intrapartum and immediate post-partum care

(KIP-PPI)

Trainers Manual

INSTITUTO NACIONAL DE SAÚDE TIMOR - LESTE

Module 1

Infection prevention in emergency obstetric and neonatal care

Training resource package for intrapartum and immediate post-partum care

Module: Infection prevention in emergency obstetric and neonatal care

Key tasks
- Hand washing
- Use of aseptic techniques for specific emergency obstetric and newborn care procedures
- Safe waste disposal disposKey infection prevention

Training schedule
- Key tasks
- Learning objectives
- Sessions plans
- Knowledge assessment

Trainer's guide
Session plan describes objectives of each session, topics, methodology and key points
- Exercise
- Demonstrat ion

Key knowledge
- Aseptic techniques in EmoNC

Critical skills
- Handwashing
- Wearing gloves
- Handling of sharps and needles
- Safe waste disposal

Evaluation
- Post Test
- Session evaluation

Module: Infection prevention in emergency obstetric care
Training schedule
Total time: 220 min (3 hours 40 min)

Time	Topic	Method	Resource materials
30 min	Objective of the module: To upgrade the knowledge and skills in infection prevention in emergency obstetric and neonatal care Welcome Objective of the module: Discuss: Key tasks Learning objectives Tools for evaluation of the session	Discussion	Slides 2-3
30 min	Knowledge assessment	Test	
Session 1 20 min	Objectives and principles of infection prevention in emergency obstetric and neonatal care	Discussion	Slides 4-5 MCPC 2017 **(C25)**
Session 2 30 min	Handwashing	Discussion Demonstration	Slide 6-7 MCPC 2017 **C26)** Handout 1
Session 3 hour and 30 min	Aseptic techniques in obstetric and newborn care procedures	Exercise Demonstration	Slides 8-14 MCPC 2017 **(C30)** Handout 2
Session 4 30 min	Client preparations in various procedures	Discussion Demonstration	Slides 15-17 MCPC 2017 **(C34)**
Session 5 20 min	Handling sharps and needles and waste disposal	Discussion Demonstration	Slides 18-21 MCPC 2017 **(C32)**
Session 6 30 min	Evaluation	Post-test Module evaluation	Questionnaire Module evaluation form

Session plan

Training process	Resources
Welcome **(30 min)** Objective of the module: To upgrade the knowledge and skills in infection prevention in emergency obstetric and neonatal care Discuss key tasks and ask the participants whether they would like to add any Learning objectives: At the end of the session the participants should be able to: The participants will be able to : • List objectives of infection prevention in obstetric and neonatal care • List underlying principles of infection prevention • Demonstrate handwashing correctly • Demonstrate wearing and removing gloves correctly • List aseptic techniques for emergency obstetric care and newborn care • List methods of safe waste disposal Explain the tools for evaluation of the session	Slides 2-3
Knowledge assessment **(30 min)**	Questionnaire
Session 1: Objectives and principles of infection prevention in emergency obstetric and neonatal care **(20 min)** *Objective of the session*: Update knowledge on objectives and principles of infection prevention *Discussion* Ask the participants about objectives of infection prevention. List the answers on the board. Ask the participants whether they know the principles of infection prevention.	Slides 4-5 MCPC 2017 (**C25)**
Session 2: Handwashing **(30 min)** *Objective of the session*: Reinforce skills in proper technique of hand washing *Discussion* Ask the participants what is the rationale for handwashing. Ask when handwashing should be practised *Demonstration* Ask one of the participants to demonstrate proper technique of handwashing. Distribute the handout on handwashing. The rest of the participants observe using the handout and provide feedback. The trainer should sum up highlighting key points.	Slide 6-7 MCPC 2017 **(C26)** Handout 1Handwashich technique
Session 3: Aseptic techniques in emergency obstetric and neonatal care procedures **(30 min)** *Objective of the session:* Update knowledge about aseptic techniques in EmoNC *Discussion* Ask the participants what is aseptic technique and what are some of the examples. The trainer should summarise by	Slides 8-14 MCPC 2017 **(C30)** Handout 2 on how to put on sterile gloves

defining aseptic technique and list the common techniques. Ask the participants about various types of gloves used in EmONC. *Exercise* Distribute the exercise sheet on aseptic techniques and ask the participants to fill. After all participants have completed, ask the participants to share their responses. The responses should be recorded on the board. After all the responses are complete, the trainer should distribute the handout and discuss aseptic procedure associated with each procedure. *Demonstration (wearing and removing gloves)* Ask one of the participants to demonstrate proper technique of wearing gloves. The rest of the participants provide feedback. The trainer should sum up highlighting key points. Ask the participants whether boiling is an acceptable method and reasons for not it being the best method.	
Session 4: Client preparations for various procedures **(30 min)** *Objective of the session: Update knowledge and skills in client preparation* *Discussion* Ask the participants about antiseptics used in preparing clients for various procedures. List the responses on the board. Discuss the correct answers. Ask about preparations of cervix and vagina and perineum. Discuss the responses. *Demonstration* Ask one of the participants to demonstrate preparation for cervical examination using the pelvic model. Ask the rest of the participants to provide feedback. The trainer should summarise by highlighting the key points.	Slides 15-17 MCPC 2017 **(C34)** Handout on aseptic techniques in EmONC
Session 5: Handling sharps and needles and waste disposal **(20 min)** *Objective of the session:* *Discussion* Ask one of the participants to demonstrate preparation of chlorine solution for decontamination (simulation) solution Discuss decontamination.	Slides 18-21 MCPC 2017 **(C32)**
Session 6: Evaluation **(30 min)**	Questionnaire Module evaluation form

Knowledge assessment

1. Which of the following creates a protective barrier for preventing infections in patients, clients and health care workers?
   a. Wearing gloves before touching anything wet.
   b. Using antiseptic agents for cleansing the skin or mucus membranes
   c. Processing instruments, gloves and other items after use.
   d. All of the above.

2. Washing hands with soap and water
   a. Reduces transient flora on skin
   b. Reduces resident flora on skin
   c. Removes soil and debris from the skin
   d. Removes soil and debris and transient flora on skin

3. Is it acceptable to use high-level disinfected gloves if sterile gloves are not available for the following procedures?
   a. Vaginal delivery
   b. Caesearean section
   c. Ventouse
   d. All of the above

4. Before placing the needle and syringe in a puncture-proof container, the following should be done:
   a. Recap the needle
   b. Disassemble the needle and syringe
   c. Decontaminate the needle and syringe
   d. Break the needle and syringe

5. Which of the following is a contaminated waste?
   a Blood, pus, urine and other body fluids
   b Used needle and blades
   c Placenta
   d All of the above

6. Decontamination and cleaning are two highly effective infection prevention measures that can
   a. Minimise the risk of transmission of Hepatitis B, Hepatitis C and HIV to health care workers.
   b. Can break the infection prevention cycle for patients
   c. Are easy to do and inexpensive
   d. All of the above

7. How long should items be boiled or steamed for high-level disinfection?
   a. 20 minutes
   b. 30 minutes
   c. 60 minutes
   d. 120 minutes

8. Which of the following is not an antiseptic?
   a. Chlorhexidine 2-4%
   b. Chlorine
   c. 60-90% alcohol
   d. 3% iodine

Exercise-Aseptic care in obstetric and neonatal care procedures

Procedure	Preferred glove	Surgical attire required	Client preparation required
Drawing blood			
Starting IV infusion			
Pelvic examination			
Pelvic examination in labour			
Catheterisation			
Manual vacuum aspiration			
Normal childbirth			
Artificial rupture of membranes			
Instrumental delivery			
Episiotomy			
Repair of perineal tears			
Bimanual compression			
Manual removal of placenta			
Reposition of inverted uterus			
Newborn care			
Neonatal resuscitation			
Handling and cleaning instruments			
Handling contaminated waste			
Cleaning blood or body fluid spills			

Module evaluation

Module: Infection prevention

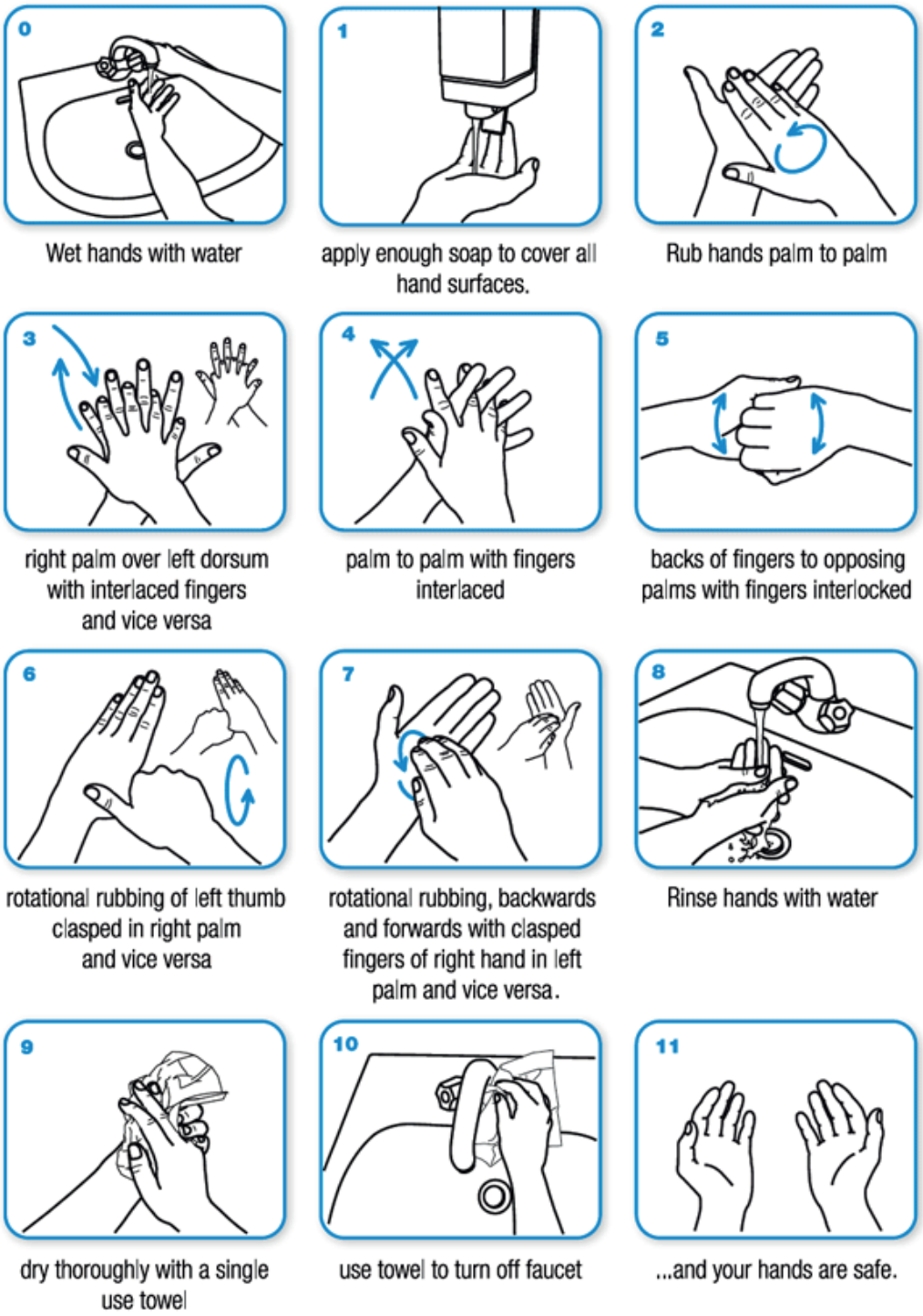
Please indicate your opinion of the course components using the following rating scale:

5. Strongly Agree
4. Agree
3. No opinion
2. Disagree
1. Strongly disagree

Course component	Rating
1.The discussions helped me to clarify elements related to basic care.	
2.The exercises were useful for learning about infection prevention in EmONC	
3. The demonstrations were useful	
4.I am confident about infection prevention in EmONC	

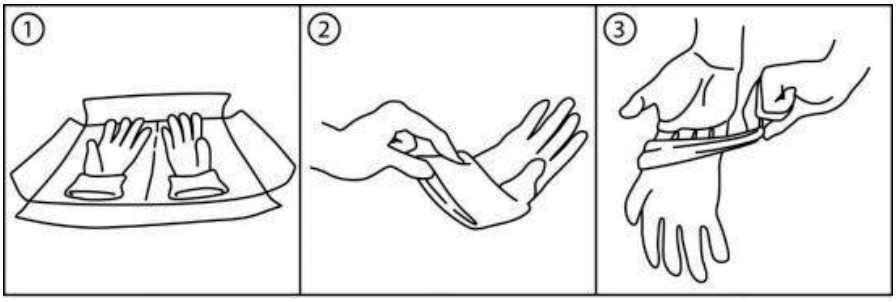
Handout 1

Handwashing Technique



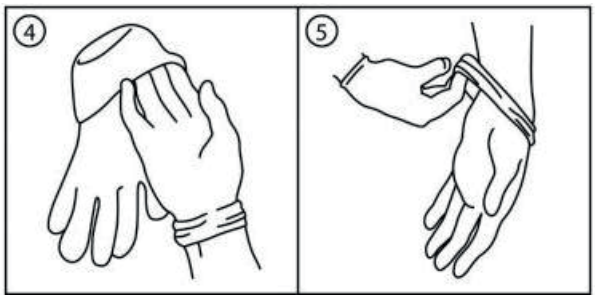
Handout 2

Steps to put on sterile gloves



Place the package of sterile gloves in a clean work area.

- Remove the outer packaging of the sterile gloves. Open the inner packaging as directed. Do not touch anything inside of the package. **Step 1** in the picture shows how the gloves look in the package.
- Wash your hands with soapand water. Dry them well.
- Using your non-dominant hand (the one you do not write with), pick up the glove for your other hand by the cuff. **Step 2** in the picture shows how this looks.This glov is for your dominant hand (the one you write with). Be careful to touch just the inside of the cuff and glove.This part will touch your skin when the glove is on your hand.
- Let the glove hang with the fingers pointing downward. Then slide your dominant hand into the glove with your palm facing up and your fingers open. **Step 3** in the picture shows how this looks. Be careful not to touch the package as you put on the gloves.
- If the glove does not go on straight, wait to adjust it until you put on the other glove. Keep your hands above your waist to make sure they stay sterile.



- Use the hand with the glove to slide your fingers under the cuff of the second glove. **Step 4** in the picture shows how this looks. Only touch the outside of this glove. This part will not be against your skin when the glove is on your hand.
- Let the glove hang with the fingers pointing downward. Slide your hand into the glove with the palm up and the fingers open. **Step 5** in the picture shows how this looks.
- Adjust both gloves until they fit properly. Only touch sterile gloved areas.

Answer key
Infection prevention

1. Washing hands with soap and water
   a. Reduces transient flora on skin
   b. Reduces resident flora on skin
   c. Removes soil and debris from the skin
   d. Removes soil and debris and transient flora on skin

2. Is it acceptable to use high-level disinfected gloves if sterile gloves are not available for the following procedures?
   a. Vaginal delivery
   b. Caesearean section
   c. Ventouse
   d. All of the above

3. How long should items be boiled or steamed for high-level disinfection?
   a. 20 minutes
   b. 30 minutes
   c. 60 minutes
   d. 120 minutes

4. Which of the following is not an antiseptic?
   a. Chlorhexidine 2-4%
   b. Chlorine
   c. 60-90% alcohol
   d. 3% iodine

5. Which of the following is a contaminated waste?
   a Blood, pus, urine and other body fluids
   b Used needle and blades
   c Placenta
   d All of the above

Exercise- Glove and gown requirement

Procedure	Preferred glove	Surgical attire required
Drawing blood	Single use examination	None
Starting IV infusion	Single use examination	None
Pelvic examination	Single use examination	None
Pelvic examination in labour	Sterile surgical	None
Catheterisation	Sterile surgical	None
Manual vacuum aspiration	Sterile surgical	Plastic apron and other protective barriers (eyewear, mask, footwear)
Normal childbirth	Sterile surgical	Plastic apron and other protective barriers (eyewear, mask, footwear) CLEAN HIGH LEVEL disinfected or surgical
Artificial rupture of membranes	Sterile surgical	Plastic apron and other protective barriers (eyewear, mask, footwear) Clean high level disinfected or surgical
Instrumental delivery (Ventouse)	Sterile surgical	Plastic apron and other protective barriers (eyewear, mask, footwear) Clean high level disinfected or surgical
Episiotomy	Sterile surgical	Plastic apron and other protective barriers (eyewear, mask, footwear) Clean high level disinfected or surgical
Repair of perineal tears	Sterile surgical	Plastic apron and other protective barriers (eyewear, mask, footwear) Clean high level disinfected or surgical
Bimanual compression	Sterile surgical	Plastic apron and other protective barriers (eyewear, mask, footwear) Clean high level disinfected or surgical
Manual removal of placenta	Sterile surgical	Plastic apron and other protective barriers (eyewear, mask, footwear) Clean high level disinfected or surgical
Reposition of inverted uterus	Sterile surgical	Plastic apron and other protective barriers (eyewear, mask, footwear) Clean high level disinfected or surgical
Handling and cleaning instruments	Utility	None
Handling contaminated waste	Utility	None
Cleaning blood or body fluid spills	Utility	None
Newborn care		
Care	Single use examination	None
Resuscitation	Single use examination	None

Module 2

Screening for labour and management of first stage of labour

Training resource package for intrapartum and immediate post-partum care

National Standard 1: Every woman who goes into labour at term (37 weeks to 41 weeks) and new born receives routine, evidence-based care during labour, delivery and immediately after delivery, that is culturally sensitive and respective rights of women
Quality statement: Every woman is assessed routinely on admission, monitored for progress of labour and are provided appropriate and culturally sensitive care that respects the rights of women
Clinical protocol: Assessment and management of labour

Module: Screening for labour and management of first stage of labour

Key tasks
- Prepares for screening and monitoring
- Takes intrapartum history as per protocol
- Performs intrapartum examination (general physical, abdominal and pelvic examination and laboratory tests)
- Assesses the progress of labour and maternal-foetal health status and makes diagnosis
- Records on partograph
- Communicates findings with client
- Provides care
- Records findings and care provided

Training schedule
- Key tasks
- Learning objectives
- Sessions plans
- Knowledge assessment

Trainer's guide
Session plan describes objectives of each session, methodology and key points
- Exercise
- Case studies
- Role plays
- Learning guides

Key knowledge
- Stages of labour and signs and symptoms
- Assessment during 1st stage of labour
- Mechanisms of labour
- Partograph and purpose
- Filling partograph correctly

Critical skills
- Initial intrapartum assessment
- Interim intrapartum assessment
- Pelvic examination
- Monitoring using partograph
- Assessing progress of labour and diagnosing normal and abnormal maternal-foetal health status
- Communicating findings with the woman

Evaluation
- Post Test
- Skill assess: using learning guides
- Module evaluation

Module : Screening for labour and monitoring using partograph
Training schedule
Total time: 1125 min (18.45 hrs)

Time	Topic	Method	Resource materials
30 min	Welcome Objective of the module: To update knowledge and skills to assess and care for a woman in labour Key tasks Learning objectives Explain the tools for evaluation of the session	 Discussion	 Slide 2
30 min	Knowledge assessment		
Session 1 30 min	Stages of labour	Discussion Exercise	Slides 3-7 Textbook of midwifery MCPC 2017 **(C77)** Power point **Exercise 1** and answer key
Session 2 30 min	Elements of physical examination	Discussion	MCPC 2017 **(C78)** **Handout 1** on physical examination
Session 3 15 min	Preparations for history and examination	Discussion	Learning guide on screening for labour
Session 4 30 min	Initial intrapartum history taking	Discussion Case study Skills practice	Slide 10 MCPC 2017 **(C79)** Learning guide on screening for labour **Handout 2** on history taking
Session 5 1 hr	Initial intrapartum physical examination	Discussion Case study Skills practice	Slides 11-13 MCPC 2017 **(C79-84)** Learning guide on screening for labour **Handout 1** on physical examination
Session 6 1 hr	Initial intrapartum vaginal examination	Discussion Skills practice	MCPC 2017 **(C90)** Learning guide on pelvic examination in labour Learning guide on screening for labour

Session 7 I hr	Assessing progress of labour and maternal –foetal health status and diagnosis normal/abnormal and action to be taken if abnormal findings	Discussion	MCPC 2017 **(C89)** **Handout 2** on physical examination Clinical protocol on assessment and management of labour and other relevant protocols
Session 8 30 min	Communicating findings and action to be taken in a reassuring manner	Discussion Role play	Learning guide on screening for labour Clinical protocol on assessment and management of labour
Session 9 30 min	Provision of care in collaboration with the woman	Discussion Role play	MCPC 2017 **(C85)** Learning guide on screening for labour
Session 10 15 min	Recording findings	Discussion Demonstration	Labour records
Session 11 2 hrs	Monitoring labour using partograph	Discussion Exercise	MCPC **(C91)** **Handout 3** on information to be filled in partograph Wall chart of partograph Partographs
Session 12 1 hr	Interim history taking and physical examination	Discussion Exercise Skills practice	Learning guide on monitoring labour using partograph and pelvic examination Exercise answer sheet
Session 13 1 hr	Assessing the progress of labour and maternal and foetal health status	Discussion Case study	MCPC 2017 **(C89)** Learning guide on monitoring labour
Session 14 30 min	Communicating findings and action to be taken in a reassuring manner	Discussion Role play	Learning guide on monitoring labour using partograph
Session 15 1 hr	Care of the mother	Discussion	Learning guide on monitoring labour using partograph
Session 16 15 min	Recording findings on the partograph as well as labour records	Discussion Demonstration	Records
Session 17 4 hrs	Supervised client practice		Learning guides
Session 18 2 hrs	Evaluation	Post-test Skill check Module evaluation	Questionnaire Learning guides Module evaluation form

Session plan

Training process	Resources
Welcome the participants and introduce yourself Objective of the module: To update knowledge and skills to assess and care for a woman in labour Discuss the key tasks and ask the participants to contribute Discuss the learning objectives. Learning objectives: At the end of the module the midwife will be able to: 1. Describe the four stages of labour 2. Take a history of a woman in labour as per learning guide 3. Do a general physical examination, including an abdominal and a vaginal examination as per the learning guide 4. Assess progress of labour and diagnose maternal-foetal health status 5. Monitor labour progress using the partograph 6. Provide compassionate care	Slide 2 List of key tasks Learning objectives
Pre-session knowledge assessment – **30 min**	Questionnaire
Session 1: Stages of labour – **30 min** *Objective of the session*: Describe the various stages of labour *Discuss* the following: Distribute ***Exercise 1*** – Confirming true labour and stages of labour and ask the participants to fill the same. After all have completed, discuss the answers. Distribute the answer sheets and discuss. Discuss the mechanism of labour.	Slides 3-7 Textbook of midwifery MCPC 2017 **(C-77)** Exercise 1 and answer sheet
Session 2: Types of assessments during various stages of labour – **30 min** *Objective of the session*: Describe the various types of assessments done during first stage of labour *Discussion* Ask the participants to list the elements of physical examination and the responses should be recorded on the flip chart (general well-being, skin, conjunctiva, vital signs measurement (respiration, blood pressure, maternal temperature, pulse, visual inspection of the breasts (skin and nipples), abdominal examination (surface of abdomen, uterine shape, fundal height, foetal parts and movements, foetal lie and presentation, descent, foetal heart, bladder, frequency and duration of contractions,), genital examination (vaginal opening, skin, labia, vaginal secretions), cervical examination (dilation, membranes and amniotic fluid, presentation, moulding). After the discussions are over, the trainer projects the first column of the **Handout 1** on physical examination.	MCPC 2017 **(C78)** **Handout 1**
Session 3: Preparations for history and examination **(15 min)** *Objective of the session*: Describe the various preparations, including resources in preparation for history and examination *Discuss* the preparations – setting (decontamination of the work surface, ensure availability of essential items and equipments, records) ***Laboratory tests (Urine for sugar and albumin) and blood for Hb (if anaemic) and for blood grouping and RH compatibility, serology (if not done)***	Learning guide on screening for labour

Session 4: Initial intrapartum history taking **(30 min)** *Objective of the session*: Develop skills in initial history taking *Case study* Divide the participants into groups and project the case study up to diagnosis. The case study will be used for Sessions 4-6. Each group reads the case study and answers the question related to initial history taking. *Discuss* the following: • Key points to be reviewed in the ANC records (see learning guide on screening for labour) • Key points to be asked in history and rationale for the questions Distribute **Handout 2** on history taking. Discuss complication readiness plan. Use the slide to explain. *Skills practice*- Learning guide on screening for labour *(tasks* 1, 2)(see instructions on skills practice sessions) Distribute **Learning guide on screening for labour**. Participants should review learning guide on screening for labour before beginning the activity. Each participant should become competent in history taking.	MCPC 2017 **(C79)** Learning guide on screening for labour **Handout 2** on history taking Power point on complication readiness plan
Session 5: Initial intrapartum physical examination **(60 min)** *Objective of the session*: Develop skills in initial intrapartum physical examination as well as abdominal examination Review the elements of examination by projecting the first column of the handout *Case study* (as above). Ask the groups to answer the questions related to physical examination. *Discuss* how to determine foetal descent. Show the slide. Ask how to assess the effectiveness of contractions. Show the power point on assessing effectiveness of contractions. *Skill practice* –Learning guide on screening for labour (*task* 3)(see instructions on skills practice session) This activity should be conducted using childbirth simulator/pelvic and foetal models. As instructed above, participants should review the learning guide on screening for labour	MCPC 2017 **(C79-C84)** Learning guide on screening for labour Power point on foetal descent and effectiveness of contractions **Handout 1**on physical examination
Session 6: Initial intrapartum vaginal examination **(60 min)** *Objective of the session*: Develop skills in initial intrapartum vaginal examination *Discuss* the following: • External genital examination- components and rationale • Cervical examination- components and rationale *Skill practice* – Learning guide on pelvic examination and screening for labour (*Task*s (see instructions on skills practice session) This activity should be conducted using child birth simulator or foetal and pelvic models and should follow the steps listed for physical examination. Use learning guides on pelvic examination and screening for labour.	MCPC 2017 **(C90)** Learning guides on pelvic examination and screening for labour
Session 7: Assessing progress of labour and maternal –foetal health status and diagnosis normal/abnormal and action to be taken if abnormal findings **(30 min)** *Objective of the session*: Develop skills in diagnosing true or false labour and determining stage of labour and maternal-foetal health status *Discussion* Project the **handout 1** with columns 2 (normal) and 3 (abnormal) blank. Go through each of the elements of examination and ask each participant	MCPC 2017 **(C89)** **Handout 1** on physical examination Protocol on assessment and management of labour and other

on normal and abnormal findings and action to be taken. After completing the list, distribute the handout and ask the participants to discuss further if needed. The trainer distributes the protocol on assessment and management of labour and asks one of the participants to explain the use of protocol and adds to the discussion. ***Other protocols mentioned in the handout are projected and briefly discussed.***	relevant protocols
Session 8: Communicating findings **(30 min)** *Objective of the session*: Develop skills in communicating findings of history and examination in a reassuring manner *Discussion* Discuss how to communicate and what to communicate to in case of true labour and false labour. *Role play* (on reassuring a woman in labour) Distribute the case scenario on reassuring a woman in labour. The same groups continue the role play with the steps in communicating with a woman in labour. The trainer observes the skills in communicating the findings of the examinations.	Learning guide on screening for labour Clinical protocol on assessment and management of labour
Session 9: Provision of care in collaboration with the woman **(30 min)** *Objective of the session*: Develop skills in diagnosing and provision of care in case of false labour and true labour *Discussion* Ask the participants about diagnosis of false and true labour. *Role play* (Provision of care in false labour and true labour) Distribute the case scenario for the role play. Select two groups of participants (two per group) to perform the roles as per the case scenario provided in the role play. The trainer asks the rest of the participants observe using the learning guide on screening for labour (section on provision of care). The trainer observes the skills in diagnosing and provision of care and provides feedback. The trainer asks participants about follow-up plans in case of false labour. Directs the participants to learning guide on screening for labour.	MCPC 2017 **(C85)** Learning guide on screening for labour
Session 10: Recording findings **(15 min)** *Objective of the session*: Develop skills in accurate recording of information Discuss what information will be recorded (findings, action planned). Asks one of the participants to explain the records used. Highlight the importance of recording action planned.	Labour records
Session 11: Monitoring labour using partograph **(120 min)** *Objective of the session*: To enable participants to use the partograph to monitor labour *Discussion* Review the key tasks (discussed under Session 1) and inform that that tasks 2-4 will be covered through session 12. The trainer should ask each of the participants whether they have used the partograph and the purpose for which they have used the same. Find out if they found it useful and share instances when they have been able to identify problems and refer on time. Ask the participants the following	MCPC 2017 **(C91)** Partograph forms (3 for each student) and Four enlarged ones to be displayed **Handout 3** Information to be recorded in the partograph

• which stage of labour should a partograph be started • what are the benefits of recording on a partograph • what are to be recorded on the partograph *Exercises* in filling partograph Place one of the enlarged partographs on the wall. Distribute the handout on information to be recorded on the partograph. Ask each of the participants to record one finding. Distribute 3 blank partographs to each participant. *Distribute cases 1-3 under exercise 2* on partograph and ask the participants to fill the partograph and the questions. Once completed, ask three participants to plot each case study on the enlarged partographs. Each case should be discussed. It should be discussed and trainer should collect copies from all the participants and review later.	
Session 12: Interim history and physical examination **(60 min)** *Objective of the session*: Developing skills in monitoring progress of labour *Discussion* The trainer should ask the participants about the preparations for interim history and physical examination. Key points in history (general well-being (immediate concerns, anxiety, fatigue, whether taking fluids and food, emptying bladder), contractions (frequency, duration, intensity), vaginal secretions (show, bleeding, leaking fluid, foetal movement, urge to push down) Distribute the handout on history Key points in examination (vital signs, abdomen (foetal descent and movement, foetal heart, contractions, bladder), external genitalia, bimanual examination) Key indicators of progress of normal labour or abnormal Key points in evaluating maternal wellbeing (vital signs, sense of well-being, not anxious, vital signs normal and no complications and foetal well-being (movement, foetal heart) Distribute ***exercise 3*** on interim assessment (columns 2-4 blank) and ask the participants to fill in the information related to frequency of assessment, normal findings and possible abnormal findings. Discuss the same after all have completed the exercise, using the answer sheets on assessment. *Discussions* should be continued on: • Actions to be taken including referral to an appropriate facility as per relevant protocol *Skill practice*- Learning guide on monitoring labour using partograph (see instructions on skills practice session) This activity should be conducted using child birth simulator or foetal and pelvic models and should follow the steps listed for physical examination. Use learning guides on pelvic examination and screening for labour.	Learning guide monitoring labour using partograph Answer sheet on type of assessments
Session 13: Assessing the progress of labour and maternal and foetal health status **(60 min)** *Objective of the session*: Develop skills in assessing progress of labour and status of mother and foetus *Discussion* Key points to be evaluated (frequency and duration of contraction), cervical dilation, foetal descent and progress normal based on partograph	MCPC 2017 **(C89)** Learning guide on monitoring labour Slide effectiveness of contractions

Case study Distribute the case study on assessing progress of labour and maternal and foetal health. Ask the participants to review the section of learning guide on assessing progress and review the partograph and answer questions. Discuss the answers.	
Session 14: Communicating findings **(30 min)** *Objective of the session* is to communicate of the examination and assessments findings and action to be taken, in a reassuring manner *Discussion* on how to communicate and what to communicate. Special attention should be paid on compassionate care *Role play* on communicating assessment findings Distribute the case scenario on reassuring a woman in labour. The same groups continue the role play with the steps in communicating with a woman in labour. The trainer observes the skills in communicating the findings of the examinations.	Learning guide on monitoring using partograph
Session 15: Care of the woman **(60 min)** *Objective of the session*: Developing skills in providing supportive care of the woman in labour *Discussion* on key elements of supportive care (communicating, rest and activity positions, comfort, nutrition, elimination, hygiene and infection prevention) Distribute the **handout 4** on supportive care.	Learning guide on monitoring using partograph **Handout 4**
Session 16: Recording findings in labour record **(15 min)** *Objective of the session*: Develop skills in accurate recording of information Discuss the labour records and partograph. Ask one of the participants to demonstrate filling in the labour record. Highlight the importance of recording action planned.	Partograph Labour record
Session 17: Supervised client practice **(240 min)** *Objective of the session* is to practice skills with clients. This is the final stage of clinical skills developments and participants should be allowed to work with clients only after they have demonstrated skill competency in a simulated situation. Planning for the supervised practice is a critical component so that participants get adequate practice. It is important to respect the rights of clients – permission should be sought, privacy and confidentiality should be maintained and respectful dealings with the clients. Since one trainer may not be sufficient to supervise all the participants, it will be good to identify potential assistants to help the trainer (preceptors) to observe the skill practices. The preceptors could be a doctor or senior midwife who is very proficient in the skills. The preceptors will need to be trained in the use of checklists to familiarise them with the checklists. Before and after each supervised client practice, there should be discussions. Feedback should be provided. Minimum of 3-4 experiences in screening and assessing progress should be planned for each of the participants (may vary depending on the baseline skill level). The participants should be divided into groups	Learning guides
Session 18: Evaluation **(120 min)**	Questionnaire Learning guides Module evaluation form

Knowledge Assessment
(Screening for labour and assessment)

1. On October 10, Mrs. C. and her husband come to the clinic because Mrs. C. has been experiencing a backache and "stomach pains" all day. List nine steps you would take to evaluate Mrs. C.'s problem.

2. What are the signs prior to the onset of labour?

3. Describe signs that indicate the:
   a. First stage of labour

   b. Latent phase of labour

   c. Active phase of labour

   d. Second stage of labour

   e. Third stage of labour

4. What are the mechanisms of labour?

5. List three measures to care for a woman during the first stage of labour
   a.
   b.
   c.

6. At 4 PM on October 10, you determine that Mrs. C. is 3 cm dilated. The baby's head is at 3/5 above the pelvic brim. She is having contractions every 4 mins lasting 40 secs. The baby's heart rate is 150 beats per min. (Copy of a blank partograph to be handed out with this question.)
   a. Fill in the partograph with this information.

   b. At 8:30 PM, Mrs. C. tells you she feels like pushing and a vaginal examination found cervical dilatation at 10 cm. Fill in the partograph. How long was the first stage of labour?

   c. How frequently will you listen to the foetal heart rate and for how long?

7. Posterior fontanelle is bordered by:
   a. the occipital bone and two parietal bones
   b. the two occipital bones
   c. the frontal and two parietal bones
   d. the two occipital and the two parietal bones

Exercise 1
Confirming true labour and assessing stage of labour

Stages of labour	Cervix	Contractions	Vaginal secretions	Descent
False labour				
First stage/latent phase				
First stage of labour active phase				
Second stage of labour				

Exercise 2: Recording in partograph

Case 1
Step 1

- Mrs. A was admitted at 05.00 on 12.5.2017
- Membranes ruptured 04.00
- Gravida 3, Para 2+0
- Hospital number 7886
- On admission the foetal head was 4/5 palpable above the symphysis pubis and the cervix was 2 cm dilated

Answer the following question:
Q: What should be recorded on the partograph?

Note: Mrs. A is not in active labour. Record only the details of her history, i.e., first four bullets, not the descent and cervical dilation.

Step 2

09.00:

- The foetal head is 3/5 palpable above the symphysis pubis.
- The cervix is 5 cm dilated

Answer the following question:

- Q: What should you now record on the partograph?

Note: Mrs. A is now in the active phase of labour. Plot this and the following information on the partograph:

- 3 contractions in 10 minutes, each lasting 20–40 seconds
- Foetal heart rate (FHR) 120
- Membranes ruptured, amniotic fluid clear
- Sutures of the skull bones are apposed
- Blood pressure 120/70 mmHg
- Temperature 36.8°C
- Pulse 80/minute
- Urine output 200 mL; negative protein and acetone

Answer the following questions:
Q: What steps should be taken?
Q: What advice should be given?
Q: What do you expect to find at 13.00

Step 3

Plot the following information on the partograph:

09.30 FHR 120, Contractions 3/10 each 30 seconds, Pulse 80/minute

10.00 FHR 136, Contractions 3/10 each 30 seconds, Pulse 80/minute

10.30 FHR 140, Contractions 3/10 each 35 seconds, Pulse 88/minute

11.00 FHR 130, Contractions 3/10 each 40 seconds, Pulse 88/minute, Temperature37°C

11.30 FHR 136, Contractions 4/10 each 40 seconds, Pulse 84/minute, Head is 2/5 palpable

12.00 FHR 140, Contractions 4/10 each 40 seconds, Pulse 88/minute

12.30 FHR 130, Contractions 4/10 each 45 seconds, Pulse 88/minute

13.0 FHR 140, Contractions 4/10 each 45 seconds, Pulse 90/minute, Temperature37°C

- The foetal head is 0/5 palpable above the symphysis pubis
- The cervix is fully dilated
- Amniotic fluid clear
- Sutures apposed
- Blood pressure 100/70 mmHg
- Urine output 150 mL; negative protein and acetone

Answer the following questions:
Q: What steps should be taken?
Q: What advice should be given?
Q: What do you expect to happen next?

Step 4

Record the following information on the partograph:

13.20: Spontaneous birth of a live female infant weighing 2,850 g

Answer the following questions:
Q: How long was the active phase of the first stage of labour?
Q: How long was the second stage of labour?

Case 2

Step 1

Mrs. B was admitted at 10.00 on 12.6.2017

Membranes intact , Gravida 1, Para 0+0

Record the information above on the partograph, together with the following details:

- The foetal head is 5/5 palpable above the symphysis pubis
- The cervix is 4 cm dilated
- 2 contractions in 10 minutes, each lasting less than 20 seconds
- FHR 140
- Membranes intact
- Blood pressure 100/70 mmHg
- Temperature 36.2°C
- Pulse 80/minute
- Urine output 400 mL; negative protein and acetone

Answer the following questions:
Q: What is your diagnosis?
Q: What action will you take?

Step 2

Plot the following information on the partograph:

10.30 FHR 140, Contractions 2/10 each 15 sec, Pulse

90/minute

11.00 FHR 136, Contractions 2/10 each 15 sec, Pulse

88/minute

11.30 FHR 140, Contractions 2/10 each 20 sec, Pulse

84/minute

12.0 FHR 136, Contractions 2/10 each 15 sec, Pulse 88/minute, Temperature 36.2°C, Membranes intact

The foetal head is 5/5 palpable above the symphysis pubis. The cervix is 4 cm dilated, membranes intact.

Answer the following questions:
Q: What is your diagnosis?
Q: What action will you take?

Step 3

Plot the following information on the partograph:

12.30 FHR 136, Contractions 1/10 each 15 sec, Pulse

90/minute

13.00 FHR 140, Contractions 1/10 each 15 sec, Pulse

88/minute

13.30 FHR 130, Contractions 1/10 each 20 sec, Pulse

88/minute

14.00 FHR 140, Contractions 2/10 each 20 sec, Pulse 90/minute, Temperature 36.8°C, Blood pressure 100/70 mmHg

The foetal head is 5/5 palpable above the symphysis pubis. Urine output 300 mL; negative protein and acetone

Answer the following questions:
Q: What is your diagnosis?
Q: What will you do**?**

Plot the following information on the partograph:

14:00:

- The cervix is 4 cm dilated, sutures apposed
- Labour augmented with oxytocin 2.5 units in 500 mL IV fluid at 10 drops per minute (dpm)
- Membranes artificially ruptured, clear fluid

Step 4

Plot the following information on the partograph:

14.30:

- 2 contractions in 10 minutes, each lasting 30 seconds
- Infusion rate increased to 20 drops per minute (dpm)
- FHR 140, Pulse 90/minute

15.00:

- 3 contractions in 10 minutes, each lasting 30 seconds
- Infusion rate increased to 30 dpm
- FHR 140, Pulse 90/minute

15:30:

- 3 contractions in 10 minutes, each lasting 30 seconds
- Infusion rate increased to 40 dpm
- FHR 140, Pulse 88/minute

16.00:

- Foetal head 2/5 palpable above the symphysis pubis
- Cervix 6 cm dilated; sutures apposed

- 3 contractions in 10 minutes, each lasting 30 seconds
- Infusion rate increased to 50 dpm
- FHR 144, Pulse 92/minute
- Amniotic fluid clear

16.30:

- 3 contractions in 10 minutes, each lasting 45 seconds
- FHR 140, Pulse 90/minute
- Infusion remains at 50 dpm

Answer the following question:
Q: What steps would you take?

Step 5

Plot the following information on the partograph:

17.00 FHR 138, Pulse 92/minute, Contractions 3/10 each 40 sec, maintain at 50 dpm 17.30 FHR 140, Pulse 94/minute, Contractions 3/10 each 45 sec, Maintain at 50 dpm 18.00 FHR 140, Pulse 96/minute, Contractions 4/10 each 50 sec, Maintain at 50 dpm 18.30 FHR 144, Pulse 94/minute, Contractions 4/10 each 50 sec, Maintain at 50 dpm

Step 6

19.00:

- Foetal head 0/5 palpable above the symphysis pubis
- 4 contractions in 10 minutes, each lasting 50 seconds
- FHR 144, Pulse 90/minute
- Cervix fully dilated

Step 7

Record the following information on the partograph:

19.30:

- 4 contractions in 10 minutes, each lasting 50 seconds
- FHR 142, Pulse 100/minute

20.00:

- 4 contractions in 10 minutes, each lasting 50 seconds
- FHR 146, Pulse 110/minute

20.10:

- Spontaneous birth of a live male infant weighing 2,654 g

Answer the following questions:
Q: How long was the active phase of the first stage of labour? Q: How long was the second stage of labour?
Q: Why was labour augmented?

Case 3
Step 1

- Mrs. C was admitted at 10.00 on 12.9.2003
- Membranes ruptured 09.00
- Gravida 4, Para 3+0
- Hospital number 6639

Record the information above on the partograph, together with the following details:

- Foetal head 3/5 palpable above the symphysis pubis
- Cervix 4 cm dilated
- 3 contractions in 10 minutes, each lasting 30 seconds
- FHR 140
- Amniotic fluid clear
- Sutures apposed
- Blood pressure 120/70 mmHg
- Temperature 36.8°C
- Pulse 80/minute
- Urine output 200 mL; negative protein and acetone

Step 2

Plot the following information in the partograph:

10.30 FHR 130, Contractions 3/10 each 35 sec, Pulse 80/minute

11.00 FHR 136, Contractions 3/10 each 40 sec, Pulse 90/minute

11.30 FHR 140, Contractions 3/10 each 40 sec, Pulse 88/minute

12.00 FHR 140, Contractions 3/10 each 40 sec, Pulse 90/minute, Temperature37°C, Head 3/5 palpable

12.30 FHR 130, Contractions 3/10 each 40 sec, Pulse 90/minute

13.00 FHR 130, Contractions 3/10 each 45 sec, Pulse 88/minute

13.30 FHR 120, Contractions 3/10 each 45 sec, Pulse 88/minute

1400 FHR 130, Contractions 4/10 each 45 sec, Pulse 90/minute, Temperature37°C, Blood pressure 100/70 mmHg

Foetal head 3/5 palpable above the symphysis pubis, cervix 6 cm dilated, amniotic fluid clear, sutures overlapped but reducible

Step 3

14.30 FHR 120, Contractions 4/10 each 40 sec, Pulse 90/minute, Clear fluid

15.00 FHR 120, Contractions 4/10 each 40 sec, Pulse 88/minute, Blood-stained fluid

15.30 FHR 100, Contractions 4/10 each 45 sec, Pulse 100/minute

16.00 FHR 90, Contractions 4/10 each 50 sec, Pulse 100/minute, Temperature37°C

16.30 FHR 96, Contractions 4/10 each 50 sec, Pulse 100/minute

17.0 FHR 90, Contractions 4/10 each 50 sec, Pulse 110/minute

Foetal head 3/5 palpable above the symphysis pubis, cervix 6 cm dilated, amniotic fluid meconium stained, sutures overlapped and not reducible, urine output 100 mL; protein negative, acetone 1+

Step 4

Record the following information on the partograph:

Caesarean section at 17.30, live female infant with poor respiratory effort and weighing 4,850 g

Answer the following questions:
Q: What is the final diagnosis?

Exercise 3
Type of ongoing assessments in each stage of labour and normal and possible abnormal findings

What to assess	**Stage of labour How often to assess**		**Normal finding**	**Abnormal finding and action to be taken**
	Latent 1st stage	Active stage		
BP				
Temperature				
Pulse				
Foetal heart				
Membranes and amniotic fluid				
Moulding				
Foetal descent				
Contractions – frequency and duration				
Cervix – dilatation and presentation				
Vaginal secretions or bleeding				
Maternal mood and behaviour				

Case study: Assessment in labour
Directions

Read and analyse 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 developed.

Client profile
Mrs. Domingas is 30 years of age. She attended the antenatal clinic a week ago and has now come to the hospital with her mother-in-law because labour pains started 3 hours ago. Mrs. Domingas reports that the pains start in her back and move forward, last 20 seconds, and occur about every 8 minutes. Mrs. Domingas appears very anxious.

Pre-assessment
1. Before beginning your assessment, what steps do you take?

Assessment (information gathering through history, physical examination, and laboratory testing)
2. What history will you include in your assessment of Mrs. Domingas and why?
3. What physical examination will you include in your assessment of Mrs. Domingas and why?
4. What laboratory tests will you include in your assessment of Mrs. Domingas and why?

Diagnosis (interpreting information to identify problems/needs)
You have completed your assessment of Mrs. Domingas and your main findings include the following:

History**:**

- Mrs. Domingas is 39 weeks pregnant.
- This is her second pregnancy.
- Her first pregnancy and birth were uncomplicated, although she repeatedly states that labour was more painful than she had expected.
- She confirms that labour started 3 hours ago and that contractions seem to be growing increasingly longer and more frequent.
- All other aspects of her history are normal or without significance.

Physical Examination:
- Vital signs are normal (Blood pressure is 120/80, pulse is 88, respiration is normal, temperature is normal)
- On abdominal examination: Fundal height is 33 cm, presenting part is 3/5ths above the pelvic brim, foetal heart is 124 beats per minute, contractions are irregular every 8-10 minutes and lasts 14-18 seconds.
- On pelvic examination: Cervical dilation is 3cm, membranes are intact, vertex presentation.
- No pedal oedema, no pallor
- Testing: Blood group is O positive, RPR is negative, and blood was tested for HIV.

5. Based on these findings, what is Mrs. Dominga's diagnosis (problem/need) and why?

Care provision

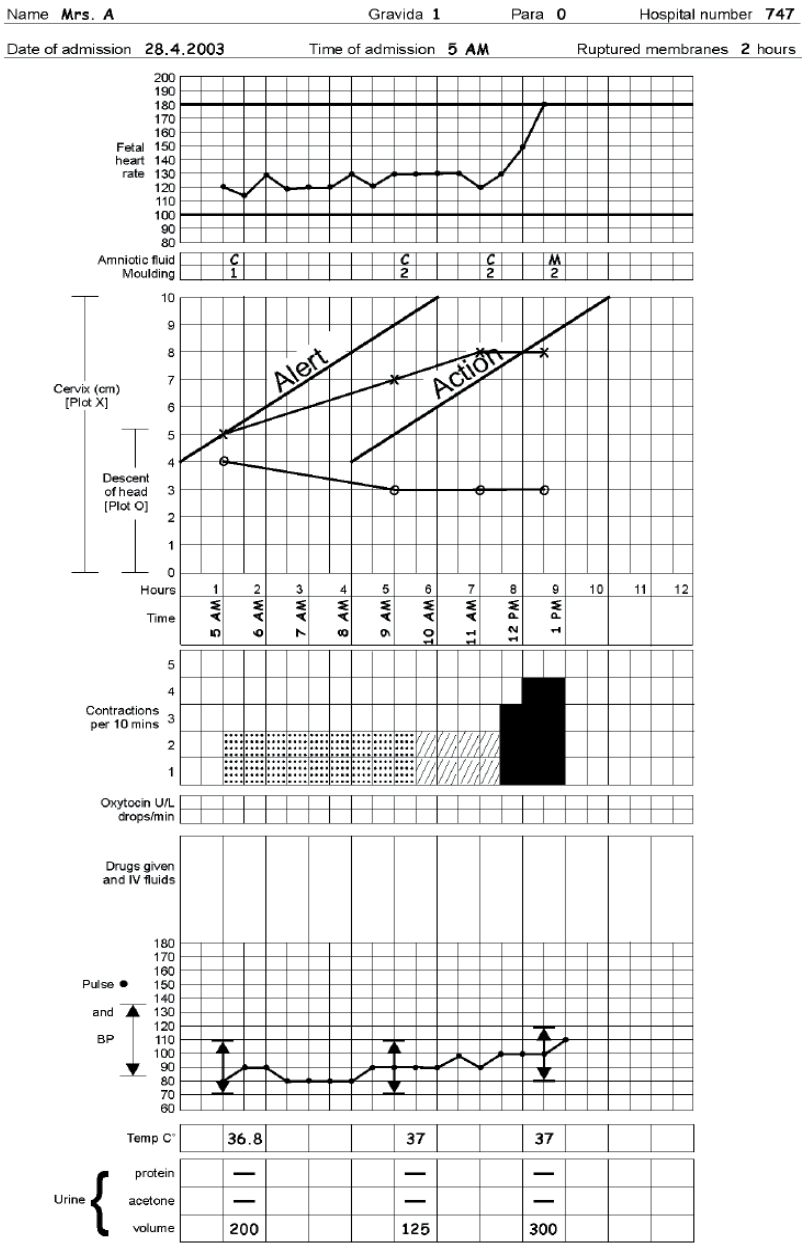
6. Based on your diagnosis (problem/need identification), what is your plan of care for Mrs. Domingas
and why?

Evaluation

- Mrs. Domingas continues to have regular contractions; by 2 hours after admission, she is having 2 contractions in 10 minutes, each lasting 20-40 seconds.
- Maternal pulse remains between 80 and 88 beats per minute; foetal heart rate remains between
  150 and 160 beats per minute.
- Mrs. Dominga's level of anxiety remains high and she continues to become agitated during
  contractions.

8. Based on these findings, what is your continuing plan of care for Mrs. Domingas and why?

Case study on assessing progress of labour and maternal and foetal health



Questions:

1. Is the labour progressing well? List reasons for the answer.
2. Is maternal health status normal?
3. Is foetal health normal?
4. What is the plan of action?

Role play: Reassuring the woman in labour

Directions
The trainer will select two participants to perform the following roles: health care provider and woman in labour. The two participants taking part in the role play should take a few minutes to prepare for the activity by reading the background information provided below. The remaining participants, who will observe the role play, should at the same time read the background information.

The purpose of the role play is to provide an opportunity for participants to develop/practice effective interpersonal skills.

Participant roles
Healthcare provider: The healthcare provider is an experienced midwife who has good interpersonal skills.

Woman in labour: Mrs. Alice is16 years old. This is her first pregnancy.

Situation
Mrs. Alice has come to the hospital because contractions started 3 hours ago. When the midwife asks Mrs. Alice how she is feeling she grasps her abdomen with both hands as a contraction begins. She shuts her eyes tightly and cries out that she does not understand what is happening and is frightened.

Focus of the role play

The focus of the role play is the interpersonal interaction between the midwife and Mrs. Alice and the appropriateness of the midwife's verbal and non-verbal communication skills.

Discussion questions

The trainer should use the following questions to facilitate discussion after the role play.

1. How did the midwife demonstrate respect and kindness during her interaction with Mrs. Alice?

2. How did the midwife provide emotional support and reassurance to Mrs. Alice?

3. What non-verbal behaviours did the midwife use to encourage interaction between herself and Mrs. Alice

ROLE PLAY: Provision of care in false and true labour

Directions

The trainer will select two groups of two participants each to perform the following roles: health care provider and woman in labour. The two groups taking part in the role play should take a few minutes to prepare for the activity by reading the background information provided below. The remaining participants, who will observe the role play, should at the same time read the background information.

The purpose of the role play is to provide an opportunity for participants to develop/practice skills in determining whether the labour is false or true.

Participant roles

Healthcare provider: The healthcare provider is an experienced midwife who has good interpersonal skills.

Woman in labour:
Case A: Mrs A is 25 years old. This is her third pregnancy.
Case B: Mrs C is 20 years old. This is her first pregnancy.

Situation

Case A
Mrs. Sara, 40 weeks pregnant, Para 3, comes into the health centre. Gives history of abdominal pains 4 hours ago and now every 10 minutes. Her baby is moving as usual. She has regularly attended the antenatal clinic and has brought her records with her. Her due date of delivery is today. She had eaten 4 hours ago and passed urine 2 hours ago. She is not any medication. She has no bleeding form the vagina or headache or blurry vision

Case B
Mrs. Celina, 36 weeks pregnant, primipara, complained of pain in front of the abdomen, infrequent, not progressing, can move around. She has had some blood-stained discharge, but no frank bleeding or gush of fluids.

Ask each group to play the roles assigned and the trainer and the rest of the participants observe using the relevant section of learning guide on screening for labour.

Focus of the role play

The focus of the role play is skills in diagnosis of true and false labour pains and provision of care in both the situations.

After the roleplay, the trainer should lead the discussion on each case and discuss the following:
CASE A
5. Was the diagnosis correct? What were the assessment findings that supported the findings?
6. What are the elements of care provision?

CASE B

7. Was the diagnosis correct? What were the assessment findings that supported the findings?
8. What care the elements of care provision.

Role play: Communicating assessment findings

Directions

The trainer selects two participants to perform the following roles: health care provider and woman in labour. The two participants taking part in the role play should take a few minutes to prepare for the activity by reading the background information provided below. The remaining participants, who will observe the role play, should at the same time read the background information.

The purpose of the role play is to provide an opportunity for participants to develop/practice effective interpersonal skills.

Participant roles

Healthcare provider: The healthcare provider is an experienced midwife who has good interpersonal skills.

Woman in labour: Mrs. Doris is 24 years old. This is her second pregnancy.

Situation

Mrs. Doris has come to the hospital because contractions started. Her membranes ruptured and the fluid was clear. She has no bleeding. Her partograph showed unsatisfactory progress of labour. Ask the participants to refer to the partograph used in the case study on assessing progress of labour.

Focus of the role play

The focus of the role play is the communication skills of the midwife while conveying the assessment findings to Mrs. Doris.

Discussion questions

The trainer should use the following questions to facilitate discussion after the role play.

1. How did the midwife demonstrate respect and kindness during her interaction with Mrs. Doris?

2. How did the midwife convey the need for referral to the family members?

Skills practice session: Assessment of the woman in labour
Purpose

The purpose of this activity is to provide opportunities to observe and practice clinical skills, either in a simulated setting or at a clinical site.

Instructions

This activity should be conducted in a simulated setting using the appropriate pelvic and foetal models.

Participants should review the appropriate learning guide before beginning the activity.

Under the guidance of the trainer, participants should then work in groups of three to practice the steps/tasks and observe each other's performance; one plays the role of provider, the second one as woman in labour and the third as observer. The observer uses the relevant section of learning guide on screening for labour to observe performance. Participants reverse the roles until each has had an opportunity to take a history and conduct physical examination and is competent. The trainer observes each participant when ready for observation and provides feedback. The participants who are not competent are made to repeat the exercise.

During supervised practice at a clinical site, the trainer assesses the skills competency of each participant using learning guides.

The above process is repeated in case of each skills practice session.

Resources

- Childbirth simulator
- Sphygmomanometer and stethoscope
- Foetal stethoscope /Doppler
- Speculum
- Thermometer
- Sterile gloves
- Protective barriers
- Soap and water and betadine
- 0.5% chlorine solution and receptacle for decontamination
- Leak proof container or plastic bag
- Partograph
- Labour records
- Learning guides on screening for labour, monitoring labour using partograph and pelvic examination during labour

Learning guide: Screening for labour

Rating scale
2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards

CHECK WHETHER To ADD RAPID INITIAL ASSESSMENT

Task 1: Prepares for initial history and examination				
	2	**1**	**0**	**Comments**
Setting 1.1 Decontaminates and cleans the work surface				
1.2 Ensures the availability and arranges: ▪ adequate light ▪ examination table, linen, pillow ▪ bin and cover ▪ soap, water and hand towel ▪ gloves ▪ thermometer, BP apparatus, stethoscope, watch, tape measure and weighting scale ▪ antiseptic lotion ▪ 0.5% chlorine solution				
1.3 Reviews the antenatal records for age, parity, weeks of gestation (expected date of confinement (EDC), progress of pregnancy, problems/life threatening complications, risk factors (IF NO ANC record refer to Handout on history taking for information to be collected)				
1.4 Greets woman				
1.5 Ensures she is comfortably seated and privacy is maintained				
Task 2: Obtains initial intrapartum history				
Labour history 2.1 Asks the woman how she is feeling since the last ANC visit (if any)				
2.2 Asks whether she has experienced any problems				
2.3 Obtains information about labour: ▪ confirms EDC ▪ time of onset of uterine contractions ▪ quality of uterine contractions- frequency, duration, intensity,				

location of discomfort ▪ ***if multipara-previous labour history and size of babies*** ▪ history of bloody show ▪ any bleeding from the vagina (amount and colour) ▪ any gush or leaking fluid from the vagina (date, amount, colour, smell)				
2.4 Foetal movement (how many times the baby kicked in the last 24 hours)				
2.5 Obtains information about the woman's well being ▪ whether she is anxious ▪ when she had something to drink or ate ▪ when she last emptied her bladder ▪ -when she slept and fatigue level				
.6 Ask whether she has any concerns.				
Task 3: Performs initial intrapartum examination				
General approach to examination 3.1 Observes the woman for her energy level, emotional tone and posture 3.2 Explains to the woman about the steps in examination and asks whether she needs any clarification 3.3 Washes hands with soap and water and air dries hands or with a clean towel				
3.4 *Laboratory tests* - Asks the woman to empty her bladder and tests urine for albumin and ketones ***-Draws blood for testing Hb and grouping, blood sugar, syphilis and HIV testing (if needed)***				
3.5 *General physical examination* *-Vital signs* ▪ Measures BP, heart rate, respiratory rate and temperature. ▪ Asks the woman to undress and offers linen for privacy. ▪ Assists the woman sit on an examination table/bed *-Conjunctiva* ▪ For jaundice and pallor *-Face*				

▪ Inspects the face for oedema *-Extremities* ▪ Inspects the hands and fingers for oedema ▪ Inspects and palpates the legs: • Varicose veins • Calves for redness and tenderness • Legs, ankles and feet for oedema (whether pitting)				
3.6 Abdomen - Inspects the abdomen for: ▪ Scars ▪ Size and contour -Measures fundal height -Palpates the uterus for: ▪ foetal lie, presentation, position and descent (using Leopold's manoeuvers) ▪ foetal movement ▪ uterine contractions noting frequency, duration, intensity ▪ Measures the foetal heart rate ▪ Palpates supra-pubic area for bladder distension				
3.7 *Pelvic: external genitalia* ▪ Assists the woman into position for the pelvic examination and drapes for privacy ▪ Puts on gloves without contaminating them ▪ Inspects the vulva for absence or presence of : o sores or ulcers o redness or inflammation o unusual discharge o bloody show o ***anything protruding (cord, foot, arm)*** o bleeding from the vagina (if present, notes amount, colour and progression) o leaking of fluid from the vagina (if present, notes colour and odour) ▪ Inspects the *perineum for:* o scarring o strictures o distention				
3.8 Cleans the vulva using soap and water/betadine				

3.9 Performs bimanual examination ▪ status of cervix o effacement o dilatation ▪ status of amniotic sac (intact or not) ▪ presenting part ▪ Moulding if vertex presentation ▪ absence or presence of umbilical cord				
3.10 Removes fingers; removes soiled gloves and disposes of them in a decontamination solution				
3. 11Washes hands with soap and water and air dries/with clean cloth				
3.12 Assists the woman off the examination table				
3.13 Thanks the woman for her cooperation and change into her clothing				
3.14 Records in labour record and partograph if the ***cervical dilatation is 4 cm or more***				
Task 4: Assesses progress if labour and maternal and foetal health status and makes diagnoses				
(the following steps will be done concurrently with relevant sections) *Progress of labour* 4.1 Decides whether woman is having false or true labour. If true labour, which stage/phase				
4.2 If true labour, decides whether uterine contraction pattern and duration are normal for the stage/phase of labour.				
4.3 If true labour, determines whether cervical dilatation is normal for the stage/phase of labour.				
4.4 If true labour, determines whether foetal descent is normal for the stage/phase of labour				
4.5 Decides if overall progress of true labour is normal based on the partograph				
Maternal well-being 4.6 Evaluates historical and physical findings for presence or absence of: - psycho-emotional response to labour - life threatening complications				

4.7 Evaluates historical and physical findings for presence or absence of risk factors.				
4.8 Decides if maternal health status is normal based on the above evaluations; and if not, prepares to discuss treatment/referral options with the woman.				
Foetal well-being 4.9 Evaluates historical and physical findings for presence or absence of problems: - physiologic response to labour - life-threatening complications.				
4.10 Evaluates historical and physical findings for presence or absence of problems: - physiologic response to labour - life-threatening complications.				
4.11 Evaluates historical and physical findings for presence of risk factor				
4.12 Decides if foetal health status is normal based on the above evaluations; and if not, prepares to discuss treatment/referral options with the woman.				
Task 5: Shares assessments and diagnosis with the woman				
5.1 Informs the woman, in a reassuring manner, of the assessments and diagnoses including: - progress of labour/estimated time of birth - her own health status - health status of her foetus				
5.2 If any abnormalities are discovered in any of the areas mentioned, asks the woman if she is aware of these				
5.3 Explain possible causes of any abnormalities discovered				
5.4 If any abnormalities are discovered, informs woman about next steps in addressing them				
5.5 Encourages the woman to share reactions to the information provided, gently probing as necessary				
Task 6: Provides care in collaboration with the woman (if in false or true labour)				
Support (false labour; >36 weeks gestation; amniotic sac intact)				

6.1 Reassures the woman.				
6.2 Reviews signs of true labour, including when to return to be examined (or call birth attendant)				
6.3 Reviews signs of potential life-threatening complications and what to do if present				
6.4 Encourages the woman to get as much rest as possible.				
6.5 Encourages woman to take/maintain nourishment and fluids.				
6.6 Asks woman and her significant others if she/they have questions or concerns				
Support (true labour) 6.7 Reassures and encourages the woman				
6.8 Explains labour monitoring (e.g., how and why).				
6.9 Assists woman to settle-in if not in her own home				
6.10 Advises woman to walk and move about, as desired and appropriate				
6.11 Encourages/offers light nourishment and fluids				
6.12 Asks woman and her relatives if she/they have questions or concerns				
Treatment or intervention				
6.7 Treats or refers problems, as necessary and appropriate				
Task 7: Plans follow-up care in collaboration with the woman (<u>only if false labour, gestation > 36 weeks, amniotic sac intact</u>). <u>OMIT if in true labour</u>				
7.1 Discusses with the woman follow-up treatments or preventive measures and associated instructions, if any				
7.2 Asks the woman to repeat instructions for follow-up treatments, if any				
7.3 Encourages the woman to ask any unanswered questions. (If any queries after this visit, encourages to bring to these to the next visit; or if any queries of concern, encourage to return as soon as possible)				
7.4 Discusses with the woman possible dates for the next antepartum visit				

7.5 Schedules the follow-up visit and gives the woman the time and date				
7.6 Encourages her to bring her husband or family to the visits, as she desires				
Task 8: Records findings, assessments, diagnoses, care provided and follow-up plan				
8.1 Neatly and clearly writes all findings, assessments, diagnoses, care provided and plans for follow-up on the woman's antepartum record				
IF THE WOMAN IS IN LABOUR 8.2 begins the intrapartum record/maintains the partograph				

Learning guide: Monitoring labour using partograph

Rating scale
2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards

Task 1: Prepares for monitoring of labour				
	2	1	0	Comments
Setting 1.1 Decontaminates and cleans the work surface				
1.2 Ensures the availability and arranges: ▪ adequate light ▪ examination table, linen, pillow ▪ bin and cover ▪ soap, water and hand towel ▪ antiseptic solution ▪ gloves ▪ thermometer, BP apparatus, stethoscope, watch, tape measure and weighting scale				
1.3 If not involved in screening for labour, provider reviews antenatal records for age, parity, weeks of gestation (expected date of confinement (EDC), progress of pregnancy, problems/life threatening complications, risk factors				
1.4 If new to woman, reviews the intrapartum record/partograph for overall pattern of findings, and most recent findings concerning: ▪ maternal health status (temperature, BP, heart rate, respiratory rate) ▪ foetal health status (heart rate, movement) ▪ labour progress (uterine contraction, quality, cervical dilatation and foetal descent)				
1.5 Greets woman				
1.6 Ensures she is comfortably seated and privacy is maintained				

Task 2: Obtains the interim intrapartum history				
Labour history 2.1 Asks how woman how she is feeling and whether she has any concerns				
2.2 Responds to immediate concerns raised by woman				
2.3 Obtains information about the 's labour: ▪ Change in quality of uterine - contractions- frequency, duration, intensity-location of discomfort ▪ -previous labour history (if multipara) ▪ history of bloody show ▪ any bleeding from the vagina (amount and colour) ▪ any gush or leaking fluid from the vagina (date, amount, colour, smell) ▪ Leaking of fluids from the vagina ▪ Increase in pelvic pressure, whether she feels like bearing down ▪ Asks about foetal movement				
2.4 Obtains information about the woman's well being ▪ whether she is anxious ▪ -when she had something to drink or ate ▪ when she last emptied her bladder and bowel ▪ - when she slept and fatigue level				
2.5 Ask whether she has any concerns.				
Task 3: Performs interim intrapartum examination				
General approach to examination 3.1 Observes the woman for her energy level, emotional tone and posture 3.2 Explains to the woman about the steps in examination and asks whether she needs any clarification 3.3 Washes hands with soap and water and air dries hands or with a clean towel				
General physical examination *3.4 Vital signs* ▪ Washes hands with soap and water, air dries or dries with clean cloth ▪ Ensures that the woman is comfortably positioned on the examination table and that privacy is maintained ▪ Reassures client to help her relax ▪ Measures BP, heart rate, respiratory rate and temperature.				

3.5 *Abdomen* ▪ Palpates (using Leopold's manoeurves) -foetal descent -foetal movement ▪ Listens foetal heart beat for rate and rhythm ▪ Palpates for uterine contractions, noting: - Frequency - Duration - Intensity ▪ Palpates suprapubic area for bladder - Distension - tenderness				
3.6 *Pelvic: external genitalia* *Vaginal examination should be performed every 4 hours, or as needed. The objective is to obtain sufficient information to monitor labour and progress and also minimize chances of infection as a result of multiple/frequent examination.* ▪ Assists the woman into position for the pelvic examination and drapes for privacy ▪ Reassures the client: explains as performs the examination ▪ Puts on gloves without contaminating them ▪ Inspects the vulva for absence or presence of: o Bloody show o Vaginal bleeding (if present note colour, amount, progression) o leaking amniotic fluid (if present, make note of time of onest, amount, colour and odour) ▪ Inspects the perineum for distension				
3.7 Cleans the vulva using soap and water/ betadine				
Bimanual examination 3.8 Performs bimanual examination by inserting two fingers into vagina, palpating to determine: ▪ status of cervix o effacement o dilatation o				

▪ absence or presence of umbilical cord ▪ status of the foetus o presentation and position o station and ballotability o if vertex, absence or presence of moulding and caput				
3.9 Removes fingers, removes soiled gloves and disposes of them in a decontamination solution				
3. 10 Washes hands with soap and water and air dries/with clean cloth				
3.11 Assists the woman off the examination table				
3.12 Thanks the woman for her cooperation and change into her clothing				
3.13 Records in labour record and partograph				
Task 4: Assesses the progress of labour and maternal-foetal health status and makes diagnosis				
Progress of labour based on partograph				
(the following steps will be done concurrently with relevant sections) 4.1 Evaluates whether the frequency and duration of uterine contractions and overall duration of contractions from onset of labour are as expected (e.g., contractions progress in frequency and duration; overall duration of contractions after client is first examined and determined to be in latent phase labour ≤ 8 hours)				
4.2 Evaluates whether cervical dilatation is as expected in active phase (i.e. ≥ 1 cm/hour, plotting remains on or to the left of the alert line)				
4.3 Evaluates whether foetal descent is as expected in active phase (i.e., plotting shows progression until birth).				
4.4 Decides if progress of labour is normal based on the partograph, and if not, appropriately manages and/or prepares to discuss treatment/referral options with the client and persons accompanying her.				

Maternal well-being 4.5 Evaluates historical and physical findings for presence or absence of problems noting: ▪ psycho-emotional response to labour ▪ physiological response to labour ▪ life-threatening complications				
4.6 Evaluates historical and physical findings for presence or absence of risk factors				
4.7 Decides if maternal health status is normal based on the above evaluations, if not, prepares to discuss treatment/referral options with the woman and persons accompanying her				
Foetal well-being *4.8* Evaluates historical and physical findings for presence or absence of problems noting: ▪ physiological response to labour ▪ life-threatening complications				
4.9 Evaluates historical and physical findings for presence of risk factors				
4.10 Decides if foetal health status is normal based on the above evaluations; and if not, prepares to discuss treatment/referral options with the client and persons accompanying her				
Task 5: Shares assessments and diagnosis with the woman				
5.1 Informs the woman, in a reassuring manner, of the examination findings and assessments including: ▪ progress of labour/estimated time of birth ▪ her own health status ▪ health status of her foetus				
5.2 Explains possible causes of any abnormalities discovered.				
5.3 If any abnormalities are discovered, informs woman about next steps in addressing them				
5.4 Encourages woman to share reactions to the information provided, gently probing as necessary				
Task 6: Provides care in collaboration with the woman				
Support 6.1 Offers woman reassurance and encouragement				

6.2 Asks client and family , if any questions or concerns				
6.3 Encourages woman to walk and move about, as able/desired/appropriate				
6.4 Offers nourishment as desired /appropriate				
6.5 Offers woman physical comfort measures, as client desires including: ▪ massaging ▪ sponge bathing ▪ cushioning with pillows ▪ covering for warmth if needed ▪ fanning for cooling, if needed				
6.6 Encourages woman to maintain an empty bowel and bladder/assists to facilities, as needed				
6.7 Assists woman to bear down effectively, once the cervix becomes fully dilated				
6.8 Maintain hygiene of the client by providing changes of fresh linen/bedding/clothing				
Treatment and intervention 6.9 Provides treatment or refers, as indicated				
Task 7: Records all findings, assessments, diagnosis and care provided				
7.1 Neatly and clearly writes findings, assessments, diagnoses, and care provided on the intrapartum record; maintains the partograph.				

Learning guide: Pelvic examination during labour

Rating scale
2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards

Task 1: Prepares for vaginal examination (The step MAY NOT BE NEEDED if already done)				
	2	1	0	Comments
Setting 1.1 Decontaminates and cleans the work surface				
1.2 Ensures the availability and arranges: ▪ adequate light ▪ examination table, linen, pillow ▪ bin and cover ▪ soap, water and hand towel ▪ antiseptic solution ▪ gloves ▪ thermometer, BP apparatus, stethoscope, watch, tape measure and weighting scale				
1.3 Greets woman				
1.4 Ensures she is comfortably seated and privacy is maintained				
1.5 If not involved in screening for labour, provider reviews antenatal records for age, parity, weeks of gestation (expected date of confinement (EDC), progress of pregnancy, problems/life threatening complications, risk factors				
1.6 If new to woman, reviews the intrapartum record/partograph for overall pattern of findings, and most recent findings concerning: ▪ maternal health status (temperature, BP, heart rate, respiratory rate) ▪ foetal health status (heart rate, movement) ▪ labour progress (uterine contraction, quality, cervical dilatation and foetal descent)				
1.7 Asks the woman to empty her bladder				
1.8 Explains to the woman the procedure				

Task 2: Inspects external genitalia				
2.1 Inspects: ▪ labia majora ▪ labia minora ▪ -Introitus ▪ -Patches ▪ -Ulcer ▪ -Growth ▪ -warts ▪ -Discharge ▪ -Swelling ▪ -for redness				

Task 3: Performs bimanual examination				
3.1 Explains to the woman about the procedure				
3.2 Lubricates the middle and index finger with clean water/ gel				
3.3 Separates the labia and puts two fingers (middle and index) inside the vagina				
3.4 Puts the other hand on the lower abdomen above the symphysis pubis				
3.5 Using the two fingers in the vagina (vaginal fingers), follows the anterior vaginal mucosa into the anterior fornix and locate the cervix				
3.6 Feels the cervix ▪ for effacement ▪ the cervical os for dilatation by assessing the distance between the fingers in the os				
3.7 Feels for membranes to see whether present or absent if membranes absent, see whether liquor is meconium stained				
3.8 Feels for presenting part: ▪ if the presenting part is hard, confirms whether vertex ▪ feels for any caput ▪ feels for moulding ▪ Sees if the presenting part is closely applied to the cervix ▪ Feels whether the head is flexed (posterior fontanelle at lower level and anterior fontanelle not felt) ▪ Determines the station (above, at or below the ischial spine) by feeling the ischial spines and the presenting part				
3.9 Determines the capacity of the pelvis as follows: ▪ Feels for the sacral promontory by following the sacral curve and take the fingers as high as possible ▪ Feels for the ischial spines				
3.10 After examination, puts the gloves into the tray for disinfection (in 0.5% chlorine)				
3.11 Records the findings on the partograph, if appropriate and labour record				
Subsequent examinations done every four hours				
3.12 Assesses cervical dilation and station of the head and record				
3.13 If membranes are absent, assesses the colour of the liquor, moulding and caput				
3.14 Record the findings on partograph and labour record.				

Module evaluation

Module: Assessment in labour

Please indicate your opinion of the course components using the following rating scale:

5.Strongly Agree 4. Agree 3. No opinion 4. Disagree 5. Strongly disagree

Course component	Rating
1.The discussions helped me to clarify elements related to basic care.	
2.The exercises were useful for learning about basic care during labour.	
3.The role plays on interpersonal communication skills were helpful.	
4.The case studies were useful for practising clinical decision making.	
5.The time for skill practice in a simulated setting was sufficient.	
6.The supervised client practice within the limitations of time was sufficient.	
7.I am confident about providing care during childbirth.	

ASSESSMENT AND MANAGEMENT OF LABOUR

When a woman is admitted with labour pains, systematic assessment needs to be done.

Stages of Labour

First stage: Starting of labour pains to full dilatation of cervix
Second stage: Full dilatation of cervix to the birth of the baby
Third stage: Birth of the baby to the delivery of the placenta

Examination during labour

Abdominal examination

- Duration and frequency of contraction
- Fundal height
- Foetus: lie, presentation, position
- Foetal heart rate (FHR) - Count rate in one minute after contractions

Vaginal examination

- Prepare clean gloves, swabs and pads
- Wash hands with soap and water before and after each examination
- Put on gloves
- Position the woman with legs flexed and apart
- Clean vulva and perineal areas (starting with vulva) with soap and water /Betadine
- Inspect the perineum
  - Bulging perineum, any visible parts
  - Vaginal bleeding,
  - Leaking amniotic fluid, if yes - meconium stained, foul smelling
- Perform gentle vaginal examination (do not start during a contraction, ensure bladder is empty)
  - Determine cervical dilatation in centimetres
  - Feel for membranes –whether intact
  - Determine presenting part- head (hard, round and smooth), or identify the part and manage as per protocol
  - If head, determine position

Preparation for Labour

- No shaving
- Make the woman empty bladder frequently
- Maintain hydration, nutrition (no solids)
- Comfort: physical and emotional
- Observe infection prevention measures
- Keep delivery and neonatal resuscitation equipment ready

Satisfactory progress in labour

- Regular contractions, increase in frequency and duration
- Rate of cervical dilatation at least 1cm/hour
- Cervix well applied to presenting part
- Foetal descent

Unsatisfactory progress in labour

- Infrequent irregular uterine contractions (less than three contractions in10 minutes, each lasting less than 40 seconds)
- Rate of cervical dilatation <1cm/hour
- Cervix poorly applied to presenting part

Foetal distress

- Foetal heart rate <120/min for 1min between the contractions, persistently
- Foetal heart rate >160/min for 1 min between the contractions, persistently
- Meconium stained liquor with /without abnormal FHR

Maternal distress

- Fever
- Tachycardia
- High respiratory rate
- Signs of dehydration
- Acetone in breath

Supportive care

- Respect for the woman (respect during care and discussions and maintain privacy during examinations)
- Communication with the woman and her family about progress and problems and management
- Maintain cleanliness of woman by encouraging her to shower, clean genitalia
- Encourage the woman to walk around
- Encourage to pass urine
- Make sure the woman is adequately hydrated and nourished by drinking fluids and eating light meals
- Pain and discomfort relief as needed
- If requested, allow one accompanying person of women's choice in labour room.

ASSESSMENT AND MANAGEMENT OF LABOUR

Review ANC records

History

- LMP /months of pregnancy
- Past obstetric history/ gynaecological, medical and surgical history
- Duration and frequency of contractions
- Foetal movement
- Any discharge or bleeding per vagina

Examination

Quick evaluation of the general condition of the woman

- Look for pallor, look for signs of dehydration (sunken eyes, dry mouth)
- Blood pressure, pulse, temperature

Abdominal examination

- Fundal height
- Duration and frequency of uterine contractions
- Lie, presentation, position
- Foetal heart rate

Vaginal examination

- Colour of discharge (whether meconium stained), cervical dilation, presentation, position of the foetus

Investigation

Hb, urine routine and microscopy blood grouping, serology (VDRL), HIV, HbSAg (if not known)

Indications for referral in labour (see specific protocols)

- Bleeding
- Pre-eclampsia, Eclampsia
- Abnormal presentation
- Unsatisfactory progress in labour
- Foetal distress associated with any of the above
- Maternal distress

➢ **Refer to specialist** if any medical indication or serology positive

Active labour

- Cervical dilatation

Not yet in active labour

- Cervical dilatation 0-3 cm
- Contractions weak
- Foetal heart rate normal

☐ Monitor frequency, strength, duration of uterine contractions every 30 mins
☐ Monitor foetal heart rate after each contraction
☐ Monitor descent of the presenting part
☐ Assess cervical dilatation- every 4 hours
☐ **Record in partograph every 30 mins**
☐ **Watch for warning signs**

☐ Discharge the woman if living closer to the facility and
☐ Advise to return if:
•Pain/discomfort increases
•Vaginal bleeding
•Foetal movement decreases *(see protocol on decreased foetal movement)*

☐ Rate of cervical dilatation >1cm/hour

☐ Rate of cervical dilatation <1cm/ hour for 4 hours

☐ Foetal distress

•Satisfactory progress

• Unsatisfactory progress

☐ Prop up the woman and ask her to lie on left side and give oxygen 4-6 L
☐ Rule out maternal and foetal causes

• Deliver at full dilatation *(See delivery protocol)*

☐ **Refer to specialist**
☐ Continue monitoring

• If any maternal cause found OR
• No improvement in FHR

• FHR improved
• Satisfactory progress of labour

☐ Deliver *(See delivery protocol)*

ANSWER KEYS- Screening for labour and management of first stage of labour

Knowledge assessment

2. On October 10, Mrs. C. and her husband come to the clinic because Mrs. C. has been experiencing a backache and "stomach pains" all day. List nine steps you would take to evaluate Mrs. C.'s problem.

   The following are correct, but the *answer must include all <u>but</u> the last two steps*:

   a. confirm due date as current
   b. obtain history of backache and stomach pains: onset, duration, frequency and intensity
   c. ask about presence of fluid from the vagina
   d. ask about presence of bloody show or frank blood from the vagina
   e. use Leopold's manoeuvers to determine foetal presentation, position and descent
   f. palpate abdomen to determine presence of contractions
   g. conduct a vaginal examination to determine cervical effacement and dilatation, and foetal presentation and descent
   h. if Mrs. C. is in labour, begin partograph and record all findings
   i. if any findings are abnormal, make arrangements for referral and transport
   j. if mother complains of fluid from the vagina, do litmus or fern test, if available, to determine rupture of membranes
   k. rule out diarrheal disease

3. What are the signs prior to the onset of labour
   a. Lightening occurs 2-3 weeks before term and is the subjective sensation felt by the mother as the baby settles into the lower uterine segment
   b. Engagement takes place a week or two before term in a primigravida
   c. Show- Mucus plug is discharged from the cervix
   d. Cervix becomes soft and effaced
   e. Persistent backache sometimes

4. Describe signs that indicate the:

   At least one characteristic must be listed for each stage/phase of labour and delivery

   a. First stage of labour:
      i. dilation of the cervix
      ii. begins with regular contractions and ends when the cervix is fully dilated
   b. Latent phase of labour:
      i. begins with onset of labour and lasts until the beginning of the active phase of cervical dilation
      ii. ends when the cervix is dilated to 3 cm
      iii. lasts no longer than 8 hrs
   c. Active phase of labour: dilation proceeds from 3 cm to 10 cm
   d. Second stage of labour:
      i. once the woman is fully dilated, the baby descends through the birth canal by force of the woman's bearing down efforts and of uterine contractions
      ii. ends with the birth of the baby
   e. Third stage of labour: the time after the birth of the baby to the delivery of the placenta

5. What are the mechanisms of labour
   a. Descent
   b. Flexion
   c. Internal rotation
   d. Delivery of the head by extension
   e. Restitution
   f. External rotation and birth of the baby

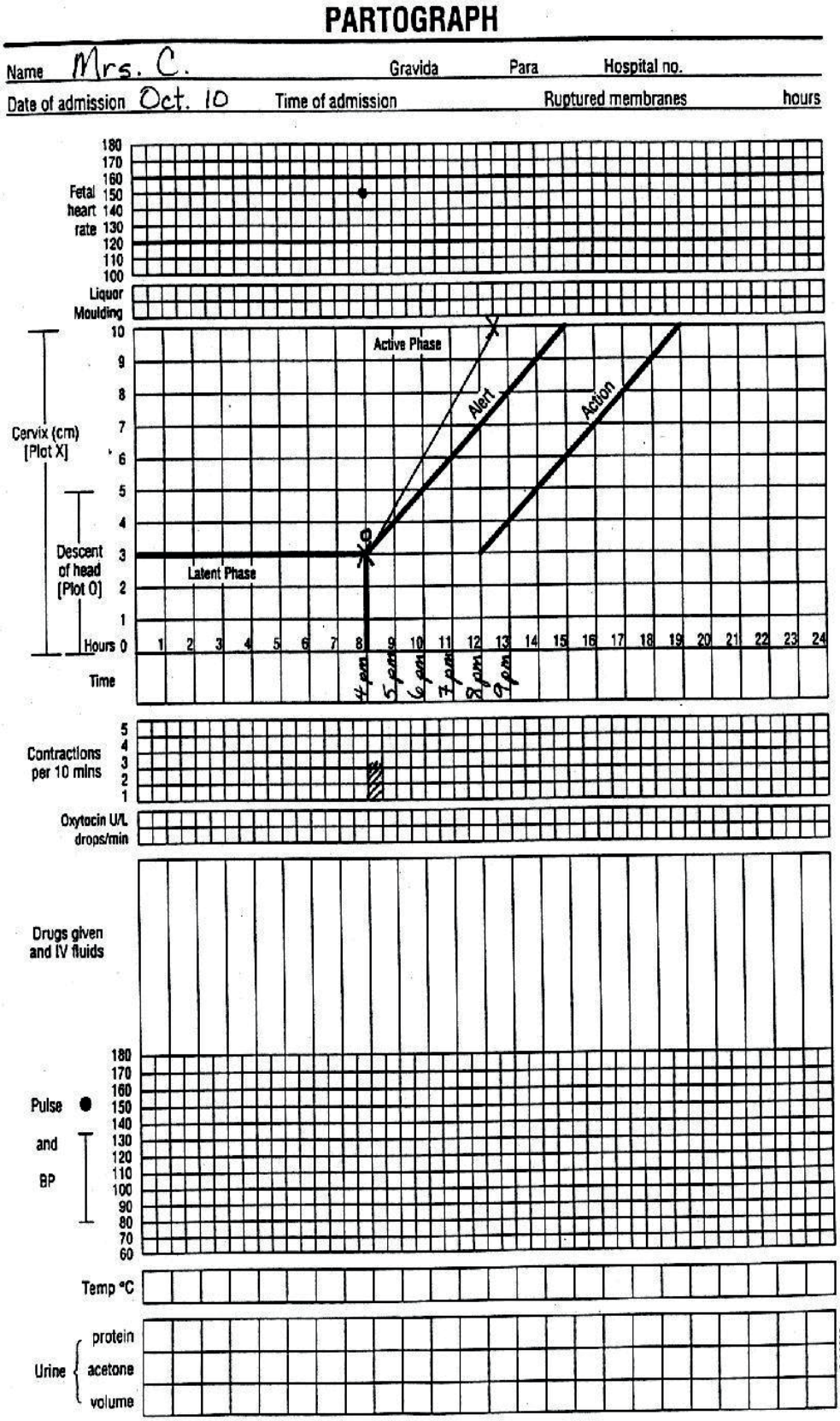
6. List three measures to care for a woman during the first stage of labour
Any three of the following measures are correct:
   a. provide emotional support
   b. offer comfort measures such as assisting the woman to take comfortable positions, massage, sponge bathing, fanning, providing warmth or cooling as needed
   c. advise walking, sitting and squatting to help the baby descend
   d. encourage the woman to drink nourishing fluids and water
   e. monitor labour progress
   f. assist the woman to cope with pain
   g. wash hands frequently; follow infection prevention techniques
   h. encourage the woman to pass urine frequently

7. At 4 PM on October 10, you determine that Mrs. C. is 3 cm dilated. The baby's head is at 3/5 above the pelvic brim. She is having contractions every 4 mins lasting 40 secs. The baby's heart rate is 150 beats per min.

a. Fill in the partograph with this information (see next page).
b. At 8:30 PM, Mrs. C. tells you she feels like pushing and a vaginal examination found cervical dilatation at 10 cm. Fill in the partograph. How long was the first stage of labour?
c. How frequently will you listen to the foetal heart rate and for how long?

The partograph provides the answers to a &b.
The answer to the second part of question b and c are given below.
   b. 4.5 hours
   c. listen to the foetal heart at least every 30 minutes and for 1 whole minute

8. Posterior fontanelle is bordered by:
   a. the occipital bone and two parietal bones
   b. the two occipital bones
   c. the frontal and two parietal bones
   d. the two occipital and the two parietal bones


PARTOGRAPH
Name Mrs. C.
Gravida
Para
Hospital no.
Date of admission Oct. 10
Time of admission
Ruptured membranes
hours
Fetal heart rate
Liquor Moulding
Cervix (cm) [Plot X]
Descent of head [Plot O]
Active Phase
Alert
Action
Latent Phase
Hours
Time
4 pm
5 pm
6 pm
7 pm
8 pm
9 pm
Contractions per 10 mins
Oxytocin U/L drops/min
Drugs given and IV fluids
Pulse
and
BP
Temp °C
Urine
protein
acetone
volume
WHO 93503

Exercise 1
Confirming true labour and assessing stage of labour

Stages of labour	Cervix	Contractions	Vaginal secretions	Descent	Other signs
False labour	No dilatation	Irregular Frequency: fewer than 3 per 10 min Duration: less than 20 sec Not progressive	None	None	Pain felt in front of the abdomen
First stage/latent phase	1-3 cm	Contractions occur irregularly Frequency: and last less than 20 sec each	Possibly show Possibly ruptured membranes	Not progressive descent	Comfortable
First stage of labour active phase	4 -10 cm Rate of dilation is 1 cm per hour	2-3 contractions every 10 mins, lasting 20-40 secs Contractions become more frequent and longer in duration with 3-5 occurring every 10 mins, lasting more than 40 secs	Possibly bloody show Possibly ruptured membranes	Descent begins and engaged in primi	Uncomfortable
Second stage of labour	10 cm	Regular frequency, at least 3 per 10 mins and lasts 40 secs each	Increase in bloody show Membranes are usually ruptured	Descent is steady More and more presenting part is seen at introitus during pushing	Wants to bear down Feels the urge to push

Exercise 2: Plotting the partograph

Purpose of the exercise
The purpose of this exercise is to enable participants to use the partograph to manage labuor.

Case 1

Step 1
Mrs. A was admitted at 05.00 on June 1, membranes ruptured at 04.00, gravida 3, para 2+0. On admission the foetal head was 4/5 palpable above the symphysis pubis and the cervix was 2 cm dilated.

Answer the following question:
Q: What should be recorded on the partograph?
ANSWER: see partograph case 1
Note: Mrs. A is not in active labour. Record only the details of her history, i.e., first four bullets, not the descent and cervical dilation.

Step 2
At 09.00: The foetal head is 3/5 palpable above the symphysis pubis. The cervix is 5 cm dilated.

Answer the following question:
Q: What should you now record on the partograph?
ANSWER: see partograph case 1
Note: Mrs. A is now in the active phase of labour. Plot this and the following information on the partograph:

- 3 contractions in 10 minutes, each lasting 20–40 seconds
- Foetal heart rate (FHR) 120
- Membranes ruptured, amniotic fluid clear
- Sutures of the skull bones are apposed
- Blood pressure 120/70 mmHg
- Temperature 36.8°C
- Pulse 80/minute
- Urine output 200 mL; negative protein and acetone

Answer the following questions:
Q: What steps should be taken?
Inform Mrs. A and her family of the findings and what to expect; encourage to ask questions; provide comfort, hydration and nutrition
Q: What advice should be given?
Assume position of choice
Q: What do you expect to find at 13.00?
Progress to at least 9 cm dilation

Step 3
Plot the following information on the partograph:

09.30 FHR 120, Contractions 3/10 each 30 seconds, Pulse 80/minute

10.00 FHR 136, Contractions 3/10 each 30 seconds, Pulse 80/minute

10.30 FHR 140, Contractions 3/10 each 35 seconds, Pulse 88/minute

11.00 FHR 130, Contractions 3/10 each 40 seconds, Pulse 88/minute, Temperature37°C

11.30 FHR 136, Contractions 4/10 each 40 seconds, Pulse 84/minute, Head is 2/5 palpable

12.00 FHR 140, Contractions 4/10 each 40 seconds, Pulse 88/minute

12.30 FHR 130, Contractions 4/10 each 45 seconds, Pulse 88/minute

13.00 FHR 140, Contractions 4/10 each 45 seconds, Pulse 90/minute, Temperature37°C

The foetal head is 0/5 palpable above the symphysis pubis, cervix is fully dilated, amniotic fluid clear, sutures apposed, blood pressure 100/70 mmHg, urine output 150 mL; negative protein and acetone

ANSWER: see partograph case 1

Answer the following questions:

Q: What steps should be taken?

Steps prepare for birth

Q: What advice should be given?

Push only when urge to push

Q: What do you expect to happen next?

Expect spontaneous vaginal delivery

Step 4

Record the following information on the partograph:

13.20: Spontaneous birth of a live female infant weighing 2,850 g

ANSWER: See partograph case 1

Answer the following questions:

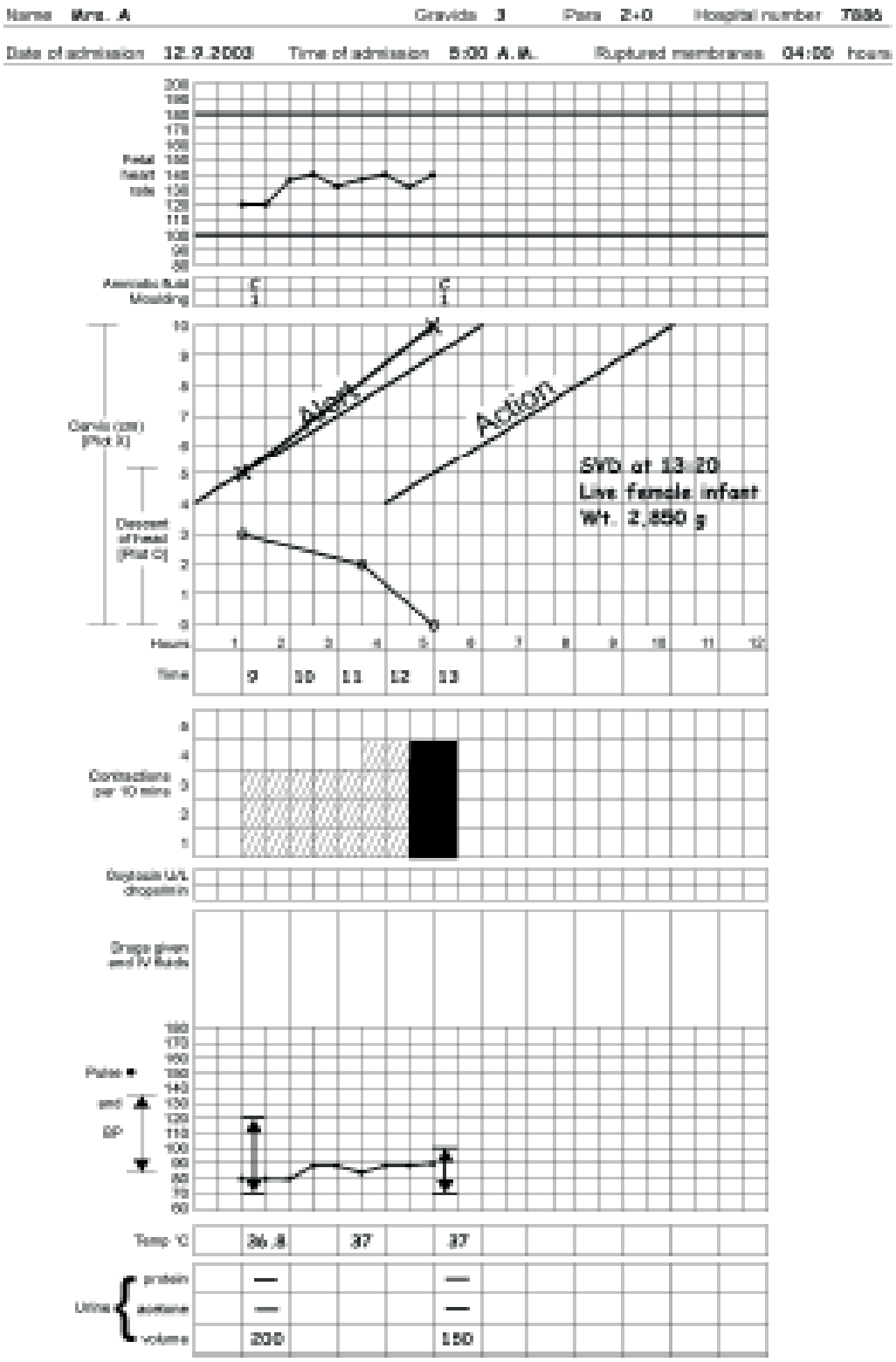
Q: How long was the active phase of the first stage of labour?

Ist stage of active labour is 5 hours (4 hours plotted (0900-1300) plus 1 hr for dilation from 4-5 cm)

Q: How long was the second stage of labour?

2nd stage of active labour is 20 minutes.

Case 1


Name Mrs. A
Gravida 3
Para 2+0
Hospital number 7886
Date of admission 12.9.2003
Time of admission 5:00 A.M.
Ruptured membranes 04:00 hours
Alert
Action
SVD at 13:20
Live female infant
Wt. 2,850 g
Hours
Time
Temp °C
Urine
protein
acetone
volume

Case 2

Step 1
Mrs. B was admitted at 10.00 on 12.6.2017

Membranes intact , Gravida 1, Para 0+0

Record the information above on the partograph, together with the following details:

- The foetal head is 5/5 palpable above the symphysis pubis
- The cervix is 4 cm dilated
- 2 contractions in 10 minutes, each lasting less than 20 seconds
- FHR 140
- Membranes intact
- Blood pressure 100/70 mmHg
- Temperature 36.2°C
- Pulse 80/minute
- Urine output 400 mL; negative protein and acetone

ANSWER: see partograph case 2
Answer the following questions:
Q: What is your diagnosis?
Active labour
Q: What action will you take?
Inform Mrs. B and her family about findings and what to expect; give continual opportunity to ask questions: encourage Mrs. B to walk around and to drink and eat as needed.

Step 2
Plot the following information on the partograph:

10.30 FHR 140, Contractions 2/10 each 15 sec, Pulse 90/minute

11.00 FHR 136, Contractions 2/10 each 15 sec, Pulse 88/minute

11.31 FHR 140, Contractions 2/10 each 20 sec, Pulse 84/minute

13.0 FHR 136, Contractions 2/10 each 15 sec, Pulse 88/minute, Temperature 36.2°C, Membranes intact

The foetal head is 5/5 palpable above the symphysis pubis. The cervix is 4 cm dilated, membranes intact.

Answer the following questions:
Q: What is your diagnosis?
Prolonged active phase; less than 3 contractions per 10 minutes, each lasting less than 40 seconds. Maternal and foetal condition good.
Q: What action will you take?
Inform MRs. B and her family on the findings and if no progress the need for referral as augmentation of labour cannot be done in the CHC.

Step 3
Plot the following information on the partograph:

12.30 FHR 136, Contractions 1/10 each 15 sec, Pulse 90/minute

13.00 FHR 140, Contractions 1/10 each 15 sec, Pulse 88/minute

13.31 FHR 130, Contractions 1/10 each 20 sec, Pulse 88/minute

14.00 FHR 140, Contractions 2/10 each 20 sec, Pulse 90/minute, Temperature 36.8°C, Blood pressure 100/70 mmHg

The foetal head is 5/5 palpable above the symphysis pubis. Urine output 300 mL; negative protein and acetone

ANSWER: see partograph case 2

Answer the following questions:

Q: What is your diagnosis?

Prolonged active phase; less than 3 contractions per 10 minutes, each lasting less than 40 seconds. Maternal and foetal condition good.

Q: What will you do**?**

Inform the family about the lack of progress and the need to refer to a referral facility. Patient is referred and in the referral facility, augmentation of the labour with oxytocin and artificial rupture of membranes is done. Mrs. B and her family is informed of the actions taken, encourage to ask questions, encourage fluid intake and help Mrs. B to assume a position of comfort.

Plot the following information on the partograph

14:00:

- The cervix is 4 cm dilated, sutures apposed
- Labour augmented with oxytocin 2.5 units in 500 mL IV fluid at 10 drops per minute (dpm)
- Membranes artificially ruptured, clear fluid

ANSWER: See the partograph case 2

Step 4

Plot the following information on the partograph:

14.30:

- 2 contractions in 10 minutes, each lasting 30 seconds
- Infusion rate increased to 20 dpm
- FHR 140, Pulse 90/minute

15.00:

- 3 contractions in 10 minutes, each lasting 30 seconds
- Infusion rate increased to 30 dpm
- FHR 140, Pulse 90/minute

15:30:

- 3 contractions in 10 minutes, each lasting 30 seconds
- Infusion rate increased to 40 dpm
- FHR 140, Pulse 88/minute

16.00:

- Foetal head 2/5 palpable above the symphysis pubis
- Cervix 6 cm dilated; sutures apposed
- 3 contractions in 10 minutes, each lasting 30 seconds
- Infusion rate increased to 50 dpm
- FHR 144, Pulse 92/minute
- Amniotic fluid clear

16.30:

- 3 contractions in 10 minutes, each lasting 45 seconds
- FHR 140, Pulse 90/minute
- Infusion remains at 50 dpm

ANSWER: see the partograph case 2
Answer the following question:
Q: What steps would you take?
Continue augmentation of labour, provide physical and emotional support, encourage fluids

Step 5
Plot the following information on the partograph:

17.00 FHR 138, Pulse 92/minute, Contractions 3/10 each 40 sec, Maintain at 50 dpm

17.30 FHR 140, Pulse 94/minute, Contractions 3/10 each 45 sec, Maintain at 50 dpm

18.00 FHR 140, Pulse 96/minute, Contractions 4/10 each 50 sec, Maintain at 50 dpm

18.30 FHR 144, Pulse 94/minute, Contractions 4/10 each 50 sec, Maintain at 50 dpm

ANSWER: See partograph case 2

STEP 6
19.00:

- Foetal head 0/5 palpable above the symphysis pubis
- 4 contractions in 10 minutes, each lasting 50 seconds
- FHR 144, Pulse 90/minute
- Cervix fully dilated

ANSWER: See partograph case 2

STEP 7
Record the following information on the partograph:

19.30:

- 4 contractions in 10 minutes, each lasting 50 seconds
- FHR 142, Pulse 100/minute

20.00:

- 4 contractions in 10 minutes, each lasting 50 seconds
- FHR 146, Pulse 110/minute

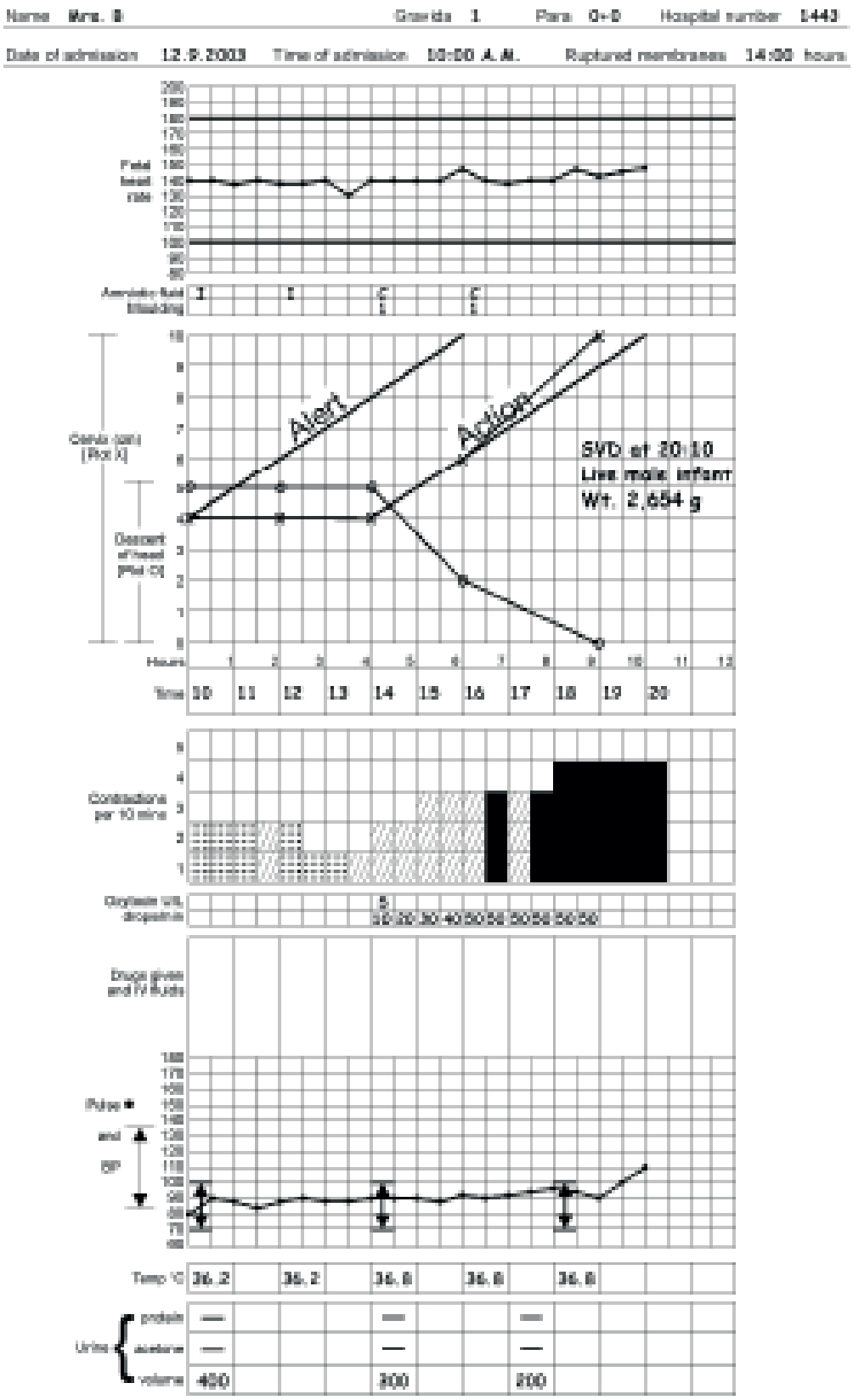
20.10:

- Spontaneous birth of a live male infant weighing 2,654 g

ANSWER: See partograph case 2
Answer the following questions:

Q: How long was the active phase of the first stage of labour? Q: How long was the second stage of labour?
Ist stage of labour – 9 hours
2nd stage of labour- 1 hr 10 min
Q: Why was labour augmented?
Due to lack of progress

Case 2


Name Mrs. B
Gravida 1
Para 0+0
Hospital number 1443
Date of admission 12.9.2003
Time of admission 10:00 A.M.
Ruptured membranes 14:00 hours
Alert
Action
SVD at 20:10
Live male infant
Wt. 2,654 g
Hours
Time
Contractions per 10 mins
Drugs given and IV fluids
Temp °C
Urine
protein
acetone
volume
420
300
200

Case 3

Step 1

- Mrs. C was admitted at 10.00 on 12.9.2003
- Membranes ruptured 09.00
- Gravida 4, Para 3+0
- Hospital number 6639

Record the information above on the partograph, together with the following details:

- Foetal head 3/5 palpable above the symphysis pubis
- Cervix 4 cm dilated
- 3 contractions in 10 minutes, each lasting 30 seconds
- FHR 140
- Amniotic fluid clear
- Sutures apposed
- Blood pressure 120/70 mmHg
- Temperature 36.8°C
- Pulse 80/minute
- Urine output 200 mL; negative protein and acetone

ANSWER: See partograph case 3

Step 2
Plot the following information in the partograph:

10.30 FHR 130, Contractions 3/10 each 35 sec, Pulse 80/minute

11.00 FHR 136, Contractions 3/10 each 40 sec, Pulse 90/minute

11.31 FHR 140, Contractions 3/10 each 40 sec, Pulse 88/minute

12.00 FHR 140, Contractions 3/10 each 40 sec, Pulse 90/minute, Temperature37°C, Head 3/5 palpable

12.30 FHR 130, Contractions 3/10 each 40 sec, Pulse 90/minute

13.00 FHR 130, Contractions 3/10 each 45 sec, Pulse 88/minute

13.31 FHR 120, Contractions 3/10 each 45 sec, Pulse 88/minute

1400 FHR 130, Contractions 4/10 each 45 sec, Pulse 90/minute, Temperature37°C, Blood pressure 100/70 mmHg

Foetal head 3/5 palpable above the symphysis pubis, cervix 6 cm dilated, amniotic fluid clear, sutures overlapped but reducible
ANSWER: see partograph case 3

Step 3
14.30 FHR 120, Contractions 4/10 each 40 sec, Pulse 90/minute, Clear fluid

15.00 FHR 120, Contractions 4/10 each 40 sec, Pulse 88/minute, Blood-stained fluid

15.30 FHR 100, Contractions 4/10 each 45 sec, Pulse 100/minute

16.00 FHR 90, Contractions 4/10 each 50 sec, Pulse 100/minute, Temperature37°C

16.30 FHR 96, Contractions 4/10 each 50 sec, Pulse 100/minute

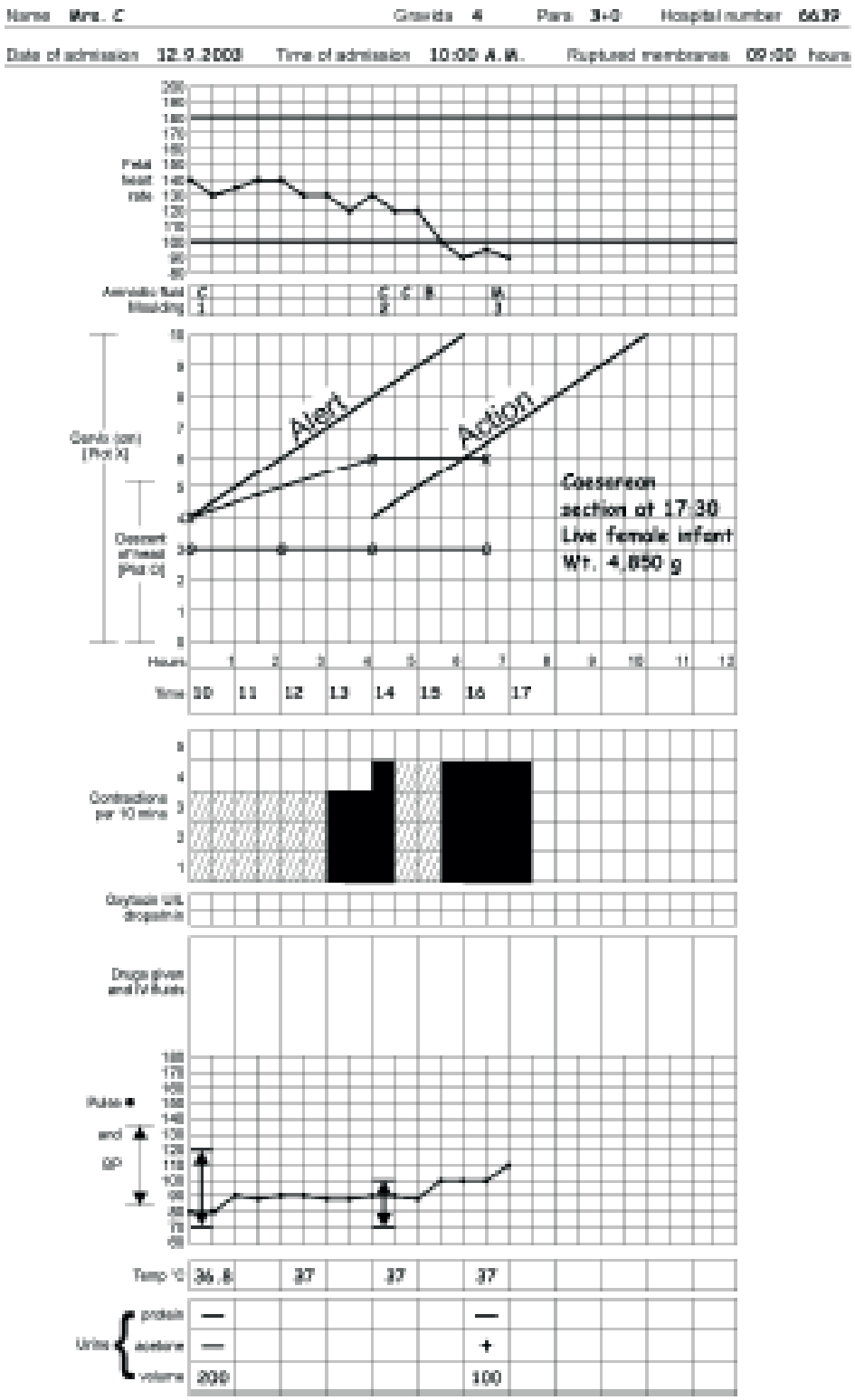
18.0 FHR 90, Contractions 4/10 each 50 sec, Pulse 110/minute

Foetal head 3/5 palpable above the symphysis pubis, cervix 6 cm dilated, amniotic fluid meconium stained, sutures overlapped and not reducible, urine output 100 mL; protein negative, acetone 1+
ANSWER: See partograph case 3

Step 4
Record the following information on the partograph:

Caesarean section at 17.30, live female infant with poor respiratory effort and weighing 4,850 g
ANSWER: See partograph case 3
Answer the following questions:
Q: What is the final diagnosis?
Obstructed labour with foetal head 3/5 palpable above the symphysis pubis.

Case 3


Name Mrs. C
Gravida 4
Para 3+0
Hospital number 6639
Date of admission 12.9.2008
Time of admission 10:00 A.M.
Ruptured membranes 09:00 hours
Alert
Action
Caesarean section at 17:30
Live female infant
Wt. 4,850 g
Hours
Time
10
11
12
13
14
15
16
17
Temp °C
36.8
37
37
37
protein
acetone
volume
200
100

Exercise 3
Various type of assessments in each stage of labour and normal and possible abnormal findings

What to assess	Stage of labour How often to assess		Normal finding	Abnormal finding and action to be taken
	Latent 1st stage	Active stage		
BP	Every 4 hrs	Every 4 hrs	Systolic 90-140 mmHg	If systolic <90, rapid assessment If systolic 90-110 mmHg, act based on *clinical protocol on Hypertensive disorder in pregnancy* If diastolic BP is more than 110 mmHg, act based on *clinical protocol on Hypertensive disorder in pregnancy*
Temperature	Every 4 hrs	Every 2 hrs	Less than 38 degree Celsius	More than 38 degree Celsius, refer Encourage increased fluid intake by mouth. Use tepid sponge *Consider paracetamol 500–1000 mg every six to eight hours (maximum of 4000 mg in 24 hours) to help decrease temperature*
Pulse	Every 4 hrs	Every 30 mins	90-110 per min	Less than 90 or 110 or more per min, rule out shock Act as per *clinical protocol on shock*
Foetal heart	Every 4 hrs	Every 30 mins	120-160 per min Active labour-100-180 per min	Absent foetal heart, act based on *clinical protocol on decreased foetal movement or intrauterine foetal death* If foetal heart rate not within normal range, act based on *clinical protocol on assessment in labour*
Membranes and amniotic fluid	When doing vaginal examination or when leaking noticed or reported	When doing vaginal examination or when leaking noticed or reported	Membranes rupture spontaneously during labour or childbirth Amniotic fluid is clear and has a distinct odour	If red/bloody- *refer to clinical protocol on APH* If green or brown, refer If foul smelling, refer If membranes ruptured more than 18 hours before birth, act based on *clinical protocol on PROM*

Moulding	When doing a vaginal examination	When doing a vaginal examination	Bones separated or just touch each other	Bones overlap and watch out for signs of unsatisfactory progress
Foetal descent	Once	Every 4 hrs	Descent progresses continually in active phase of labour	If descent is not progressing continuously, refer to *clinical protocol on unsatisfactory progress of labour*
Contractions – frequency and duration	Every 4 hrs	Every 30 mins	Latent phase: Contractions occur irregularly Frequency: and last less than 20 sec each Active phase: 2-3 contractions every 10 mins, lasting 20-40 secs Contractions become more frequent and longer in duration with 3-5 occurring every 10 mins, lasting more than 40 secs	If continuous with no relaxation of uterus, ***refer to clinical protocol on APH or ruptured uterus*** If contractions are decreasing in frequency/duration, act based on *clinical protocol on unsatisfactory progress of labour*
Cervix – dilatation and presentation	Every 4 hrs	Every 4 hrs	Latent phase: Dilation 1-3 cm Dilation is progressing slowly Presentation cephalic Active phase: Dilation is 4-10 cm Dilation is increasing by 1 cm per hour Presentation is cephalic	If foetus is breech, act based on *clinical protocol on breech* If cord presentation, act based on *clinical protocol on cord prolapse* If dilation has not increased for more than 8 hrs, or dilation has not progressed beyond 3 cm in latent phase or dilation has not increased by 4 cm in 4 hrs in active phase, act based on *clinical protocol on unsatisfactory progress of labour*
Vaginal secretions or bleeding	Every 4 hrs or when increased secretions or bleeding reported	Every 4 hrs or when increased secretions or bleeding reported	There is no blood, foul-smelling discharge Normal variation- mucus plug, bloody	If blood, act based on *clinical protocol on APH* If meconium stained, refer

			show, amniotic fluids (if membrane ruptured)	
Maternal mood and behaviour	Every I hr	Every 30 min	Latent phase: Woman is comfortable, can walk and eat and drink Active phase: Woman is uncomfortable and needs support and rest, can drink fluids	If uncomfortable, provide physical and psychological support

Handout 1: Elements of physical examination and normal and possible abnormal findings and follow up action

Element of physical examination	Normal finding	Abnormal finding /follow up action to be taken
General well being (including gait, behaviour, movements, vocalization)	Normal gait and movements Behaviour and vocalisation normal	If any abnormality noticed, find out about injury, whether without food or fluid, on medication, having contractions, do further assessments and take appropriate action If degree of anxiety is high, find out reason and counsel
Skin	No lesions and bruises	If any bruises, suspect violence and obtain additional information
Conjunctiva	No pallor and no sign of jaundice	Pale, get Hb checked, act based on *clinical protocol on anaemia.* If jaundice, refer.
Face	No oedema	Oedema, act based on *clinical protocol on hypertensive disorders of pregnancy*
Extremities	NO oedema No varicose veins	Oedema, act based on *clinical protocol on hypertensive disorders of pregnancy* If varicose veins, watch out for deep vein thrombosis after delivery
BP	Systolic 90-140 mmHg	If systolic <90, rapid assessment If systolic 90-110 mmHg, act based on *clinical protocol on Hypertensive disorder in pregnancy* If diastolic BP is more than 110 mmHg, act based on *clinical protocol on Hypertensive disorder in pregnancy*
Temperature	Less than 38 degree Celsius	More than 38 degree Celsius, refer
Pulse	90-110 per min	Less than 90 or 110 or more per min, rule out shock Act as per *clinical protocol on shock*
Visual inspection of breasts	Skin is smooth and no lesions or sores Nipples normal with no discharge	If any lesion, ulceration, lumps, refer Abnormal nipple discharge or ulceration, refer Inverted nipple- test for protractility and teach how to gently pull out
Abdomen		
Surface of the abdomen	No scar	Scar from previous caesarean or other surgery, refer or consult expert
Uterine shape	Oval (longer vertically)	If longer horizontally, suspect transverse lie, refer
Fundal height	Fundal height consistent with weeks of gestation	If fundal height is less than 37 weeks, onset of labour is apparent, *act as per clinical protocol on PROM* If fundal height is more than expected height at term, then suspect multiple pregnancy and act as per *clinical protocol o multiple pregnancy*
Foetal parts and movements	Buttocks palpable in the fundus of the uterus and head in the lower segment and can be moved backwards and forwards between	More than one foetus suspected (multiple foetal parts, uterine size larger, more than one foetal heart heard) Act as per *clinical protocol on multiple pregnancy*

	Foetal movements may or may not be felt but the mother will be able to report	
Foetal lie and presentation	Longitudinal and cephalic Head may be engaged or free and floating	If the foetus is in breech presentation and in the perineum, act as per *protocol on breech* If the foetus is in transverse lie, refer
Foetal descent	Descent progresses continually in active phase of labour (see slide on determining foetal descent)	If descent is not progressing continuously, refer to *clinical protocol on unsatisfactory progress of labour*
Foetal heart	120-160 per min Active labour- 100-180 per min	Absent foetal heart, act based on *clinical protocol on decreased foetal movement or intrauterine foetal death* If foetal heart rate not within normal range, act based on *clinical protocol on assessment in labour*
Bladder	Not palpable	If palpable, catheterise
Contractions – frequency and duration	Latent phase: Contractions occur irregularly Frequency: and last less than 20 sec each Active phase: 2-3 contractions every 10 mins, lasting 20-40 secs Contractions become more frequent and longer in duration with 3-5 occurring every 10 mins, lasting more than 40 secs	Distinguish between true and false labour (see table under exercise 1) Evaluate effectiveness of contractions (see slide on evaluating effectiveness) If continuous with no relaxation of uterus, *refer to clinical protocol on APH or ruptured uterus* If contractions are decreasing in frequency/duration, act based on *clinical protocol on unsatisfactory progress of labour*
Pelvic examination		
Vaginal opening Skin labia	Nothing is protruding No sores or ulcers or warts or lice Labia soft and not painful	If there is cord protruding, act according *to clinical protocol on cord prolapse* If there is hand or foot protruding, refer Refer or consult an expert if sores or ulcers or other signs or labia painful
Vaginal secretions or bleeding	There is no blood, foul-smelling discharge Normal variation- mucus plug, bloody show, amniotic fluids (if membrane ruptured)	If blood, act based on *clinical protocol on APH* If meconium stained, refer
Dilatation	Latent phase: Dilation 1-3 cm Dilation is	Distinguish between true and false labour. If dilation has not increased for more than 8 hrs, or dilation has not progressed beyond 3 cm in latent phase or

	progressing slowly Active phase: Dilation is 4-10 cm Dilation is increasing by 1 cm per hour	dilation has not increased by 4 cm in 4 hrs in active phase, act based on *clinical protocol on unsatisfactory progress of labour*
Membranes and amniotic fluid	Membranes rupture spontaneously during labour or childbirth Amniotic fluid is clear and has a distinct odour	If red/bloody- *refer to clinical protocol on APH* If green or brown, refer---- If foul smelling, refer If membranes ruptured more than 18 hours before birth, act based on *clinical protocol on PROM*
Presentation	Cephalic	If foetus is breech, act based on *clinical protocol on breech* If cord presentation, act based on *clinical protocol on cord prolapse* *If cephalic and face, brow, chin or occipito posterior, refer*
Moulding	Bones of the foetal skull separated or just touch each other	If bones overlap, assess further for signs and symptoms of unsatisfactory progress of labour. If unsatisfactory progress of labour, act as *per clinical protocol on unsatisfactory progress of labour*

Handout 2: History taking

Question	Use of information/follow-up action
1.Personal information	
Name	Identification
Age	If adolescent, special care needed
Contact details	Contacting the woman
Number of previous pregnancies (gravida) and childbirth (parity)	Planning for individualisedbasic care provision
Current problems (obstetric, medical, social or personal)	For gathering additional information for further assessment and plan of action
Care giver (other than the midwife in the health centre)	Purpose of seeking care and outcome
2. Estimated time of delivery	
Estimated date of confinement (EDC)	If less than 37 weeks' gestation onset of labour is apparent, immediate action is needed ***If EDC is not known, estimate gestational age using reported date of first foetal movement (adding 20 weeks to the date, if first baby or 24 weeks to the date if at least one baby, fundal height (symphysis pubis to fundus) or ultrasound.***
3. Present pregnancy/labour	
Antenatal care	If yes, date of first visit, how many visits, care giver, tests, immunizations, prophylaxis, counselling If no, be alert for symptoms and signs of conditions or complications
Rupture of membranes	If yes, timing of rupture, colour of amniotic fluid, whether foul smelling If red/bloody- *refer to clinical protocol on APH* If green or brown, refer---- If foul smelling, refer If membranes ruptured more than 18 hours before birth or if more than 4 hours but labour has not started, act based on *clinical protocol on PROM*
Regular contractions	If no, assess for false labour (see table under exercise 1), provide care as in the learning guide on screening for labour. If regular contractions began, time of starting is important for diagnosing unsatisfactory progress of labour. If more than 12 hours, act as per *clinical protocol on unsatisfactory progress of labour*
Frequency and duration of contractions	Information is useful in evaluating the effectiveness of contractions, phase and stage of labour
Foetal movement in the last 24 hours	If no foetal movement, act as *per clinical protocol on decreased foetal movement or intra-uterine foetal death*
Timing of food or fluid intake	Watch for signs of dehydration and finding out reasons for not taking food or fluid

4.Obstetric history	
If not a primi, in the previous pregnancy/ies ▪ history of caesarean section, ruptured uterus or uterine surgery? ▪ history of convulsions during pregnancy or childbirth ▪ Tears and degree ▪ PPH ▪ Stillbirths, preterm or low birth weight, neonatal deaths, big baby	Refer or consult expert Watch out for complications during childbirth
History of breast feeding	If no, find out reasons for not breast feeding If yes, duration of breast feeding, problems etc. If problems during breast feeding, watch out for problems with breast feeding after delivery
5. Medical history	
History of heart disease, kidney problems, diabetes, hypertension, tuberculosis, hepatitis or other problems	Refer or consult medical and OBGYN expert
History of anaemia and whether on treatment	Assess Hb status and act as per *clinical protocol on anaemia*
History of syphilis, HIV	Refer
History of surgery	Type of surgery and potential to complicate childbirth
On any medication and for what purpose	To guide individualised care
Tetanus toxoid immunisation	To assess women's need for further immunization
6.Complication readiness plan	
Plans for complication readiness	If yes, confirm arrangements If no, make arrangements (see slide on complication readiness)

Handout 3: Information to be recorded on the partograph:

- **Client information**: Record the woman's name, gravida, para, hospital number, date and time of admission, and time of ruptured membranes or time elapsed since rupture of membranes (if rupture occurred before charting on the partograph began).
- **Foetal heart rate**: Record every half hour.
- **Amniotic fluid**: Record the colour of the amniotic fluid and the status of membranes at every vaginal examination:
  I: membranes intact
  R: membranes ruptured
  C: membranes ruptured, clear fluid
  M: meconium-stained fluid
  B: blood-stained fluid
- **Moulding:**
  1. sutures apposed
  2. sutures overlapped but reducible
  3. sutures overlapped and not reducible.
- **Cervical dilatation**: Assess at every vaginal examination and mark a cross (**X**) on the partograph. Begin plotting on the partograph at 4 cm.
- **Alert line**: A line starts at 4 cm of cervical dilatation to the point of expected full dilatation at the rate of 1 cm per hour.
- **Action line**: Parallel and four hours to the right of the alert line.
- **Descent assessed by abdominal palpation**: Refers to the part of the head (divided into five parts) palpable above the symphysis pubis; record as a circle (**O**) at every abdominal examination. At 0/5, the sinciput (S) is at the level of the symphysis pubis.
- **Hours:** Record the time elapsed since onset of active phase of labour (observed or extrapolated).
- **Time:** Record actual time.
- **Contractions:** Chart every half hour; count the number of contractions in a 10-minute time period and their duration in seconds:
  Less than 20 seconds: 
  Between 20 and 40 seconds: 
  More than 40 seconds: 
- **Oxytocin**: Record the amount of oxytocin per volume IV fluids in drops per minute every 30 minutes when used.
- **Drugs given**: Record any additional drugs given.
- **Pulse**: Record every 30 minutes and mark with a dot (●).
- **Blood pressure**: Record every four hours and mark with arrows.
- **Temperature**: Record every two hours.
- **Protein, acetone and volume**: Record when urine is passed.

Handout 4: Supportive care during labour

1. Encourage the woman to have companion of choice
   - Encourage the companion to provide support by rubbing her back and encouraging her to move around.
2. Ensure good communication and support by staff
   - Explain all procedures, seeking permission for procedures, discussing findings
   - Ensure privacy and confidentiality
   - Provide supportive, encouraging atmosphere for birth and is respectful of the woman's wishes
3. Maintain cleanliness of the woman and her environment
   - Encourage the woman to wash herself or shower at the onset of labour
   - Wash the vulval and perineal areas before each examination
   - Provider washes hands with soap and water before each examination
   - Maintain cleanliness in labour and birthing areas. Clean up spills immediately.
4. Ensure mobility
   - Encourage the woman to move about freely
   - Support the woman's choice of positon during labour and birth
5. Encourage the woman to empty her bladder regularly
6. Encourage the woman to eat and drink fluids (latter even in advanced labour)
7. Teach the woman breathing techniques, by encouraging the woman to breathe out more slowly than usual and relax with each expiration
8. Help the woman who is anxious, fearful or in pain
   - Give her praise, encouragement and reassurance
   - Give her information about the labour process and progress
   - Listen to her concerns
   - Encourage birth companion to provide support
9. If distressed by pain:
   - Suggest change in position
   - Encourage mobility
   - Encourage companion to massage her back, cool cloth at the back of her neck, sponge her face between contractions
   - Encourage breathing techniques
   - Encourage the woman to take a warm shower
10. Avoid the following practices:
    - Do not routinely shave the perineal/pubic area prior to a vaginal birth
    - Do not routinely cleanse the vagina with an antiseptic during labour
    - Do not routinely give an enema to women in labour

study: Assessment in labour

Directions
Read and analyse 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 developed.

Client profile

Mrs. Domingas is 30 years of age. She attended the antenatal clinic a weeks ago and has now come to the hospital with her mother-in-law because labour pains started 3 hours ago. Mrs. A reports that the pains start in her back and move forward, last 20 seconds, and occur about every 8 minutes. Mrs. Domingas appears very anxious.

Pre-assessment

1. Before beginning your assessment, what steps do you take?
   - Greet Mrs. Domingas respectfully and with kindness.
   - Offer a seat and make her feel comfortable and welcome.
   - Establish rapport and build trust.
     A good relationship helps to ensure that the client will adhere to the care plan and return for continued care.
   - Ascertain whether Mrs. Domingas had a quick check by someone.
   - If not do a quick check to detect whether she is in advanced labour or has signs/symptoms of life threatening conditions. If in advanced labour or has life threatening conditions, ensure that she receives urgent care.

Assessment (information gathering through history, physical examination, and laboratory testing)

5. What history will you include in your assessment of Mrs. Domingas and why?

   - If she is not in advanced labour, take a complete history (i.e., personal information, estimated date of childbirth/menstrual history, history of present pregnancy and labour
     childbirth, obstetric history, medical history) to guide further assessment and help individualize care provision. Some responses may help determine whether she is in labour as well as stage/phase of labour, or may indicate a special need/condition that requires additional care or a life-threatening complication that requires immediate attention.
   - When asking about the history of the current labour, note whether her contractions are increasing in intensity, frequency, and duration.
   - Observe for any anxiety/stress while taking history pregnancy, note any stressful experiences that may explain her extreme anxiety.

6. What physical examination will you include in your assessment of Mrs. Domingas and why?
   - Perform complete physical examination if not in advanced labour (use the handout) to guide further assessment and individualized care. Some findings may help determine whether she is in labour as well as stage/phase of labour, or may indicate a special need/condition that requires additional care or a life-threatening complication that requires immediate attention.
   - ➢ Assessment of general well-being, including gait and movements, behaviour and vocalizations, help to assess her degree of anxiety.
   - ➢ Mrs. Dominga's respirations, blood pressure, temperature, and pulse should be measured to rule out any physical problems or abnormalities that might explain her feelings of anxiety.
   - ➢ During abdominal examination, special attention should be given to:
     - o Fundal height, which will helps confirm gestational age or indicate size-date discrepancy
     - o Descent of the presenting part, which would help in evaluating progress of labour
     - o Foetal heart tones, which will help indicate foetal condition
     - o Frequency and duration of contractions to determine quality of contractions and help determine stage/phase of labour, as well as evaluate progress of labour

- Cervical examination should include assessment of:
  - Dilation of the cervix to help determine stage and phase of labour, as well as evaluate
  - progress of labour
  - Membranes and amniotic fluid to determine whether the membranes have ruptured and to
  - help assess foetal condition
  - Presentation to determine if there is any abnormality that will affect the birth
  - Moulding to help determine foetal condition and indicate possible obstruction of labour
  - (foetal-pelvic disproportion)

7. What laboratory tests will you include in your assessment of Mrs. Domingas and why?
   - Routine laboratory tests (urine, Hb)
   - Blood sugar, blood grouping and Rh factor and serology for syphilis, HIV testing (as needed)

   The findings will help to guide further assessment and help care provision as well as indicate special need/condition requiring additional care or a life-threatening complication that requires immediate attention.

Diagnosis (interpreting information to identify problems/needs)

You have completed your assessment of Mrs. A and your main findings include the following:

History**:**

- Mrs. Domingas is 39 weeks pregnant.
- This is her second pregnancy.
- Her first pregnancy and birth were uncomplicated, although she repeatedly states that labour was more painful than she had expected.
- She confirms that labour started 3 hours ago and that contractions seem to be growing increasingly longer and more frequent.
- All other aspects of her history are normal or without significance.

Physical Examination:
- Vital signs are normal (Blood pressure is 120/80, pulse is 88, respiration is normal, temperature is normal)
- On abdominal examination: Fundal height is 33 cm, presenting part is 3/5ths above the pelvic brim, foetal heart is 124 beats per minute, contractions are irregular every 8-10 minutes and lasts 14-18 seconds.
- On pelvic examination: Cervical dilation is 3cm, membranes are intact, vertex presentation.
- No pedal oedema, no pallor

Testing:
- Blood group is O positive, RPR is negative, and blood was tested for HIV.

5. Based on these findings, what is Mrs. Dominga's diagnosis (problem/need) and why?

- Mrs. Domingas is in latent phase of first stage of labour.
- She is anxious, probably because of her experience in the first pregnancy.

Care provision

6. Based on your diagnosis (problem/need identification), what is your plan of care for Mrs. A. and why?

- Ensure supportive and encouraging atmosphere that is respectful that will help to ally anxiety and provide emotional support.
- Ongoing assessment of vital signs, foetal heart tones, descent and contractions should be done to detect any problems or abnormalities in the mother and foetus or in the progress of labour for early intervention and to assure Mrs. Domingas and the family that the care is continuous.
- Initiate a partograph if the cervical dilation is 4 cm.

- Ongoing supportive care should be provided:
  - by encouraging mother-in-law to stay with her to her to provide emotional support and allay anxiety
  - give back rub and teach the woman to breathe out more slowly than usual during contractions (to relieve her anxiety)
  - encourage to remain active as desired, encourage rest and sleep so that she is well rested before active labour begins
  - encourage to eat and drink as long as the woman can tolerate to meet calorie/energy needs
  - encouraged to empty bladder every two hours and empty bowels as needed (urinary retention could prevent descent of foetal head)
  - no enema should be given
  - encourage to bathe before active labour, clean genital area before each examination for infection prevention

Evaluation

- Mrs. Domingas continues to have regular contractions; by 2 hours after admission, she is having 2 contractions in 10 minutes, each lasting 20-40 seconds.
- Maternal pulse remains between 80 and 88 beats per minute; foetal heart rate remains between
  150 and 160 beats per minute.
- Mrs. Dominga's level of anxiety remains high and she continues to become agitated during contractions.

7. Based on these findings, what is your continuing plan of care for Mrs. Domingas and why?

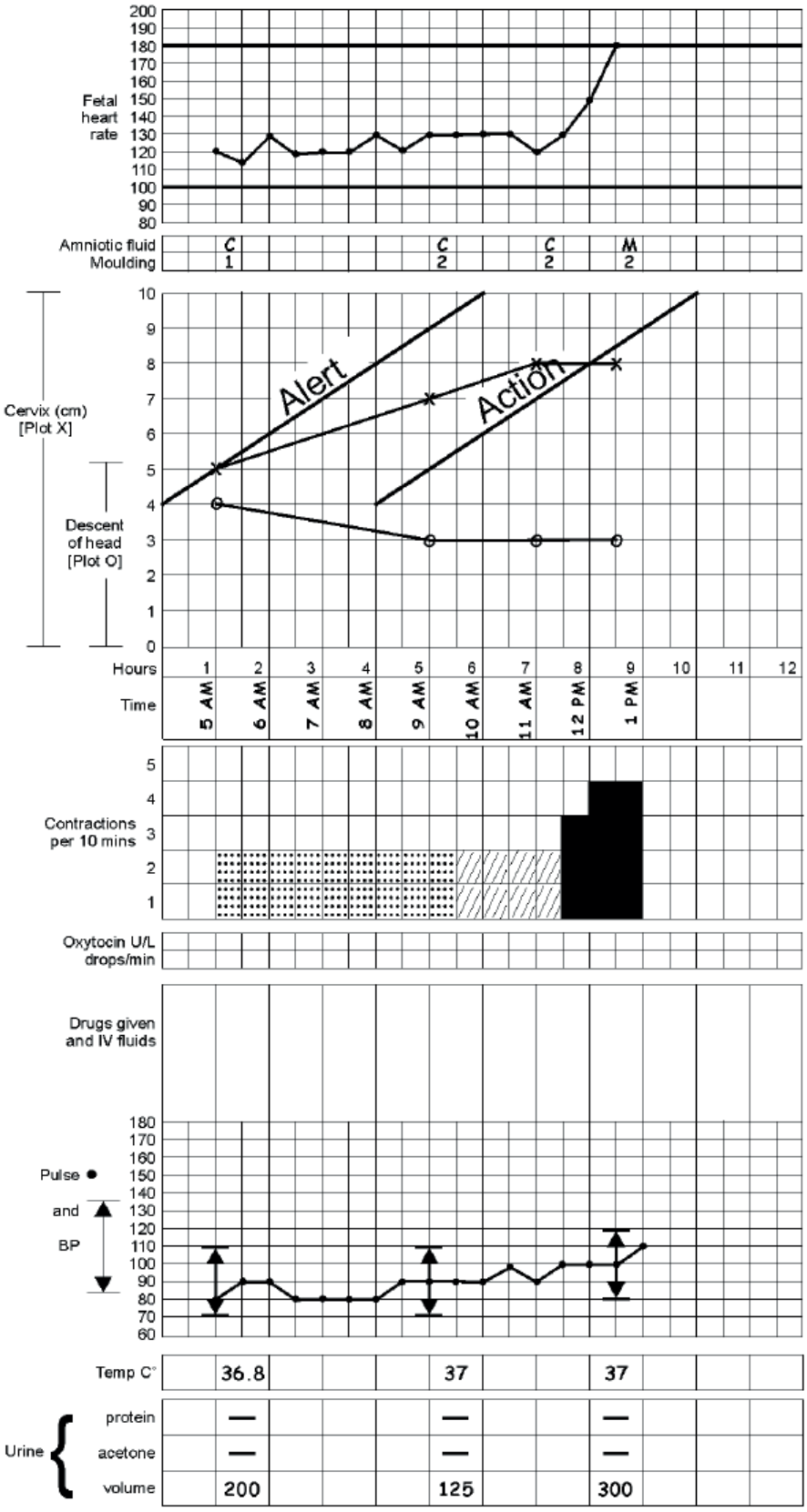
Care should continue as outlined above for reasons given above.

- Encourage breathing as above.
- Praise, reassurance and encouragement should be given to allay anxiety and for emotional support as labour progresses
- Information on the process of labour and her progress should be provided to help
  allay anxiety and provide some feeling of "control" and participation in her labour.
- Care must be taken to ensure that a birth companion is always with Mrs. Domingas so that she is not left alone.

Case study: assessing progress of labour and maternal and foetal health status

Name **Mrs. A** Gravida **1** Para **0** Hospital number **747**

Date of admission **28.4.2003** Time of admission **5 AM** Ruptured membranes **2** hours



Questions:

9. Is the labour progressing well? List reasons for the answer.
    - Labour is not progressing as the contractions are only 2 per 10 minutes lasting less than 20 minutes at 9 AM and at 11 AM, it is 2 per 10 minutes lasting 20-40 minutes
    - Descent of the head is 3/5 since 9 AM
    - Dilation is less than 1 cm per hour between 11AM and 1300
    - Progress not normal and has crossed the alert line.

10. Is maternal health status normal?
    Normal as BP 110/70, Pulse is 80, Temperature 36.8 D celsius
11. Is foetal health normal?
    Signs of foetal distress
12. What is the plan of action
    Refer

Role play: Reassuring the woman in labour

Directions

The trainer will select two participants to perform the following roles: health care provider and woman in labour. The two participants taking part in the role play should take a few minutes to prepare for the activity by reading the background information provided below. The remaining participants, who will observe the role play, should at the same time read the background information.

The purpose of the role play is to provide an opportunity for participants to develop/practice effective interpersonal skills.

Participant roles

Healthcare provider: The healthcare provider is an experienced midwife who has good interpersonal skills.

Woman in labour: Mrs. Alice is16 years old. This is her first pregnancy.

Situation

Mrs. Alice has come to the hospital because contractions started 3 hours ago. When the midwife asks Mrs. Alice how she is feeling she grasps her abdomen with both hands as a contraction begins. She shuts her eyes tightly and cries out that she does not understand what is happening and is frightened.

Focus of the role play

The focus of the role play is the interpersonal interaction between the midwife and Mrs. Alice and the appropriateness of the midwife's verbal and non-verbal communication skills.

Discussion questions

The trainer should use the following questions to facilitate discussion after the role play.

4. How did the midwife demonstrate respect and kindness during her interaction with Mrs. Alice?

5. How did the midwife provide emotional support and reassurance to Mrs. Alice?

6. What non-verbal behaviours did the midwife use to encourage interaction between herself and Mrs. Alice?

The following answers should be used by the trainer to guide discussion after the role play. Although these are "likely" answers, other answers provided by participants during the discussion may be equally acceptable.

1. The midwife should speak in a calm, reassuring manner and hold Mrs. Alice's hand or rub her back until the contraction has finished. The midwife should speak in a culturally appropriate way and involve any family member that Mrs. Alice. wants brought into the interaction.
2. When Mrs. Alices's contraction has finished, the midwife should make her as comfortable as possible and explain that she is having labour pains and what is likely to happen next, and what she can do to improve outcome. Helping Mrs. Alice understand what is happening should help to reassure her and reduce her anxiety. Mrs. Alice should be encouraged to ask questions and the midwife should use the same calm, reassuring manner to answer them. The midwife should also identify and mention anything that Mrs. A. is doing well.
3. Supportive nonverbal behaviours, such as nodding and smiling, should be used to let Mrs. A know that she is being listened to and understood. If culturally appropriate, the midwife can touch the patient gently on her shoulder, arm, hand, and abdomen.

Role play: Provision of care in false and true labour

Directions

The trainer selects two groups of two participants each to perform the following roles: health care provider and woman in labour. The two groups taking part in the role play should take a few minutes to prepare for the activity by reading the background information provided below. The remaining participants, who will observe the role play, should at the same time read the background information.

The purpose of the role play is to provide an opportunity for participants to develop/practice skills in determining whether the labour is false or true.

Participant roles

Healthcare provider: The healthcare provider is an experienced midwife who has good interpersonal skills.

Woman in labor:
Case A: Mrs Sara is 25 years old. This is her third pregnancy.
Case B: Mrs Celina is 20 years old. This is her first pregnancy.

Situation

Case A
Mrs. Sara, 40 weeks pregnant, Para 3, comes into the health centre. Gives history of abdominal pains 4 hours ago and now every 10 minutes. Her baby is moving as usual. She has regularly attended the antenatal clinic and has brought her records with her. Her due date of delivery is today. She had eaten 4 hours ago and passed urine 2 hours ago. She is not on any medication. She has no bleeding form the vagina or headache or blurry vision

Case B
Mrs. Celina, 36 weeks pregnant, primipara, complained of pain in front of the abdomen, infrequent, not progressing, can move around. She has had some blood-stained discharge, but no frank bleeding or gush of fluids.

Ask each group to play the roles assigned and the trainer and the rest of the participants observe using the relevant section of learning guide on screening for labour.

Focus of the role play
The focus of the role play is skills in diagnosis of true and false labour pains and provision of care in both the situations.

After the roleplay, the trainer should lead the discussion on each case and discuss the following:
CASE A
13. What did the midwife do?
Greets, quick assessment through questions about starting of contractions, frequency, duration, whether membranes ruptured, time of rupture, fluid – normal/bloody/greenish , examination of abdomen for contractions, pelvic examination for cervical dilatation and effacement, whether membranes intact and secretions
14. What is the diagnosis? What were the assessment findings that supported the findings?
False labour. For supporting evidence – see Table exercise 1
15. What are the elements of care provision?
See relevant section under learning guide on screening for labour.
CASE B

1.What did the midwife do?

Greets, quick assessment through questions about starting of contractions, frequency, duration, whether membranes ruptured, time of rupture, fluid – normal/bloody/greenish , examination of abdomen for contractions, pelvic examination for cervical dilatation and effacement, whether membranes intact and secretions

2.What is the diagnosis? What were the assessment findings that supported the findings?

True labour. For supporting evidence – See Table exercise 1

3.What care the elements of care provision?

See relevant section under learning guide on screening for labour.

For both case studies:

Was the midwife's behaviour reassuring?

- The midwife should speak in a calm, reassuring manner and hold Mrs. Alice's hand or rub her back until the contraction has finished. The midwife should speak in a culturally appropriate way and involve any family member that the woman wants brought into the interaction.
- When contraction has finished, the midwife should make the woman as comfortable as possible and explain that she is having labour pains and what is likely to happen next, and what she can do to improve outcome. Helping the woman understand what is happening should help to reassure her and reduce her anxiety. The woman should be encouraged to ask questions and the midwife should use the same calm, reassuring manner to answer them.
- Supportive nonverbal behaviours, such as nodding and smiling, should be used to let the woman know that she is being listened to and understood.

Role play: Communicating assessment findings

Directions
The trainer selects two participants to perform the following roles: health care provider and woman in labour. The two participants taking part in the role play should take a few minutes to prepare for the activity by reading the background information provided below. The remaining participants, who will observe the role play, should at the same time read the background information.

The purpose of the role play is to provide an opportunity for participants to develop/practice effective interpersonal skills.

Participant roles
Healthcare provider: The healthcare provider is an experienced midwife who has good interpersonal skills.

Woman in labour: Mrs. Doris is 24 years old. This is her second pregnancy.

Situation
Mrs. Doris has come to the hospital because contractions started. She was admitted at 5 AM. Her membranes ruptured and the fluid was clear. She has no bleeding. The midwife did an assessment at 9 AM and at 11 AM and recorded the findings on the partograph. The partograph showed unsatisfactory progress of labour. *Ask the participants to refer to the partograph used in the case study on assessing progress of labour.* She needs referral.

Focus of the role play

The focus of the role play is the communication skills of the midwife while conveying the assessment findings to Mrs. Doris.

Discussion questions

The trainer should use the following questions to facilitate discussion after the role play.

3. How did the midwife demonstrate respect and kindness during her interaction with Mrs. Doris?
   After the examination at 11 AM, the midwife conveyed the findings to Mrs. Doris. The midwife spoke in a calm, reassuring manner and held Mrs. Doris's hand and told her that her labour is not progressing well and the baby could be in danger. She assured her that they are doing everything possible and are making arrangements to shift her. She encouraged Mrs. Doris to ask questions.
4. How did the midwife convey the need for referral to the family members?
   The midwife showed respect and narrated the situation to the family members. She encouraged them to ask questions. She explained the arrangements being made. She also informed them that there may be need for blood transfusion if Mrs. Doris needs a caesarean and requested for a donor to accompany.

Module 3

Assisting with childbirth

Training resource package for intrapartum and immediate post-partum care

National Standard 1: Every woman who goes into labour at term (37 weeks to 41 weeks) and new born receives routine, evidence-based care during labour, delivery and immediately after delivery that is culturally sensitive and respective rights of women
Quality statement: Every woman receives quality care during delivery and immediately after delivery, including her new born that is appropriate and culturally sensitive and respects rights of women.

Clinical protocol: Management of second stage of labour

Module : Assisting with childbirth

Key tasks
- Prepares for delivery
- Assists birth of the foetus
- Provides care of newborn at birth
- Assists with the birth of the placenta
- Inspects placenta, membranes and umbilical cord
- Performs immediate assessment of mother and newborn
- Assesses progress of the delivery of the foetus and placenta and well - being of mother and newborn and makes diagnosis
- Communicating during delivery and after
- Provides immediate post-partum care
- Records findings

Training schedule
- Key tasks
- Learning objectives
- Sessions plans
- Knowledge assessment

Trainer's guide
Session plan describes objectives of each session, topics, methodology and key points
- Case studies
- Exercise
- Learning guides

Key knowledge
- Signs of second stage of labour
- Key physical assessments
- Readiness of labour room
- APGAR score
- Active management
- Key points in immediate care of newborn

Critical skills
- Assessment during 2nd stage of labour
- Preparations for delivery
- Assisting with birth
- Newborn care at birth
- Active management of 3rd stage of labour
- Assessment during the 4th stage of labour
- Assessment of maternal and foetal well-being and diagnosis

Evaluation
- Post Test
- Skill assess: using learning guides
- Module Evaluation

Module 2: Assisting with childbirth

Training schedule

Total time: 1095 min (18 hours 15 min)

Time	Topic	Method	Resource materials
30 min	Welcome Objective of the module: To update knowledge and skills to assist a woman in labour Key tasks Learning objectives Explain the tools for evaluation of the session Distribute knowledge assessment sheet	Discussion	Power point
30 min	Knowledge assessment		Questionnaire
Session 1 30 min	Defining second, third and fourth stages of labour and care provision	Discussion Exercise 1	MCPC 2017 Power point
Session 2 60 min	Monitoring and care during second stage of labour	Discussion Exercise 2 Case study	MCPC 2017 **Handout 1:** On-going assessment *(from the Module on screening for labour and management)*
Session 3 30 min	Preparations for delivery	Discussion	Learning guide on assisting during childbirth and immediate postpartum Clinical protocol and conducting normal delivery
Session 4 240 min	Assisting with the delivery of the foetus	Discussion Skills practice	MCPC 2017 Power point Learning guide on assisting during childbirth and immediate postpartum Clinical protocol and conducting normal delivery
Session 5 30 min	Caring for newborn immediately at birth	Discussion Skills practice	MCPC 2017 TL newborn care training guide Learning guide on assisting during childbirth and immediate postpartum Clinical protocol and conducting normal delivery

Session 6 60 min	Assisting with the delivery of the placenta – active management of third stage of labour	Discussion Skills practice	MCPC 2017 **Handout 2:** Active management of 3rd stage of labour Learning guide on assisting during childbirth and immediate postpartum Clinical protocol and conducting normal delivery
Session 7 30 min	Inspection of the placenta, membranes and umbilical cord	Discussion Skills practice	MCPC 2017 Learning guide on assisting during childbirth and immediate postpartum
Session 8 120 min	Performing immediate assessment of the mother and newborn	Discussion Exercise assessment of mother Exercise assessment of mother Skills practice	MCPC 2017 TL newborn care training guide Learning guide on assisting during childbirth and immediate postpartum
Session 9 30 min	Assessing progress of the delivery of the foetus and well-being of the mother and new born and makes diagnosis	Discussion Case study Skills practice	Learning guide on assisting during childbirth and immediate postpartum Clinical protocol and conducting normal delivery
Session 10 30 min	Communicating during labour and after	Discussion	Learning guide on assisting during childbirth and immediate postpartum
Session 11 60 min	Providing immediate care to mother and newborn	Skills practice	TL newborn care training guide Learning guide on assisting during childbirth and immediate postpartum **Handout 3:** Danger signs Clinical protocol and conducting normal delivery
Session 12 15 min	Recording findings	Discussion Demonstration	Delivery records and newborn

			records
Session 13 240 min	Supervised client practice		Learning guide on assisting during childbirth and immediate postpartum
Session 14 60 min	Evaluation	Post-test Skill check Module evaluation	Post-test Learning guide Module evaluation form

Session plan

Training process	Resources
Greet participants - **30 min** Objective of the module: To update knowledge and skills to assist a woman in labour Discuss the key tasks and ask the participants to contribute Discuss the learning objectives. Learning objectives: At the end of the module the midwife will be able to: 1. Describe the signs of second stage of labour 2. Demonstrate skills in delivering the foetus 3. Demonstrate skills in examination of new born at birth 4. Demonstrate skills in active management of the third stage of labour 6. Recognise completeness of placenta and membranes 7. Assess mother and new born 8. Provide compassionate care	Power points
Knowledge assessment - **30 min**	Questionnaire
Session 1: Defining second, third and fourth stages of labour and care provision – **30 min** *Objective of the session*: Develop skills in identification of the second, third and fourth stages of labour **Distribute blank sheets of *exercise* 1** on clinical signs of second stage of labour and ask the participants to fill the same. Discuss the sheets after all have completed. *Discussion* Ask about key points in provision of care and discuss using the Power point on the same.	MCPC 2017 C-77 Power points **Exercise 1**
Session 2: Monitoring and care during second stage – **60 min** *Objective of the session*: Develop knowledge and skills in on-going assessments during second stage of labour and provision of care **Distribute blank forms of *exercise 2*** and ask the participants to fill the columns related to second stage of labour, normal and abnormal situations. Discuss the answers on assessments including the importance of the assessments. *Discussion* Discuss supportive care during second and third stage (refer to handout 1: Supportive care in the module on screening for labour and management) *Case study* Divides the participants into groups and project the case study up to diagnosis (Question 3). Each group reads the case study and answers the questions. After all participants have finished, discuss the answers to the questions by asking a representative of the group to read out the group responses.	MCPC 2017 **Exercise 2** **Handout 1:** Ongoing assessment Handout on supportive care (from the Module on screening for labour and management)
Session 3: Preparations for delivery - **30 min** *Objective of the session*: Upgrade knowledge in preparations for delivery and immediate new born care *Discussion* Ask the participants about what preparations are necessary for delivery. (List equipment and supplies for delivery, for	Learning guide on assisting during childbirth and immediate postpartum Clinical protocol

newborn care, active management of third stage of labour) (refer to learning guide). Introduce the clinical protocol on second stage and conducting normal delivery. *Emphasise no shaving pubic area, cleaning vagina, enema prior to delivery.*	and conducting normal delivery
Session 4: Assisting with the delivery of the foetus – **240 min** *Objective of the session*: Practice skills in delivery of the foetus *Discussion* Discuss key actions during the second stage of labour Refer to clinical protocol *Skills practice*- Learning guide on assisting during childbirth and immediate postpartum ***(Task 1 and 2)*** Trainer should request one of the participants to demonstrate. Rest of the participants observe using the relevant section of learning guide. Trainer provides feedback. The participants are divided into groups and asked to practice using the childbirth simulator (see instructions on skill practice session)	MCPC 2017 Power points Learning guide on assisting during childbirth and immediate postpartum Clinical protocol and conducting normal delivery
Session 5: Caring for newborn immediately at birth – **30 min** *Objective of the session*: Practice skills in care of the newborn at birth *Discussion* Ask the participants what are the most important assessments of new born at birth and the rationale for the same. Refer to clinical protocol *Skills practice:* Learning guide on assisting during childbirth and immediate postpartum ***(Task 2)*** Trainer should request one of the participants to demonstrate care of new born at birth. Rest of the participants observe using the relevant section of learning guide. Trainer provides feedback. The participants are divided into groups and asked to practice using the childbirth simulator (see instructions on skill practice session)	MCPC 2017 Learning guide on assisting during childbirth and immediate postpartum Power point Clinical protocol and conducting normal delivery
Session 6: Assisting with delivery of the placenta-active management of the third stage of labour – **60 min** *Objective of the session*: Practice skills in active management of the third stage of labour *Discussion* Discuss the importance of active management of third stage of labour. Ask participants why active management is important. Discuss key elements of active management. (reference learning guide) Refer to clinical protocol *Skills practice*- Learning guide on assisting during childbirth and immediate postpartum ***(Task 3)*** Trainer should request one of the participants to demonstrate active management of the third stage of labour. Rest of the participants observe using the relevant section of learning guide. Trainer provides feedback. The participants are divided into groups and asked to practice using the childbirth simulator and model of placenta (see instructions on skill practice session)	MCPC 2017 Learning guide on assisting during childbirth and immediate postpartum Clinical protocol and conducting normal delivery

Session 7: Inspection of the placenta, membranes and umbilical cord **30min** *Objective of the session*: Practice inspection of the placenta, membranes and umbilical cord *Discussion* Ask the participants the importance of inspection of the placenta. Discuss the importance of the step and management in case of missing lobes of placenta or incomplete membranes. *Demonstratio*n Ask one of the participants to demonstrate the inspection of the placenta using the model of placenta. The rest of the participants observe using the relevant section of the learning guide (see instructions on skill practice)	MCPC 2017 Learning guide on assisting during childbirth and immediate postpartum
Session 8: Performing immediate assessment of the mother and newborn – **120 min** *Objective of the session*: Practice skills in immediate examination of the mother and newborn after delivery after delivery *Discussion* Distribute a blank table on ongoing assessment and ask each of the participants to fill the column on 4th stage. Discuss the answers on assessments including the importance of the assessments. Emphasise the importance of monitoring bleeding. The trainer concludes by pointing out the right answers. Distribute the exercise sheet with the columns filled and ask the participants to review and compare with their answers. *Distribute* blank table on newborn assessment. After completing the table, ask one of the participants to present the assessment including normal and abnormal findings. The trainer concludes by pointing out the right answers. Refer to clinical protocol. *Skills practice*-Learning guide on assisting with delivery and immediate postpartum ***(Task 5)*** Trainer should request one of the participants to demonstrate immediate examination of mother after delivery. Rest of the participants observe using the relevant section of learning guide. Trainer provides feedback. Another participant is requested to demonstrate the steps in newborn assessment. Rest of the participants using the learning guide. The participants are divided into groups and asked to practice using the childbirth simulator and the newborn doll (see instructions on skill practice session).	Learning guide on assisting during childbirth and immediate postpartum TL newborn training guide Filled exercise sheets on immediate assessment of mother and newborn Clinical protocol and conducting normal delivery
Session 9: Assessing progress of the delivery of the foetus and well-being of the mother and new born and makes diagnosis – **30 min** *Objective of the session*: Practice key tasks to be performed after delivery of the foetus *Discussion* Ask the participants about the key tasks to be performed after delivery of the baby to anticipate/recognise problems. Record on chart/board the responses Now ask the participants to refer to the relevant section in the learning guide.	Learning guide on assisting during childbirth and immediate postpartum Clinical protocol and conducting normal delivery

Discuss the algorithm in the clinical protocol and clinical decision making. *Case study* Distribute the full case study. Each group reads the case study and answers the questions. After all participants have finished, discuss the answers to the questions by asking a representative of the group to read out the group responses. Discuss the responses. *Skills practice*-Learning guide on assisting during childbirth and immediate postpartum ***(Task 6)*** Trainer should request one of the participants to demonstrate relevant assessments. Rest of the participants observe using the relevant section of learning guide. The participants are divided into groups and asked to practice using the childbirth simulator (see instructions on skill practice session)	
Session 10: Communicating with the client during – **30 min** *Objective of the session*: Practising compassionate care and sharing information during delivery and afterwards *Discussion* Ask the participants to list the key elements of communicating during labour and after. Importance of care Trainer sums up by mentioning rights of women and importance of recognition of rights Refer the participants to the section of the learning guide on communicating on findings	Learning guide on assisting during childbirth and immediate postpartum
Session 11: Providing immediate post-partum care to mother and newborn – **60 min** *Objective of the session*: Practice skills in immediate post-partum care to mother and newborn *Discussion* Asks the participants about elements of immediate care to the mother. Lists the responses on the board. Asks about the immediate care of the newborn and lists the points on the board. Trainer adds missing points. Discusses the preventive care for mother and newborn. Asks the participants to list the potential danger signs as well as emotional problems. Then asks about danger signs in newborn. Distributes the hand out. Introduce the participants to *Skills practice*-Assisting during childbirth and immediate postpartum ***(Task 8)*** Continuing with the same groups as earlier for skills practice, the trainer asks the participants to practice the providing care using the learning guide. The trainer observes each group and provides feedback (see the instructions on skill practice).	MCPC 2017 Learning guide on assisting during childbirth and immediate postpartum TL newborn care training guide **Handout 3:** danger signs
Session 12: *Recording findings* – **15 min** Objective of the session: Practice accurate and complete recording Ask one of the participants to explain the filling in delivery and newborn records.	Delivery and newborn records

Session 13: Supervised client practice – **240 min** *Objective of the session* is to practice skills with clients. This is the final stage of clinical skills developments and participants should be allowed to work with clients only after they have demonstrated skill competency in a simulated situation. Planning for the supervised practice is a critical component so that participants get adequate practice. It is important to respect the rights of clients – permission should be sought, privacy and confidentiality should be maintained and respectful dealings with the clients. Since one trainer may not be sufficient to supervise all the participants, it will be good to identify potential assistants to help the trainer (preceptors) to observe the skill practices. The preceptors could be a doctor or senior midwife who is very proficient in the skills. The preceptors will need to be trained in the use of checklists to familiarise them with the checklists. Before and after each supervised client practice, there should be discussions. Feedback should be provided. Minimum of 3-4 experiences in conducting normal delivery should be planned for each of the participants (may vary depending on the baseline skill level).	Learning guide on assisting during childbirth and immediate postpartum
Session 14: Evaluation – **60 min**	Questionnaire Learning guide Module evaluation form

Knowledge assessment

1. Which of the following are signs of second stage of labour?
   a. Cervical dilation 9 cm
   b. Contractions 3 per 10 minutes lasting more than 40 sec
   c. Descent at 3/5
   d. All of the above

2. The steps in active management of third stage of labour include:
   a. Controlled cord traction, fundal massage and oxytocin
   b. Intravenous oxytocin, cord clamping and cutting and fundal massage
   c. Cord clamping and cutting, controlled cord traction, ergometrine administration and inspection of the placenta
   d. Intramuscular injection of oxytocin, controlled cord traction, uterine massage

3. During the first six hours after birth:
   a. List three things you would do to determine the new mother's well-being.

   b. How would you determine that the mother is losing too much blood?

   c. What steps would you take to stop the bleeding?

4. List four most danger signs to watch for in the mother

5. List five important assessments to be done in a newborn.

Exercise 1: Signs of second stage of labour

Items	Findings
Cervix	
Contractions	
Vaginal secretions	
Descent	
Other signs	

Exercise 2: Type of assessments and frequency

What to assess	Frequency of assessment		Normal	Abnormal and action to be taken
	2nd stage	4th stage		
BP				
Temperature				
Pulse				
Foetal heart				
Membranes and amniotic fluid				
What to assess	**Frequency of assessment**		**Normal**	**Abnormal and action to be taken**
	2nd Stage	**4th Stage**		

Moulding of foetal head				
Foetal descent				
Contractions – frequency and duration				
Vaginal secretions or bleeding				
Maternal response and behaviour				
Uterus				

Exercise 3: Assessments of newborn during 4th stage of labour

What to assess	Frequency	Normal	Abnormal/action
Respiration			
Temperature			
Colour			
Movement and posture			
Level of alertness and muscle tone			
Breastfeeding			
Mother-baby bonding			

Case study: Childbirth assessment and care

Directions

Read and analyse 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 case study. When all groups have finished, the case studies and the answers each group has developed will be discussed.

Client profile

Mrs. Betsy is 25 years of age. Her mother -in- law has brought her to the hospital and reports that she has been in labour for 8 hours and that her membranes ruptured 3 hours ago. You greet Mrs. Betsy and her mother-in- law respectfully and with kindness. On arrival at the hospital, she had a strong contraction lasting 45 seconds. Because she is showing signs of labour, you complete the Quick Check to detect signs/symptoms of life-threatening complications and, finding none, quickly proceed to physical examination to determine whether birth is imminent. Although Mrs. B is not pushing, you find that she has a bulging, thin perineum.

Assessment (information gathering through history, physical examination, and testing)

1. What history will you include in your assessment of Mrs. Betsy and why?

2. What physical examination will you include in your assessment of Mrs. Betsy and why?

3. What laboratory tests will you include in your assessment of Mrs. Betsy and why?

Diagnosis (interpreting information to identify problems/needs)

You have completed your assessment of Mrs. Betsy and your main findings include the following:

History:

- Mrs. B is at term.
- This is her fourth pregnancy.
- Her previous pregnancies/deliveries were uncomplicated.
- All other aspects of her history are normal or without significance.

Physical Examination:

- Vital signs are as follows: Respirations are 20 per minute, BP is 130/82, Pulse is 88 beats per minute, Temperature is 37.8°C.

On abdominal examination:

- No scars are noted and uterus is oval-shaped
- Fundal height is 34 cm
- Parts of one foetus are palpable
- Foetus is longitudinal in lie and cephalic presentation
- Presenting part is not palpable above the symphysis
- Foetal heart tones are 148 per minute
- Bladder is not palpable
- Contractions are 3 per 10 minutes, 40–50 seconds in duration each

On genital and cervical examination:

- Her cervix is 10 cm dilated and fully effaced
- Presentation is vertex and the foetal head is on the perineum
- Visible amniotic fluid is clear

All other aspects of her physical examination are within normal range.

Testing:

- Test results not yet back at this stage

4. Based on these findings, what is Mrs. Betsy's diagnosis (problem/need) and why?

Care provision (implementing plan of care and interventions)

5. Based on your diagnosis (problem/need identification), what is your plan of care for Mrs. Betsy and why?

Evaluation

- Mrs. Betsy has 3 contractions every 10 minutes, each lasting more than 40 seconds.
- After 15 minutes, she begins pushing spontaneously with each contraction.
- After another 15 minutes, she has a spontaneous vertex birth of a baby boy. The baby breathes immediately at birth.
- The third stage of labour has not yet been completed.

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

Skills practice session: Assisting during childbirth and immediate postpartum
Purpose
The purpose of this activity is to provide opportunities to observe and practice clinical skills, either in a simulated setting or at a clinical site.

Instructions

This activity should be conducted in a simulated setting using the appropriate pelvic and foetal models.
Participants should review the learning guide before beginning the activity.
Trainer requests one of the participants to demonstrate delivery of the foetus. Others provide feedback. Trainer provides feedback.

Under the guidance of the trainer, participants should then work in groups of three to practice the steps/tasks and observe each other's performance; one plays the role of provider, the second one as woman in second stage of labour and the third as observer. The observer uses the relevant section of learning guide on **assisting with childbirth** to observe performance. Participants reverse the roles until each has had an opportunity to take a history and conduct physical examination and are competent. The trainer observes each participant when ready for observation and provides feedback. The participants who are not competent are made to repeat the exercise. Repeat the same process for immediate care of the newborn by requesting one of the participants to demonstrate. *Participants should be able to perform the steps/tasks relevant to assisting the birth before progressing to active management of third stage, examination of placenta, and inspection of vagina and perineum.*

Trainer should request one of the participants to demonstrate steps in active management of third stage of labour. Rest of the participants observe using the learning guide on assisting with childbirth. The trainer should demonstrate the steps/tasks in **active management of third stage**, as well as the following steps of **examination of the placenta and inspection of the vagina and perineum for tears**. The participants should continue to work in their groups and practice using learning guide as instructed earlier.
During supervised practice at a clinical site, the trainer assesses the skills competency of each participant using learning guides.

Resources
- Childbirth simulator
- Newborn doll
- Placenta model
- Sphygmomanometer and stethoscope
- Foetal stethoscope /Doppler
- Speculum
- Delivery kit
- Receptacle for placenta
- Thermometer
- Sterile examination gloves
- Personal protective barriers
- Towels to receive newborn
- Soap and water and betadine
- 0.5% chlorine solution and receptacle for decontamination
- Leak proof container or plastic bag
- Delivery and newborn records
- Learning guide

Learning guide: Assisting during child birth and immediate postpartum

Rating scale: 2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards even after prompting

	2	1	0	Comments
Task 1: Prepares for birth				
Setting 1.1 Decontaminates and cleans work surface 1.2 Ensures availability and arranges: ▪ maintain labour room temperature at 25 degree Celsius ▪ adequate light ▪ linen, pillows, blankets and plastic sheet ▪ bin and cover ▪ soap, water and clean hand towel ▪ gloves (new or reusable that been sterilized) ▪ antiseptic lotion ▪ syringe (sterile) and oxytocin injection ▪ cord clamps or ties, scissors (sterile) ▪ mucus extractor and (high level disinfected) basin ▪ thermometer, BP apparatus, stethoscope, watch ▪ functional delivery trolley and neonatal resuscitation trolley ▪ the radiant warmer/heater to be on ▪ two clean towels under the radiant warmer to warm them to receive the baby ▪ 0.5% chlorine solution 1.3 Supportive care of woman ▪ Encourages the woman to assume dorsal position for birth, ensuring privacy as much as possible ▪ Explains the woman to on what is going to be done, and encourages to ask questions and respond to queries ▪ Provides continuous emotional support ▪ Informs the family about the procedures 1.4 Provider *SCRUBS WHEN HEAD IS VISIBLE IN THE PERINEUM AND DOES NOT RECEDE IN BETWEEN CONTRACTIONS* 1.3 Puts on personal protective barriers. 1.4 Washes and scrubs hands with soap and water air dries or dries s with clean cloth 1.5 Puts on high level disinfected or sterile surgical gloves without contaminating them				
Task 2: Assists with the birth of the foetus and care of the baby at birth				
Birth of the head 2.1 Cleans the woman's perineum with a soap and water or antiseptic solution, wiping from front to back 2.2 Observe bulging perineum and vaginal introitus for the advancing head 2.3 Asks the woman not to bear down with uterine contractions as the head begins to crown 2.4 Delivers the crowning head between uterine contractions: - maintains head flexion, as crown -supports the perineum, as necessary				

-allows gradual extension after crowns 2.5 Palpates the neck for absence or presence of umbilical cord (if present, unwraps and lifts over the head or slides over the shoulders as the body emerges. ***If the cord is tight around the neck, place two artery forceps, 3 cm apart and cut between the two clamps*** 2.6 Clears the nose and mouth of the mucus or fluid using extractor (if meconium is present uses meconium trap type) *Birth of the shoulder* 2.7 Observes for rotation of the shoulders to the anterior-posterior plane of the pelvis 2.8 Asks the woman to bear down gently with uterine contractions 2.9 Gently supporting the head between two hands, applies gentle traction: - downward to release the anterior shoulder - upwards to release the posterior shoulder. *Birth of the body* 2.10 Supports the emerging body with two hands 2.11 Positions the newborn's head slightly below the body to promote drainage of fluids 2.12 Places the baby on the mother's abdomen *Immediate care of the baby* 2.13 Wipes the face (suctions again, as necessary), - 2.14 Receives the baby in a warm dry towel - dry the baby thoroughly, giving special attention to head, axilla, and groin taking care not to remove the vernix - Removes the wet towel 2.15 Shows the baby to the woman 2.16 Note the time of the birth 2.17 Assesses the baby's breathing while drying the baby and if not breathing, call for help and start newborn resuscitation. 2.18 Clamp and cut the umbilical cord: ▪ Ties the cord at about 3 cm and 5 cm of the umbilicus ▪ Cuts the cord between the ties 2.19 Keeps the baby warm; positions skin-to-skin with the mother (between her breasts) and covers the baby's head and body with the other warm towel 2.20 Palpates the mother's abdomen and exclude second baby PROCEED WITH ACTIVE MANAGEMENT OF LABOUR				
Task 3: Assists with the delivery of the placenta				
3.1 Give oxytocin 10 units intramuscularly (within 1 min of birth of the baby) 3.2 Delivery of the placenta by CCT ▪ Clamps the cord close to the perineum and hold the clamped cord with one hand ▪ Places side of hand above symphysis pubis of the woman with palm facing towards umbilicus to apply counter traction to the uterus (push upwards on the uterus) to stabilize the uterus and prevent uterine inversion				

▪ Keeps the light tension on the cord and waits for a strong uterine contraction (2-3 min) ▪ When the uterus becomes rounded or the cord lengthens, gently pulls downward on the cord to deliver the placenta. ▪ Continues to apply counter traction with the other hand. ▪ If the placenta does not descent during 30-40 sec of CCT, relaxes the tension and repeat with next contraction ▪ As the placenta is coming out, to prevent tearing of the membranes, holds the placenta in both hands and gently turn until the membranes are twisted. ▪ Slowly pulls down to complete the delivery of the placenta. ▪ Places it in a basin 3.3 Massages the uterus until well contracted (helps contraction and expulsion of clots) 3.4 Informs the woman that the placenta has been delivered.				
Task 4: Inspects the placenta, membranes and umbilical cord				
Placenta 4.1 Inspects the placenta by holding in palm of hands, with maternal side facing upwards: ▪ Whether all lobules are present and fit together *Membranes* 542 Holds the cord with one hand allows the placenta and membranes to hand down and inserts the other hand inside the membranes with fingers spread out to inspect for ▪ Completeness ▪ Location of insertion *Umbilical cord* 4.3 Inspects the cut end of the cord: ▪ number of vessels (two arteries and one vein)				
Task 5: Performs immediate maternal and newborn examination (fourth stage)				
5.1 Examination of vagina and perineum for tears (examination could be done later too but will need to use a newer pair of gloves) ▪ Explains the procedure to the woman and the reason for the same. Informs her that there will be some discomfort. ▪ Gently separates the labia and inspects lower vagina for lacerations or tear ▪ ***Inspects*** for bleeding (notes amount, colour and progression) ▪ Inspects the perineum for lacerations or tear ▪ Gently cleanses the perineum with warm water and clean cloth ▪ Places a clean pad or cloth on the vulva. 5.2 Immerses both hands in a container filled with 0.5%				

chlorine solution; removes gloves by turning them inside out and disposes them in the chlorine solution and places instruments and other contaminated items for disinfection and follows steps for decontaminating the delivery table and floor. 5.3 Washes hands with soap and water and air dries or dries with a clean cloth *Vital signs* 5.4 Observes the client's general condition 5.5 Measures BP, heart rate and temperature *Abdomen* 5.6 Palpates the uterus for: -size -position consistency (firmness and contractility) 5.7 Palpates supra-pubic area for the absence or presence of distended bladder				
5.8 Immediate assessment of newborn ▪ Checks respiration – rate, whether any grunting, gasping or chest in-drawing ▪ Checks temperature- whether feet cold ▪ Colour- Pink (lips, nails) or cyanosis or jaundice or pallor ▪ Movements and posture ▪ Level of alertness and muscle tone ▪ Breast feeding ▪ Mother-baby bonding				
Task 6: Assess progress of birth of the foetus and placenta, neonatal and maternal and maternal well-being and makes diagnosis				
(the following steps will be done concurrently with the steps on delivery and placental delivery) *Progress of birth of the foetus and placenta* 6.1 Completes the partograph 6.2 Decides whether foetal descent, from the time of complete cervical dilatation to birth, are normal based on partograph 6.3 Decides whether placental separation, descent and expulsion are normal *Maternal well-being* 6.4 Evaluates whether historical and physical findings for presence or absence of problems: ▪ physiological response to birth ▪ life-threatening complications, if any present and manage immediately *Foetal and newborn well-being* 6.5 Evaluates whether historical and physical findings for presence or absence of risk factors for newborn 6.6 Decides if newborn health status is normal based on the above evaluations, if not decides about referral/ treatment plans				

Task 7: Shares findings and diagnosis with the woman and her family				
7.1 Informs mother in a calming, reassuring manner: ▪ her own health status ▪ health status of her newborn				
7.2 If any abnormalities are discovered, shares the action/treatment plan including referral				
7.3 Encourages the woman to ask questions by gently probing her				
Task 8: Provides immediate post-partum care in collaboration with the woman				
8.1 Praises the client for her efforts and cooperation				
8.2 Answers any questions related to labour, delivery and new born care, if asked				
8.3 Maintains hygiene for the woman by wiping her breasts, abdomen and perineum with a clean cloth and giving her a change of cloth as well as changing bed linen				
8.4 Encourages the woman to empty her bladder and bowel				
8.5 Encourages to eat food and drink fluids as needed				
8.6 Assists the woman with breast feeding ▪ advises on: o positioning o technique o latching o frequency o duration of feeding on each breast ▪ advises on what to do in case of likely problems (expression of milk)				
8.7 Applies tetracycline ointment from medial to outer corner of the eye in both eyes 8.8 Gives Vit K IM injection dose: ***1mg IM for term babies or 0.5mg for preterm babies weighing <1500 grams*** 8.9 Applies Chlorhexidine on the cut end of the cord 8.10 Takes weight 8.11 Puts identification tag				
Preventive measures 8.12 Mother Advises on daily bath, nutrition and fluid intake Advises on danger signs to watch for (see handout) *Newborn* 8.13 Advises on : ▪ keeping the newborn clean and warm (no bathing in the first 24 hours and removing vernix) ▪ cord care ▪ danger signals to watch for (see handout)				
Treatment on interventions 8.14 If any problems manages appropriately				
Task 9: Records assessments, treatment and advice accurately and completely				
9.1 Records on partograph and delivery records - Maternal - New born				

Module evaluation

Module: Assessment in labour

Please indicate your opinion of the course components using the following rating scale:

Rating:

5. Strongly Agree
4. Agree
3. No opinion
2. Disagree
1. Strongly disagree

Course component	Rating
1.The discussions helped me to clarify elements related to basic care.	
2.The exercises were useful for learning about basic care during childbirth.	
3.The role plays on interpersonal communication skills were helpful.	
4.The case studies were useful for practising clinical decision making.	
5.The time for skill practice in a simulated setting was sufficient.	
6.The supervised client practice within the limitations of time was sufficient.	
7.I am confident about providing care during childbirth.	

SECOND STAGE OF LABOUR AND CONDUCTING NORMAL DELIVERY

Prior to delivery:

- Ensure that delivery trolley and neonatal resuscitation trolley are ready and functional
- Put the radiant warmer/heater on
- Put two clean towels under the warmer/heater to warm them for receiving the baby
- Maintain labour room temperature at 25°C
- Put the woman in dorsal position with the buttocks near the edge of the table
- Scrub when noted that the head that does not recede in between contractions
- Prepare the perineum (see protocol on labour)

At Delivery:

- Ask the woman to give only small pushes with contractions
- Ensure controlled delivery of the head by placing fingers of one hand against the head to keep it flexed
- Support perineum with clean pad as the head delivers
- Ask the woman not to push once the head is delivered
- Feel for the cord around the neck
- If cord present:
  - ease it out by slipping around the head
  - or if tight, clamp and cut between clamps
- Allow the head to turn spontaneously
- After the head turns, place a hand on each side of the baby's head and tell the woman to gently push with next contraction
- Move the baby's head posteriorly to facilitate birth of the anterior shoulder
- Lift the baby's head anteriorly to deliver the posterior shoulder
- Support the rest of the baby's body with one hand as the body slides out
- Provide immediate care to the new born as listed below
- Note time of delivery
- Clamp the cord after pulsation stops: (two clamps should be applied approximately 2 – 7 cm away from the umbilicus)
- Cut the cord between the two clamps and leave the placental end in a sterile bowl between mother's legs
- Palpate mother's abdomen and exclude second baby
- Initiate active management of third stage of labour
- Examine the perineum for any tears.

Immediate care of the new born

- Receive the baby in two pre-warmed towels and dry the baby thoroughly giving special attention to head, axilla, and groin taking care not to remove the vernix
- Remove the wet towel and put the baby on the mother's abdomen (skin-to-skin contact), well covered using the other pre- warmed towel
- Check whether baby cried at birth/ spontaneous breathing
- **Initiate breast feeding after cutting the cord**

Active management of third stage of labour

- Within one minute of delivery, after excluding presence of an additional baby, give Oxytocin 10 units IM
- Apply controlled cord traction (CCT)

Delivery of the placenta by CCT

- Clamp the cord close to the perineum and hold the clamped cord with one hand
- Place side of hand above symphysis pubis of the woman with palm facing towards umbilicus to apply counter traction to the uterus
- Apply slight traction and await a strong uterine contraction (2-3 minutes)
- When the uterus becomes rounded or the cord lengthens, gently pull downward on the cord to deliver the placenta. Continue to apply counter traction with the other hand.
- As the placenta is coming out, to prevent tearing of the membranes, hold the placenta in both hands and gently turn until the membranes are twisted.
- Slowly pull down to complete the delivery.
- Examine placenta for completeness
- Assess blood loss and record.

Uterine massage

- Assess uterine tone
- If soft, massage uterus through abdomen until well contracted
- Assess uterine tone every 15 min in first 2 hrs and if uterus becomes soft, massage until contracted.

EPISIOTOMY NOT INDICATED If NORMAL DELIVERY EXCEPT:

- Foetal and maternal distress in 2nd stage
- Breech in the perineum, shoulder dystocia
- Instrumental deliveries

SECOND STAGE OF LABOUR AND CONDUCTING NORMAL DELIVERY

Review ANC record and labour records

Examination

- Monitor BP, pulse, temperature

Monitor every 5 minutes

- Frequency, duration and intensity of contractions
- Foetal heart rate
- Perineum thinning and bulging
- Visible descent of foetal head or during contraction
- *Record findings* regularly in labour record and partograph

Danger signs

- Bleeding
- Convulsions
- Foetal distress

- Head visible and perineum thinning

- ☐ Scrub hands and put on gloves
- ☐ Conduct delivery as described
- ☐ If shoulder dystocia, *refer to protocol on shoulder dystocia*
- ☐ New born care as in the protocol for new born

- ☐ Active management of third stage of labour
- ☐ Check that placenta and membranes are

- ☐ Placenta and membranes complete
- ☐ Placenta and membranes incomplete

- Second stage ≥1 hour **with no progress**
- No visible descent of head

- ☐ **Refer to specialist**
- ☐ Perform vaginal examination and see progress before shifting
- ☐ Continue monitoring while waiting to shift patient
- ☐ Carry a delivery kit

SINCE IT TAKES LONG TO SHIFT to A REFERRAL FACILITY, MAKE ARRANGEMENTS AS EARLY AS POSSIBLE

- ☐ Do digital evacuation of placental fragment
- ☐ Watch for bleeding

Monitoring in delivery room immediately after delivery

- ☐ Check BP, Pulse, Temperature every 15 minutes in first 2 hrs
- ☐ Check that uterus is well contracted and there is no bleeding. Massage the uterus every 15 minutes for first 2 hrs
- ☐ Record blood loss throughout third stage and immediately afterwards every 15 minutes for 2 hours
- ☐ Examine perineum, lower vagina for any tears
- ☐ Clean the woman and the area beneath her and provide clean pads
- ☐ Encourage the woman to drink and eat
- ☐ Keep the baby and mother together (skin to skin)
- ☐ Do not leave her alone
- ☐ Encourage the woman to pass urine
- ☐ Examine the new born after 1 hr
- ☐ Encourage breast feeding
- ☐ After 2 hours, if no problems accompany the mother and baby while shifting to the ward.
- ☐ CONTINUE watching for bleeding
- ☐ Watch out for dribbling urine

- If any vaginal or perineal tear, put a stitch
- If bleeding, apply pressure with a sterile gauze till the bleeding stops
- Monitor BP and pulse
- If bleeding does not stop, **refer to specialist**

- If dribbling urine, put indwelling catheter
- **Refer to specialist**

- ☐ Care of the new born is very critical *(refer to protocol)*

ANSWER KEYS- Assisting with childbirth
Knowledge assessment

1. Which of the following are signs of second stage of labour?
   e. Cervical dilation 9 cms
   f. Contractions 3 per 10 minutes lasting more than 40 sec
   g. Descent at 3/5
   h. All of the above

Answer: b

2. The steps in active management of third stage of labour include:
   a. Controlled cord traction, fundal massage and oxytocin
   b. Intravenous oxytocin, cord clamping and cutting and fundal massage
   c. Cord clamping and cutting, controlled cord traction, ergometrine administration and inspection of the placenta
   d. **Intramuscular injection of oxytocin, controlled cord traction, uterine massage**

Answer: d

3. During the first six hours after birth:

   d. List three things you would do to determine the new mother's well-being.
   - Check uterus for size and contraction
   - Check amount, consistency and colour of vaginal bleeding
   - Check pulse and blood pressure

   e. How would you determine that the mother is losing too much blood?
   - Check amount, consistency and colour of vaginal bleeding over time
   - Check pulse and blood pressure over time and determine whether within normal range
   - Compare character and estimated blood loss with expected blood loss
   - Look for signs of shock

   f. What steps would you take to stop the bleeding?
   - Rub the uterus whenever the uterus is soft
   - Make sure the bladder is empty
   - Put the baby to breast
   - Examine the placenta and rule out retained parts
   - Examine the perineum and vagina for tears

4. List **four most danger signs** to watch for in the mother
   - Prolonged and heavy bleeding
   - Extreme fatigue, pallor (conjunctiva, lips, nails)
   - Swelling or tenderness in one leg or both legs
   - High fever, severe abdominal pain and foul smelling vaginal discharge

5. List five important assessments to be done in a newborn
   - Respiration
   - Temperature
   - Colour
   - Movements and posture
   - Level of alertness and muscle tone

Exercise 1: Signs of second stage of labour

Cervix	Dilation is 10 cms
Contractions	Regular Frequency: at least 3 contractions per 10 min Duration: lasting more than 40 minutes
Vaginal secretions	Increase in bloody show Membranes are usually ruptured
Descent	Steady descent More and more presenting part is seen at the introitus during contractions
Other signs	Woman feels increasing rectal pressure Wants to bear down Feels intense urge to push

Exercise 2: Type of assessments and frequency 2nd stage and 4th stage

What to assess	Frequency of assessment		Normal	Abnormal and action to be taken
	2nd stage	4th stage		
BP	Once at least	Every 15 minutes	Systolic BP 90-140 mmHg Diastolic less than 90 mmHg	If systolic <90, rapid assessment to rule out shock If systolic 90-110 mmHg, act based on *clinical protocol on Hypertensive disorder in pregnancy* If diastolic BP is more than 110 mmHg, act based on *clinical protocol on Hypertensive disorder in pregnancy*
Temperature	Once	Once	Less than 38^0 Celsius	If more, tepid sponge Encourage increased fluid intake ***Consider paracetamol 500–1000 mg*** ***Rule out foul smelling discharge***
Pulse	Every 39 min	Every 15 min	Pulse 90-110 beats /min	Less than 90 or 110 or more per min, rule out shock Act as per *clinical protocol on shock*
Foetal heart	Every 5 min	-	120-160 beats/min	Absent foetal heart, act based on *clinical protocol on decreased foetal movement or intrauterine foetal death* ***If foetal heart rate not within normal range, act based on clinical protocol on assessment in labour***
Membranes and amniotic fluid	When doing vaginal examination	-	Membranes rupture spontaneously Amniotic fluid clear with a distinct odour	If red/bloody- *refer to clinical protocol on APH* If green or brown, refer If foul smelling, refer If membranes ruptured more than

				18 hours before birth, act based on *clinical protocol on PROM*
Moulding of foetal head	When doing vaginal examination	-	Bones are separated or touch each other	If bones overlap, anticipate unsatisfactory progress of labour
Foetal descent	Every 15 min	-	Progressive descent	If descent is not progressing continuously, refer to *clinical protocol on unsatisfactory progress of labour*
Contractions – frequency and duration	Every 30 min	-	Frequency 3-5 per 10 min, duration more than 40 secs and complete relaxation between contractions	If contractions are increasing in frequency/duration, foetal is not descending continuously, act as per *clinical protocol on unsatisfactory progress of labour* If contractions are decreasing in frequency/duration, act as per *clinical protocol on unsatisfactory progress of labour*
Vaginal secretions or bleeding	Continually	Every 15 min	2nd stage: Bloody show Clear amniotic fluid 4th stage: Small blood clots may be passed	2nd stage: If blood, act based on *clinical protocol on APH* ***If thickly meconium stained – act based on protocol on assessment of labour*** 4th stage: If bleeding or clots, act as per *clinical protocol on PPH*
Maternal response and behaviour	Every 5 min	-	Level of discomfort and effort required are intense	Overanxious and nervous, provide physical or psychological support
Uterus	-	Every 15 min	Uterus hard	Uterus becomes soft. Act as per *clinical protocol on PPH*

Exercise 3: Assessment of newborn during 4th stage of labour

What to assess	Frequency	Normal	Abnormal/action
Respiration	Every 15 minutes	Respiratory rate is 30-60 breaths per minute NO gasping or grunting on expiration, no chest in-drawing	If respiratory rate not within normal range, refer to expert
Temperature	Every 15 minutes	Feet are not too cold to touch Feet not too warm to touch	If feet too cold or warm, measure axillary temperature If axillary temperature less than 36.5^0 Celsius or more than 37.5^0Celsius, refer to expert
Colour	Every 15 minutes	Baby's lips, tongue and nail beds are pink NO central cyanosis No sign of jaundice No sign of pallor	If not within normal range, refer to an expert
Movements and posture	During examination	Movements are regular and symmetrical NO convulsions NO hyperextension of the body with the head and heels bent backward and body arched forewards	If irregular arm or leg movements, convulsions, or arching, refer to an expert
Level of alertness and muscle tone	During examination	Responds actively to handling and stimuli	Non-responsive, floppy or lethargic and loss of

		Not floppy or lethargic Can be easily woken from sleep	consciousness, refer to an expert
Breastfeeding	Whenever breastfeeding	Woman is positioned comfortably Attachment and sucking effective Baby satisfied after feeding	Suckling not effective, Find out reason If woman does not want to breastfeed, find out reason and counsel
Mother-baby bonding	Continuous	Mother enjoys physical contact with newborn and caresses the newborn Responds with concern to newborn's crying	If not within normal range, ask whether she is feeling sad or feeling depressed, anxious, overwhelmed, crying more than usual, assess for depression. Provide psychological support.

Handout 2: Active management of third stage of labour

- Within one minute of delivery, after excluding presence of an additional baby, give ***Oxytocin 10 units IM***
- Apply controlled cord traction (CCT)

Delivery of the placenta by CCT

- Clamp the cord close to the perineum and hold the clamped cord with one hand
- Place side of hand above symphysis pubis of the woman with palm facing towards umbilicus to apply counter traction to the uterus
- Apply slight traction and await a strong uterine contraction (2-3 minutes)
- When the uterus becomes rounded or the cord lengthens, gently pull downward on the cord to deliver the placenta. Continue to apply counter traction with the other hand.
- As the placenta is coming out, to prevent tearing of the membranes, hold the placenta in both hands and gently turn until the membranes are twisted.
- Slowly pull down to complete the delivery.
- Examine placenta for completeness
- Assess blood loss and record.

Uterine massage

- Assess uterine tone
- If soft, massage uterus through abdomen until well contracted
- Assess uterine tone every 15 min in first 2 hours and if uterus becomes soft, massage until contracted.

Handout 3: Danger signs and emotional changes

Danger signs to watch out for in mother after delivery

a. prolonged and heavy bleeding
b. extreme fatigue, pale conjunctiva, pale lips and pale fingernails
c. swelling and tenderness in one leg or both legs
d. high fever, severe abdominal pain and foul smelling vaginal discharge
e. pain or bleeding with urination and back pain
f. inability to control the flow of urine or leaking urine through the vagina
g. high fever, swelling, tenderness, red streaks and/or heat in a breast
h. difficulty eating and sleeping, severe sadness and difficulty caring for the baby
i. fast, weak pulse, sweating, pale or cool skin and confusion

Likely negative emotional changes in the mother

a. feeling overwhelmed
b. feeling sad, crying easily
c. worry about doing a good job with the baby

Handout 4: Danger signs in newborn

a. breathing difficulty
b. convulsions, spasms, arching
c. Cyanosis
d. Hot to touch/fever
e. Cold to touch
f. Bleeding
g. Jaundice
h. Pallor
i. Diarrhoea
j. Persistent vomiting and abdominal distension
k. Not feeding, poor sucking
l. Redness of umbilicus, or infection
m. Floppiness
n. Lethargy

Case study: Childbirth assessment and care

Directions

Read and analyse 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 case study. When all groups have finished, the case studies and the answers each group has developed will be discussed.

Client profile

Mrs. Betsy is 25 years of age. Her mother -in- law has brought her to the hospital and reports that she has been in labour for 8 hours and that her membranes ruptured 3 hours ago. You greet Mrs. Betsy and her mother-in- law respectfully and with kindness. On arrival at the hospital, she had a strong contraction lasting 45 seconds. Because she is showing signs of labour, you complete the Quick Check to detect signs/symptoms of life-threatening complications and, finding none, quickly proceed to physical examination to determine whether birth is imminent. Although Mrs. Betsy is not pushing, you find that she has a bulging, thin perineum.

Assessment (information gathering through history, physical examination, and testing)

1. What history will you include in your assessment of Mrs. Betsy and why?

Because there are signs of advanced labour, there is need to do a complete history. Antenatal records should be quickly checked for history of present pregnancy, obstetric and medical history, with particular attention to problems and treatment.

2. What physical examination will you include in your assessment of Mrs. Betsy and why?

Perform the following elements of examination to guide further assessment and help individualize care provision. Some findings may **help determine stage/phase of labor**, or may indicate a special need/condition that requires additional care or a life-threatening complication that requires immediate attention.

- Check vital signs to detect any abnormal signs and symptoms
- Abdominal examination including assessment for scar, uterine shape, fundal height, foetal parts
    - Foetal lie, presentation
    - Descent of foetus
    - Foetal heart
    - Bladder
    - Frequency and duration of contractions
- Genital examination : Vaginal opening, skin, labia, any foetal part protruding, secretions
- Cervical examination:
    - Dilation of the cervix
    - Membranes and amniotic fluid
    - Presentation
    - Moulding

See handout on physical examination in the module on Monitoring labour and management

3. What laboratory tests will you include in your assessment of Mrs. Betsy and why?

Blood grouping and Rh factor, syphilis and HIV if not done early for early diagnosis and

treatment

Diagnosis (interpreting information to identify problems/needs)

You have completed your assessment of Mrs. Betsy and your main findings include the following:

History:

- Mrs. Betsy is at term.
- This is her fourth pregnancy.
- Her previous pregnancies/deliveries were uncomplicated.
- All other aspects of her history are normal or without significance.

Physical Examination:

- Vital signs are as follows: Respirations are 20 per minute, BP is 130/82, Pulse is 88 beats per minute, Temperature is 37.8°C.
- On abdominal examination:
- No scars are noted and uterus is oval-shaped
- Fundal height is 34 cm
- Parts of one foetus are palpable
- Foetus is longitudinal in lie and cephalic presentation
- Presenting part is not palpable above the symphysis
- Foetal heart tones are 148 per minute
- Bladder is not palpable
- Contractions are 3 per 10 minutes, 40–50 seconds in duration each

On genital and cervical examination:

- Her cervix is 10 cm dilated and fully effaced
- Presentation is vertex and the foetal head is on the perineum
- Visible amniotic fluid is clear
- All other aspects of her physical examination are within normal range.

Test results may be back.

4. Based on these findings, what is Mrs. Betsy's diagnosis (problem/need) and why?
   - Mrs. Betsy has reached second stage of labour, indicated by full dilation and effacement of the cervix.

Care provision (implementing plan of care and interventions)

5. Based on your diagnosis (problem/need identification), what is your plan of care for Mrs. Betsy and why?
   - Mrs. Betsy must not be left alone
   - She should continue to receive on-going assessment (maternal pulse and contractions every 30 minutes, foetal heart rate every 5 minutes) to rule out any problems in mother and foetus and assess progress of labour
   - She should receive on-going supportive care including breathing (See handout on supportive care during labour under module on monitoring labour and management)

Evaluation

- Mrs. Betsy has 3 contractions every 10 minutes, each lasting more than 40 seconds.
- After 15 minutes, she begins pushing spontaneously with each contraction.
- After another 15 minutes, she has a spontaneous vertex birth of a baby boy. The baby breathes immediately at birth.
- The third stage of labour has not yet been completed.

6. Based on these findings, what is your continuing plan of care for Mrs. Betsy and why?
   - Immediate care of newborn (dry the baby, warmth, clamp and cut cord, skin-to-skin contact with mother
   - After ruling out additional baby, active management of third stage of labour (see learning guide on active management of third stage of labour)
   - Make Mrs. Betsy comfortable (clean perineum, change linen)
   - Mother and baby receive on-going assessment for first 2 hours after birth (see exercise on on-going assessment)

Skills practice session: Assisting in normal birth

Purpose

The purpose of this activity is to provide opportunities to observe and practice clinical skills, either in a simulated setting or at a clinical site.

Instructions

This activity should be conducted in a simulated setting using the appropriate pelvic and foetal models.

Trainer requests one of the participants to demonstrate delivery of the foetus including immediate care of the newborn. Others provide feedback. Trainer provides feedback.

Participants should review the learning guide before beginning the activity. Under the guidance of the trainer, participants should then work in groups of three to practice the steps/tasks and observe each other's performance; one plays the role of provider, the second one as woman in labour and the third as observer. The observer uses the relevant section of learning guide on *assisting with childbirth* to observe performance. Participants reverse the roles until each has had an opportunity to take a history and conduct physical examination and are competent. The trainer observes each participant when ready for observation and provides feedback. The participants who are not competent are made to repeat the exercise. Repeat the same process for immediate care of the newborn by requesting one of the participants to demonstrate *Participants should be able to perform the steps/tasks relevant to assisting the birth before progressing to active management of third stage, examination of placenta, and inspection of vagina and perineum.*

Trainer should request one of the participants to demonstrate steps in active management of third stage of labour. Rest of the participants observe using the learning guide on assisting with childbirth. The trainer should demonstrate the steps/tasks in **active management of third stage**, as well as the following steps of **examination of the placenta and inspection of the vagina and perineum for tears**. The participants should continue to work in their groups and practice using learning guide as instructed earlier.

During supervised practice at a clinical site, the trainer assesses the skills competency of each participant using learning guides.

Resources

- Childbirth simulator
- Newborn doll
- Placenta model
- Sphygmomanometer and stethoscope
- Foetal stethoscope /Doppler
- Delivery kit
- Towels
- Speculum
- Soap and water and betadine
- Examination gloves
- 0.5% chlorine solution and receptacle for decontamination
- Leak proof container or plastic bag

Module 4

Managing unsatisfactory progress of labour

Training resource package for intrapartum and immediate post-partum care

National Standard 2: Every woman who develops complications during labour and delivery receive evidence-based appropriate care including appropriate referral.
Quality statement: Every woman with unsatisfactory progress in labour receive timely and appropriate interventions to augment labour including safe application of appropriate procedures to ensure safe outcomes for her and new born.
Clinical protocol: Unsatisfactory progress of labour

Module: Managing unsatisfactory progress of labour

Key tasks
- Diagnosis of unsatisfactory progress of labour
- Rapid assessment
- Use of partograph to recognise underlying cause
- Shares findings with the woman and family
- Managing unsatisfactory progress of labour
- Performing artificial rupture of membranes
- Application of ventouse
- Records findings and diagnosis

Training schedule
- Key tasks
- Learning objectives
- Sessions plans
- Knowledge assessment

Trainer's guide
Session plan describes objectives of each session, methodology and key points
- Case studies
- Exercises
- Role plays
- Learning guides

Key knowledge
- Diagnosis of Unsatisfactory progress of labour and underlying causes

Critical skills
- Assessment of progress of labour
- Interpretation of unsatisfactory progress
- Management of unsatisfactory progress of labour
- Artificial rupture of membranes
- Application of ventouse

Evaluation
- Post Test
- Skill assess: using learning guides
- Module Evaluation

Module: Management of unsatisfactory progress of labour
Training schedule
Total time: 660 min (11 hours)

Time	Topic	Method	Resource materials
30 min	Welcome Objective of the module: Develop skills in identification and management of unsatisfactory progress of labour Discuss: Key tasks Learning objectives Tools for evaluation of the session	Discussion	Slide 2-3
30 min	Knowledge assessment	Test	
Session 1 2 hours	Diagnosing unsatisfactory progress of labour	Discussion	Slide 4-6 MCPC 2017 Clinical protocol on unsatisfactory progress of labour **Exercises 1, 2, 3**
Session 2 2 hours	Managing unsatisfactory progress of labour	Case study Discussion Skill practice	MCPC 2017 Learning guide on management of unsatisfactory progress of labour Learning guide on performing artificial rupture of membrane Clinical protocol on unsatisfactory progress of labour
Session 3 2 hours	Application of ventouse/vacuum extractor	Discussion Skill practice	Slide 7-21 MCPC 2017 Learning guide on application of ventouse/vacuum extractor
Session 4 2 hours	Supervised client practice	Skill practice	Learning guide
Session 5 2 hours	Evaluation	Post-test Skill check Module evaluation	Questionnaire Learning guide Module evaluation checklist

Session plan

Training process	Resources
Welcome – **30 min** Objective of the module: Upgrade skills in diagnosing and managing unsatisfactory progress of labour Key tasks Learning objectives At the end of the session the participants should be able to: 1. Assess progress of labour through use of partograph 2. Diagnose unsatisfactory progress of labour and determine the underlying reason for the same 3. Manage unsatisfactory progress of labour to save the baby and the mother 4. Perform artificial rupture of membranes 5. Apply ventouse Explain the tools for evaluation of the session	Slide 2-3
Knowledge assessment – **30 min**	Questionnaire
Session 1: Diagnosing unsatisfactory progress of labour – **120 min** *Session objective*: Update skills in monitoring progress of labour and identifying unsatisfactory progress *Exercise 1* Distribute exercise 1 and ask the participants to fill the last column. Ask the participants to share their answers. Give the correct answers. *Discussion* Ask the participants to list the key signs of satisfactory progress of first stage of labour. List the responses on the board. Ask about the key signs of unsatisfactory progress of first stage. List the responses on the board. Ask about the key signs of progress and unsatisfactory progress of labour and list the responses on the board. Discuss the responses. Show the slides to sum up the discussion. *Exercise 2* Distribute blank partographs and information to record on the partograph. Ask one of the participants to share the findings and discuss the same. Project the correctly filled partograph and point out key recordings. *Exercise 3* Distribute exercise 3 and ask the participants to respond to the answers. After all have read, ask the participants to answer the questions. Discuss the recording on the partograph.	Slide 4-6 MCPC 2017 (page S-73) Clinical protocol on unsatisfactory progress of labour Exercise 1, 2, 3 Handout (filled exercise 1) Handout 2 Correctly filled partograph of exercise 2
Session 2: Managing unsatisfactory progress of labour *Session objective*: Develop/update skills in immediate management and specific management of labour that is not progressing satisfactorily *Case study* Divide the participants into groups of three. Project the case study up to diagnosis. Ask the groups to review the case study and respond to questions 1-3. Ask one of the groups to respond to the questions. Discuss the responses. Project the rest of the case study and ask the groups to respond to questions 4 and 5. Discuss the responses. The trainer should	MCPC 2017 Learning guide on managing unsatisfactory of labour Learning guide on performing artificial rupture of membrane Clinical protocol on unsatisfactory progress of labour

summarise the responses focusing on key signs and partograph records for diagnosis and on management. *Skill practice* –Managing unsatisfactory progress of labour (follow instructions on skill practice and arrange all the supplies needed for the practice) Distribute the learning guide on unsatisfactory progress of labour. Follow the instructions on skill practice. The trainer should observe each participant using the learning guide/performing the procedure and give feedback. Skill practice- Performing artificial rupture of membrane (follow instructions on skill practice and arrange all the supplies needed for the practice) Distribute the learning guide on performing artificial rupture of membrane. Follow the instructions on skill practice. The trainer should observe each participant using the learning guide/performing the procedure and give feedback.	
Session 3: Application of ventouse *Objective of the session*: To develop skills in application of ventouse *Discussion* Ask participants whether any of them have applied ventouse , indications for the same and share their experience. Ask about indications and contraindications for applying ventouse. Ask the participants who have experience in ventouse about precautions to be taken during the procedure. *Skill practice*- Application of ventouse follow the instructions on skill practice and arrange all the supplies needed for the practice). Distribute learning guide on application of ventouse and follow the instructions for skill practice. The practice should be divided into three practice sessions as discussed below. After practising each manoeuvre feedback should be provided.	MCPC 2017 Learning guide on application of ventouse
Session 3: Supervised client practice *Objective of the session* is to practice skills with clients. This is the final stage of clinical skills developments and participants should be allowed to work with clients only after they have demonstrated skill competency in a simulated situation. Planning for the supervised practice is a critical component so that participants get adequate practice. It is important to respect the rights of clients – permission should be sought, privacy and confidentiality should be maintained and respectful dealings with the clients. Since one trainer may not be sufficient to supervise all the participants, it will be good to identify potential assistants to help the trainer (preceptors) to observe the skill practices. The preceptors could be a doctor or senior midwife who is very proficient in the skills. The preceptors will need to be trained in the use of checklists to familiarise them with the checklists.	Learning guides
Session 4: Evaluation	Questionnaire Learning guide Module evaluation format

Knowledge assessment

1. Cervical dilation plotted to the right of the alert line on the partograph indicates

a) satisfactory progress of labour
b) unsatisfactory progress of labour
c) the end of the latent phase
d) the end of the active phase

2.Unsatisfactory progress of labour should be suspected if

a) the latent phase is longer than 8 hours
b) cervical dilation is plotted to the right of the alert line on the partograph
c) the woman has been experiencing labour pains for 12 hours or more without giving birth
d) all of the above

3. A cervix that is not dilated beyond 4 cm after 8 hours of regular contractions is a sign of

a) false labour
b) inadequate uterine activity
c) prolonged latent phase
d) prolonged active phase

4. Findings diagnostic of cephalopelvic disproportion are

a) cervical dilation plotted to the right of the alert line on the partograph
b) uterine contractions in the latent phase with an unengaged foetal head
c) secondary arrest of descent of the head in the presence of good contractions
d) grade 3 moulding of the foetal head

5. If the active phase of labour is prolonged

a) delivery should be by caesarean section
b) cephalopelvic disproportion and obstruction should be ruled out
c) labour should be accelerated
d) none of the above

6. If there is no cephalopelvic disproportion, no foetal distress, second stage, contractions inadequate

a) delivery should be by caesarean section
b) the membranes should be ruptured
c) labour should be induced
d) the membranes should be ruptured and labour augmented using oxytocin

Exercise 1

Signs	Diagnosis
1.Cervix not dilated; no palpable contractions or infrequent contractions	
2. Cervix not dilated beyond 4 cm after eight hours of regular contractions	
3. Cervical dilatation to the right of the alert line on the partograph	
4. Secondary arrest of cervical dilatation and descent of presenting part in presence of good contractions	
5. Two contractions or fewer in 10 minutes, each lasting less than 40 seconds	
6. Presentation other than vertex with occiput anterior	
7. Cervix fully dilated and woman has urge to push, but no descent	

Exercise 2

Mark the following on the blank partograph.

Name of the patient: Mariam Age 20 Gravida 1 Para 0+0 Date of admission May 14, 2015
10.00 Mrs Mariam admitted with history of labour pains. No bleeding per vagina. On examination, the uterine contractions: 2 in 10 min, each lasting less than 20 sec. Foetal head 5/5 palpable. Foetal heart rate is 120 per min. Cervical dilation is 4 cm.

14.00 Uterine contraction 1 in 10 min, each lasting less than 20 sec. Foetal head still 5/5 palpable. Foetal heart rate is Membranes ruptured spontaneously. Amniotic fluid is clear. Cervix is still 4 cm dilation.

1800 Uterine contractions 2 in 10 minutes, lasting less than 20 secs. Foetal head still 5/5 palpable. Cervical dilation 6 cm. Foetal heart rate 80 per minute, amniotic fluid stained with meconium.

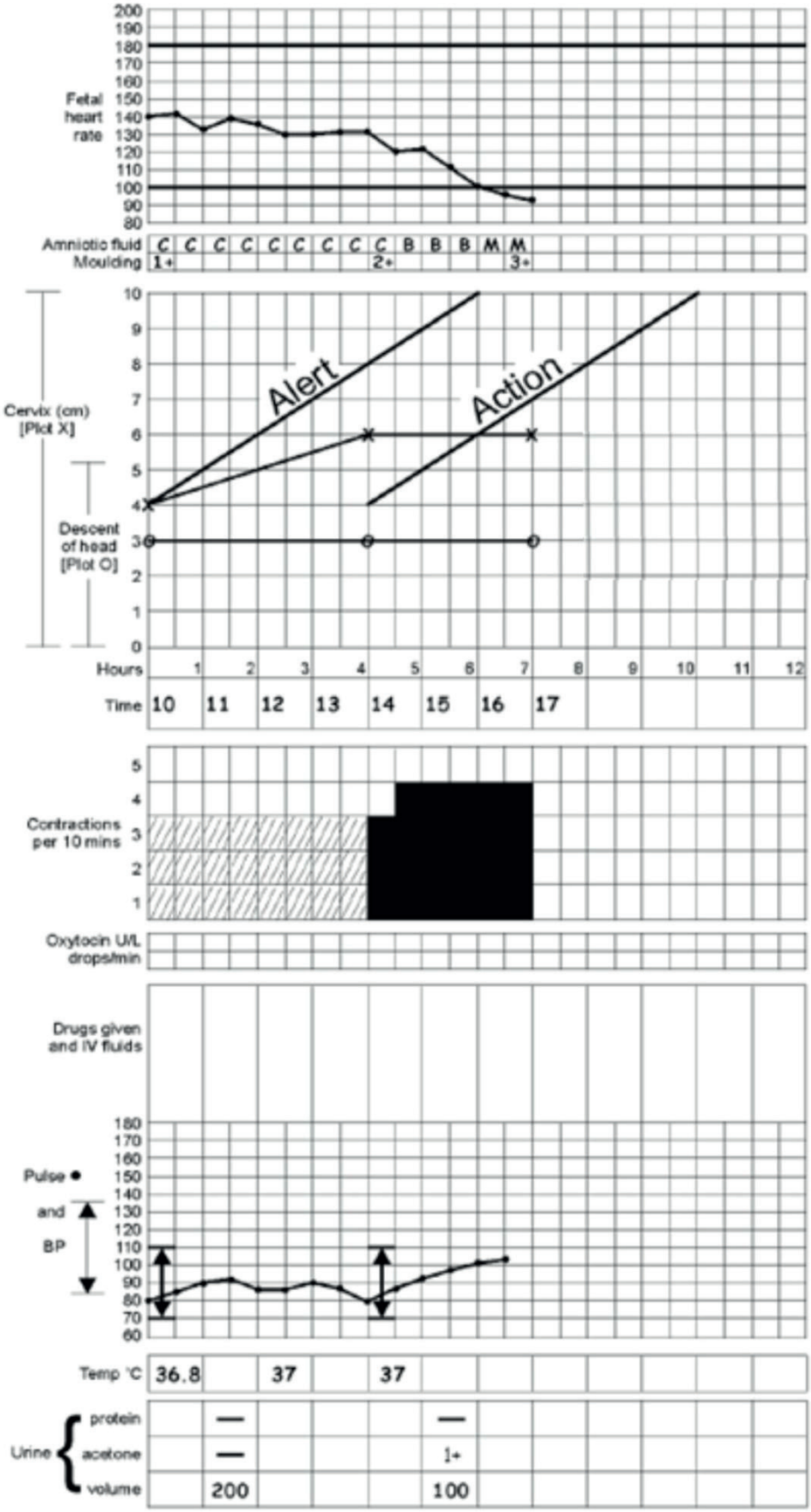
What is your diagnosis?
What would you do (make your decision using the clinical protocol)

Exercise 3

Review the partograph.
What is your diagnosis
How would you manage the case? (make your decision using the clinical protocol)

Name Mrs. H Gravida 4 Para 3+0 Hospital number 6639

Date of admission 20.5.2000 Time of admission 10:00 A.M. Ruptured membranes 1 hours



Case study: Unsatisfactory progress of labour

Directions

Read and analyse 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 case study. When all groups have finished, the case studies and the answers each group has developed will be discussed.

Case study

Mrs. Amelia is an 18-year-old primi gravida. She was admitted to the health center in active labour at 10:00 am; the foetal head was palpable at 5/5 above the symphysis pubis; the cervix was 4 cm dilated; contractions were two in 10 minutes, each lasting less than 20 seconds. Membranes ruptured spontaneously at 12:00 pm, and amniotic fluid was clear. It is now 2:00 pm, and the foetal head is still 5/5 palpable above the symphysis pubis; the cervix is still 4 cm dilated and is now to the right of the alert line on Mrs. Amelia.'s partograph; contractions continue at a rate of two in 10 minutes, lasting less than 20 seconds.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

1. What will you include in your initial assessment of Mrs. Amelia, and why?

2. What particular aspects of Mrs. Amelia'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 Mrs. Amelia, and why?

Diagnosis (Identification of Problems/Needs)

You have completed your assessment of Mrs. Amelia. and your main findings include the following:

Mrs. Amelia has no symptoms or signs of cephalopelvic disproportion or obstruction. Her vital signs are within normal range, as is the foetal heart rate. She is not dehydrated. She has a high level of anxiety, however, and is finding it difficult to relax between contractions. On assessment, the cervix is found to be favourable.

4. Based on these findings, what is Mrs. Amelia's diagnosis, and why?

Care provision (Planning and Intervention)

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

Skills practice session: Managing unsatisfactory progress of labour

Purpose

The purpose of this activity is to provide opportunities to observe and practice clinical skills, either in a simulated setting or at a clinical site.

Instructions

This activity should be conducted in a simulated setting using the appropriate pelvic and foetal models.

Participants should review the appropriate learning guide before beginning the activity.

Under the guidance of the trainer, participants should work in groups of three to practice the steps/tasks and observe each other's performance; one plays the role of provider, the second one as woman who is bleeding after childbirth and the third as observer. The observer uses the relevant learning guide related to management of bleeding after childbirth. Participants reverse the roles until each has had an opportunity to practice and is competent. The trainer observes each participant when ready for observation and provides feedback. The participants who are not competent are made to repeat the exercise.

It Is possible to incorporate the learning guide on artificial rupture of membranes into the learning guide on management of unsatisfactory progress of labour.

During supervised practice at a clinical site, the trainer assesses the skills competency of each participant using learning guides.

The above process should be repeated for each of the skills practice session.

Resources

- Childbirth simulator
- Sphygmomanometer and stethoscope
- Delivery kit
- Speculum
- Thermometer
- Catheter
- Syringe and needle
- Soap and water and betadine
- Sterile gloves
- Personal protective barriers
- IV set
- 0.5% chlorine solution and receptacle for decontamination
- Leak proof container or plastic bag
- Learning guides on management of unsatisfactory progress of labour and performing artificial rupture of membranes

Learning guide: Managing unsatisfactory progress of labour

Rating scale
2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards

	2	1	0	Comments
Task 1: Prepares for initial history and examination (*some of the steps listed below may not be applicable in case of women admitted in health centre as may have been carried out as part of monitoring of labour)*				
Setting 1.1 Decontaminates and cleans the work surface				
1.2 Ensures the availability and arranges (if already admitted in health centre, this step is not necessary) ▪ adequate light ▪ examination table, linen, pillow ▪ bin and cover ▪ soap, water and hand towel ▪ sterile gloves ▪ thermometer, BP apparatus, stethoscope, watch, tape measure and weighting scale ▪ antiseptic lotion (betadine) ▪ 0.5% chlorine solution ▪ Protective barriers				
1.3 Greets woman and carefully explains to her the situation and that you are going to examine her to see the reason. Encourages her to ask questions and responds sensitively				
1.4 Quickly reviews partograph if available and other records available especially for any evidence of abnormal presentations, twins, history of diabetes, etc.				
Task 2: Rapid assessment				
2.1 Asks timing of onset of labour pains, frequency and duration, location of discomfort, foetal movements, any vaginal discharge (fluid or blood)				
2.2 Washes hands with soap and water				
2.3 Examines the abdomen: ▪ for contractions (frequency, duration) ▪ lie, presentation, position, descent ▪ foetal head descent ▪ foetal heart rate				
2.4 Inspects the perineum for bleeding, any protrusion of baby's body parts				
2.5 Washes hands with soap and water and wears sterile gloves				
2.6 Cleans the vulva with soap and water or betadine				
2.7 Performs bimanual examination ▪ status of cervix o effacement o dilatation ▪ status of amniotic sac (intact or not) ▪ presenting part ▪ Moulding if vertex presentation ▪ absence or presence of umbilical cord				

(SHOULD WE ADD FULL EXAMINATION OF ABDOMEN, PERINEUM here from module on LABOUR) Continue to perform other examination as in Module on Labour.				
2.8 If possible, tests urine for ketone				
2.9 Assesses if the woman is anxious, fearful or distressed by pain ▪ If the woman is anxious or fearful, gives supportive care ▪ If woman is distressed by pain, encourages breathing techniques or analgesics				
Task 3: Shares assessments and diagnosis with the woman				
3.1 Informs the woman, in a reassuring manner, of the assessments and diagnoses including: -lack of progress of labour/estimated time of birth -her own health status -health status of her foetus - the need for referral to a higher facility immediately or observation (depending on the finding)				
3.2 Encourages the woman to ask questions if any.				
3.3 Informs the family about the findings and the possibility of referral (refers to the complication readiness plan if available)				
Task 4: Provides immediate and appropriate care				
4.1 Starts IV fluids				
4.2 Catheterises if bladder full and retains the catheter in				
4.3 Manages specific cause as per clinical protocol 4.3 a. Refers after informing the woman and her family (see Task 3 for details) ▪ If abnormal lie or presentation ▪ If CPD (arrest of cervical dilation and descent of head) (will CHC staff be able to assess??? Clinical protocol includes CPD ▪ If prolonged latent phase (cervical dilation not beyond 4 cm after 8 hr) ▪ If prolonged active phase (cervical dilation less than 1cm/hour or to the right of the alert line) ▪ If inadequate uterine activity (inefficient contractions less than 2 per 10 min lasting less than 40 sec)) ▪ If good contractions but no descent				
4.3 c. If foetal distress, manages as per clinical protocol ▪ If in first stage, refers ▪ If in second stage, performs assisted delivery. 4.3 d. If no foetal distress: ▪ Watches and evaluates for adequacy of contractions using partograph ▪ Performs ARM if not adequate and refers if no progress ▪ Delivers by normally or by assisted vaginal delivery				
4.4 Refers newborn to specialist for examination				
4.5 Retains the indwelling urinary catheter				

SHOULD "Obtaining initial intrapartum history and examination from Learning guide on labour should be added" (TO DISCUSS WITH TECHNICAL COMMITTEE) see back up notes				
Task 5: Post-procedure care				
5.1 Before removing gloves, disposes of waste materials in a leakproof container or plastic bag.				
5.2 Places all instruments in 0.5% chlorine solution for 10 minutes for decontamination				
5.3 Immerse both gloved hands in 0.5% chlorine solution. Removes gloves by turning them inside out. • If disposing of gloves, place them in a leakproof container or plastic bag. • If reusing surgical gloves, submerge them in 0.5% chlorine solution for 10 minutes for decontamination.				
5.4 Wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.				
5.5 Records in ***labour record and partograph if the cervical dilatation is 4 cms or more***				

Learning guide: Artificial rupture of membranes

Rating scale
2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards

Task 1: Prepares for performing artificial rupture f membranes				
	2	**1**	**0**	**Comments**
Setting 1.1 Decontaminates and cleans the work surface				
1.2 Ensures the availability and arranges: ▪ adequate light ▪ examination table, linen, pillow ▪ bin and cover ▪ soap, water and hand towel ▪ gloves ▪ thermometer, BP apparatus, stethoscope, watch, tape measure ▪ antiseptic lotion (betadine) ▪ 0.5% chlorine solution ▪ Kocher clamp or amniotic hook				
1.3 Tells the woman and her companion (if any) what is going to be done, encourages her to ask questions and responds.				
1.4 Provides continual emotional support and reassurance if feasible				
1.4 Puts on personal protective barriers				
Task 2: Performs artificial rupture of membranes				
2.1 Listens to the foetal heart				
2.2 Washes hands thoroughly with soap and water and dries with a clean cloth or air dries.				
2.3 Puts sterile surgical gloves on both hands				
2.4 Cleans the vulva with antiseptic solution				
2.5 Uses one hand to examine the cervix and notes consistency, position, effectiveness and dilation				
2.6 Uses the other hand to insert an amniotic hook or a Kocher clamp into the vagina				
2.7 Guides the hook or clamp along the fingers of the examining hand in the vagina towards the membranes				
2.8 Places two fingers of the examining hand against the membranes and gently ruptures the membranes, between rather than during contractions, with the hook or clamp in the other hand.				
2.9 Removes the hook or clamp from the vagina				
2.10 Allow the amniotic fluid to drain away slowly around the fingers of the examining hand.				
2.11 Note the colour of the fluid (e.g., clear, greenish, bloody).				
2.12 Removes the examining hand from the vagina				
Task 3: Post procedure tasks				
3.1 Before removing gloves, disposes of waste materials in a leak proof container or plastic bag.				
3.2 Places all instruments in 0.5% chlorine solution for 10				

minutes for decontamination				
3.3 Immerse both gloved hands in 0.5% chlorine solution. Removes gloves by turning them inside out. • If disposing of gloves, place them in a leakproof container or plastic bag. • If reusing surgical gloves, submerge them in 0.5% chlorine solution for 10 minutes for decontamination.				
3.4 Washes hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.				
3.5 Listens to the foetal heart.				
3.6 Monitors the contractions				
3.7 Records in the partograph				

Learning guide – Applying ventouse (vacuum extractor)

Performed in case of foetal distress
Criteria to be met for applying vacuum extractor:

- Vertex presentation
- Term foetus
- Cervix fully dilated
- Head at 0 station or no more than 2/5 palpable above the symphysis pubis
- Membranes ruptured

Rating scale: 2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards even after prompting

	2	1	0	Comments
Task 1: Getting ready				
1.1 Decides if the woman can be helped by using a vacuum extractor. Check that conditions(indications) are right to do a vacuum extraction.				
1.1 Makes arrangements for referral including transport ▪ Tells the woman that she needs assistance to deliver her baby and there may be possible problems. Explains if the vacuum extractor does not help the baby deliver, a caesarean section may be needed and will need referral. Encourages her to ask questions and responds in a compassionate manner. Provides continuous emotional support. ▪ Tells the family about the situation and arranges for a donor (already identified in the complication readiness plan or a new one to accompany the woman)				
1.4 Before the procedure, calls for helpers ▪ one person to help with the vacuum extraction who is trained in how to use the equipment ▪ another person to take care of the baby immediately after birth including resuscitation				
1.5 Prepares the vacuum extractor ▪ Identifies a large cup ▪ Connects the pump, tubing and cup ▪ Tests the vacuum on the palm of the hand by asking the helper to increase the pressure to 100 mm HG. Then releases the vacuum.				
1.6 Wears personal protective barriers				
Task 2: Pre-procedure tasks				
2.1 Positions the woman on her back with her legs bent with her buttocks at the edge of the bed. Supports her feet (by helpers) if not already in lithotomy position held by stirrups .				
2.2 If wearing gloves, change gloves or wash gloved hand in antiseptic solution				
2.3 Cleans the vulva with antiseptic solution				
2.3 Catheterises the bladder if needed				

Task 3: Vacuum extraction				
3.1 Does vaginal examination to assess the position of the foetal head by feeling the sagittal suture line and the fontanelles, descent and flexion point				
3.2 Identifies the posterior fontanelle				
3.3 Identifies the flexion point, 3 cm anterior to the posterior fontanelle				
3.4 Informs the woman each time what is going to be done during the procedure				
3.4 Applies the largest cup that will fit, with the centre of the cup over the flexion point and the edge of the cup placed about 1 cm anterior to the posterior fontanelle. ▪ Holds the vacuum extractor cup (compressed if soft cup, sideways if hard cup) in one hand ▪ Separates the labia with the fingers of the other hand and pulls down the perineum to make a place for the cup ▪ Inserts the cup in the vagina ▪ Moves the cup into place over the flexion point (centres on the sagittal suture, just in front of the posterior fontanelle)				
3.5 Performs an episiotomy if needed to facilitate the proper placement of the cup **(See learning guide for episiotomy)**				
3.5 Checks the application to ensure that no maternal soft tissue is caught in the cup (releases pressure and reapplies if any tissue is caught)				
3.6 Holds the cup in position with one hand with thumb on the cup and index finger on the baby's scalp				
3.7 With the pump, asks the assistant to create a vacuum of 0.2 kg/cm^2 negative pressure ▪ Checks the application to ensure that no maternal tissue is caught below the cup				
3.8 Increases the vacuum to 0.8kg/cm^2 (600 mmHg) ▪ Checks the application to ensure that no maternal tissue is caught below the cup				
3.9 After maximum negative pressure, starts traction in the line of the pelvic axis and perpendicular to the cup. ▪ If the **foetal head is tilted to one side or not flexed well**, traction is directed in a line that will try to correct the tilt or deflexion of the head (i.e. to one side or the other, not necessarily in the midline).				
3.10 At the onset of each contraction, applies traction perpendicular to the plane of the cup rim and maintains through the contraction (changing the axis of the traction according to pelvic curve) ▪ Place a finger on the scalp next to the cup during traction to assess potential slippage and descent of the vertex.				
3.11 Between each contractions, makes the assistant check ▪ Foetal heart ▪ Application of the cup				
3.12 Asks the woman to push long and steadily with a contraction				
3.13 a. Continues with guided pulls for a maximum of 20/30 minutes if: ▪ Progress in descent of the head				

▪ No foetal distress ▪ If there is no slip of the cup b. If not successful, refers to the facility where already arrangements have been made				
3.14 Delivers the head slowly, protecting the perineum				
3.15 Once the head is delivered, releases the vacuum and removes the cup and completes the delivery				
3.16 Informs the mother about the completion of the procedure. Informs the family.				
3.17 When the head crowns, pulls upward at 45 degree angle and pulls the head out DO NOT twist or turn the vacuum cup or handle. DO NOT USE more pressure than 600 mm Hg or equivalent				
3.18 As the woman pushes, pulls downward on the handle firmly and straight. The baby's head will rotate at the speed and direction of a normal delivery				
3.19When the contraction stops, -asks the helper to reduce the pressure to 100 mmHg -DO NOT PULL WHEN CONTRACTION STOPS - Encourage the woman slowly and deeply to relax				
3.20 Asks the assistant to provide immediate newborn care especially breathing as per **learning guide on assisting in delivery** ▪ Dries and keeps the baby warm, cuts the cord and ties and puts the baby on mother's breasts as soon as possible				
Task 4: Post-procedure care				
4.1 Performs active management of third stage of labour				
4.2 Ensures that the uterus is well contracted and that the blood loss is not excessive				
4.3 Checks for genital trauma and repairs lacerations or refers				
4.4 Repairs episiotomy				
4.5 Examines the newborn's scalp and notes injuries. Explains t the mother about the large swelling on the head				
4.6 Explains to the parents about the reason for the large swelling on the head and assures that it will disappear within few hours				
4.7 Encourages the mother and baby to rest and monitor them closely				
4.8 Monitors the woman's uterine tone, vaginal bleeding, pulse, temperature and blood pressure every 15 minutes for the first two hours, every 30 minutes for the third hour after birth, and then hourly for three hours.				
Task 5: Post-procedure tasks				
5.1 Disposes of waste material in leak-proof container				
5.2 Places all instruments in 0.5% chlorine solution for 10 minutes for decontamination				
5.3 Immerses the gloved hand in 0.5% chlorine solution				
5.4 Washes hand with soap and water and dries with clean cloth or air dries				
5.5 Documents the following information: ▪ indication for vacuum birth ▪ date and time of the procedure				

▪ name of the clinician performing the procedure and the names of personnel who assisted ▪ length of the procedure and the number of pulls ▪ position of the foetal head prior to application of the cup (occipito-anterior, occipito-lateral, occipito-posterior) ▪ birth position (occipito-anterior or occipito-posterior) ▪ condition of the baby at birth, colour, whether breathing and any resuscitation needed as well as position of "chignon" and any bruising ▪ details of the third stage of labour ▪ details of any medications used ▪ maternal condition following the procedure ▪ any complications affecting the mother or baby				
PRECAUTIONS- TO AVOID COMPLICATIONS • Place cup on flexion point. • Pull in the direction of the birth canal. • Pull only when the woman is pushing with contraction. • Each pull should show progress. • Two pulls without descent – stop. • Three pop-offs – stop. • Foetal scalp trauma seen – stop. • Failure of efforts in 20 minutes – stop. • Prevent cup detachment (pop-off). TIPS • Never use the cup to actively rotate the baby's head. Rotation of the baby's head will occur with traction. • The first pulls help to find the proper direction for pulling. • Do not continue to pull between contractions and expulsive efforts. • With progress, and in the absence of fetal distress, continue the "guiding" pulls for a maximum of 30 minutes. Vacuum-assisted birth •				

SESSION EVALUATION

Module: Unsatisfactory progress of labour

Please indicate your opinion of the course components using the following rating scale:

5.Strongly Agree 4. Agree 3. No opinion 4. Disagree 5. Strongly disagree

Course component	Rating
1.The discussions helped me to clarify elements related to basic care.	
2.The exercises were useful for learning about unsatisfactory progress of labour	
3.The role plays on interpersonal communication skills were helpful.	
4.The case studies were useful for practising clinical decision making.	
5.The time for skill practice in a simulated setting was sufficient.	
6.The supervised client practice within the limitations of time was sufficient.	
7.I am confident about managing unsatisfactory progress of labour.	

UNSATISFACTORY PROGRESS OF LABOUR

Progress of labour is classified as unsatisfactory in the following situations:

- Cervix not dilated beyond 4 cm after 8 hours of regular contractions
- Cervical dilatation to the right of the alert line on the partograph
- Woman has been experiencing labour pains for 12 hours or more without progress
- Abnormal foetal lie (Abnormal foetal lies include: transverse lie, shoulder presentation, hand prolapse, footling breech)

Review of partograph

- Focus on uterine contractions, cervical dilation, descent of the presenting part, colour of liquor, foetal heart rate

Management of ketosis

- Test urine for ketones and treat with IV fluids if ketotic.

Diagnosis of Unsatisfactory Progress of Labour

Findings	Diagnosis
Cervix not dilated. No palpable contractions or infrequent contractions	False labour
Cervix not dilated beyond 4 cm after eight hours of regular contractions	Prolonged latent phase
Cervical dilatation to the right of the alert line on the partograph	Prolonged active phase
• Secondary arrest of cervical dilatation and descent of presenting part in presence of good contractions	• Cephalo-pelvic disproportion (CPD)
• Secondary arrest of cervical dilatation and descent of presenting part with large caput, third degree moulding, cervix poorly applied to presenting part, oedematous cervix, ballooning of lower uterine segment, formation of retraction band or maternal and foetal distress	• Obstruction
• Two contractions or less in 10 minutes, each lasting less than 40 seconds	• Inadequate uterine activity
• Presentation other than vertex with occiput anterior	• Mal-presentation or malposition
• Cervix fully dilated and woman has urge to push, but no descent	• Prolonged expulsive phase, CPD

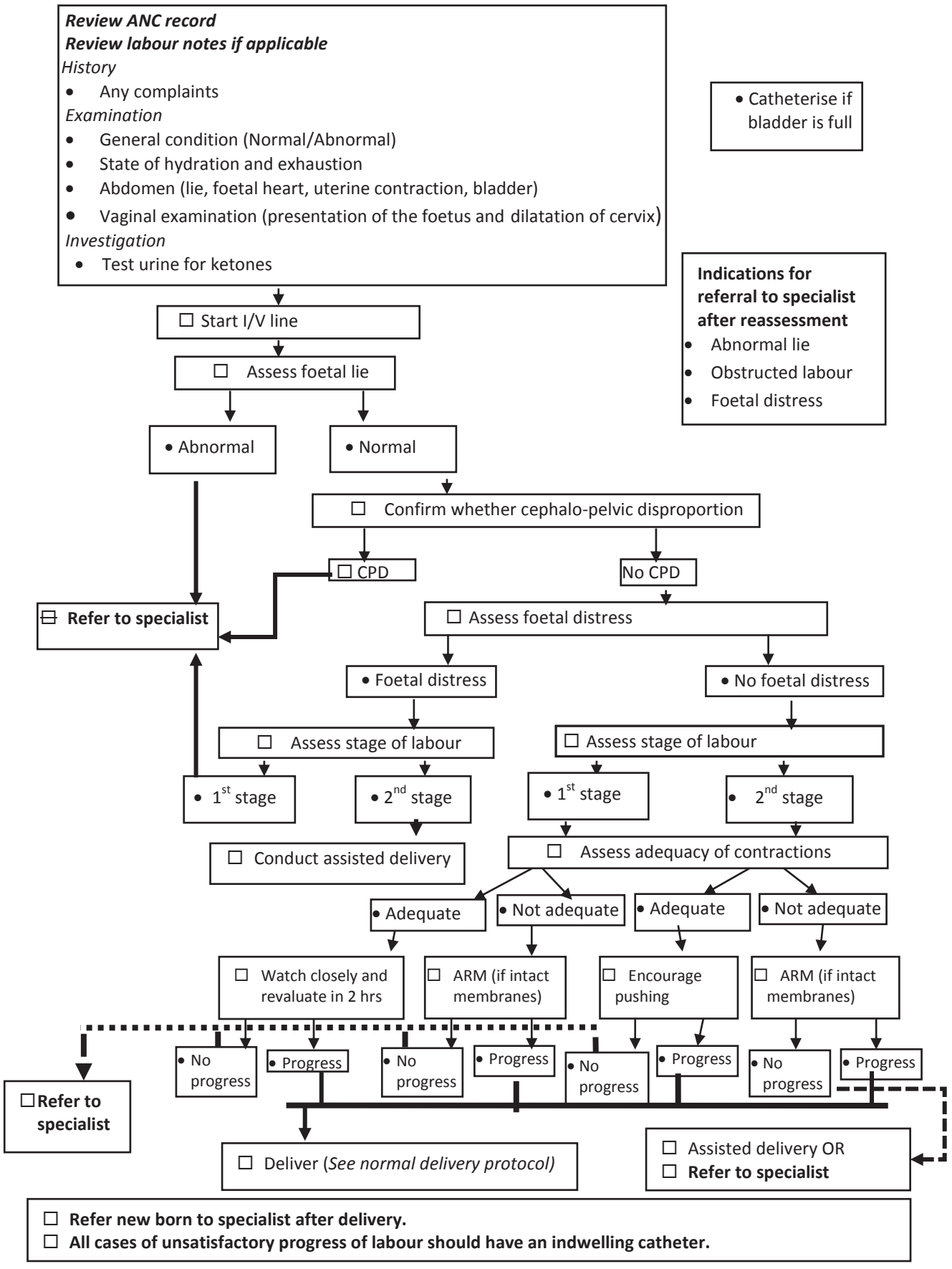
Artificial rupture of membranes (ARM)

If membranes are intact it a recommended practice is to perform artificial rupture of membranes

Note: In areas where HIV and Hepatitis is highly prevalent ARM not to be done.

All cases with prolonged labour should have an indwelling catheter to enable free drainage of urine and help prevent fistula formation or heal small fistula.

UNSATISFACTORY PROGRESS OF LABOUR



ANSWER KEY

Knowledge assessment

Answers to knowledge assessment

1.Cervical dilation plotted to the right of the alert line on the partograph indicates
a) satisfactory progress of labour
b) **unsatisfactory progress of labour**
c) the end of the latent phase
d) the end of the active phase
Answer: b

2.Unsatisfactory progress of labour should be suspected if
a) the latent phase is longer than 8 hours
b) cervical dilation is plotted to the right of the alert line on the partograph
c) the woman has been experiencing labour pains for 12 hours or more without giving birth
d) **all of the above**
Answer: d

3. A cervix that is not dilated beyond 4 cm after 8 hours of regular contractions is a sign of
a) false labour
b) inadequate uterine activity
c) **prolonged latent phase**
d) prolonged active phase
Answer: c

4. Findings diagnostic of cephalopelvic disproportion are
e) cervical dilation plotted to the right of the alert line on the partograph
f) uterine contractions in the latent phase with an unengaged foetal head
g) **secondary arrest of descent of the head in the presence of good contractions**
h) grade 3 moulding of the foetal head
Answer: c

5. If the active phase of labour is prolonged
e) delivery should be by caesarean section
f) **cephalopelvic disproportion and obstruction should be ruled out**
g) labour should be accelerated
h) none of the above
Answer: b

6. If there is no cephalopelvic disproportion, no foetal distress, second stage, contractions inadequate
e) delivery should be by caesarean section
f) **the membranes should be ruptured**
g) labour should be induced
h) the membranes should be ruptured and labour augmented using oxytocin
Answer:b

Exercise 1

Signs	Diagnosis
1.Cervix not dilated; no palpable contractions or infrequent contractions	False labour
2. Cervix not dilated beyond 4 cm after eight hours of regular contractions	Prolonged latent phase
3. Cervical dilatation to the right of the alert line on the partograph	Prolonged active phase
4. Secondary arrest of cervical dilatation and descent of presenting part in presence of good contractions	Cephalopelvic disproportion
5. Two contractions or fewer in 10 minutes, each lasting less than 40 seconds	Inadequate uterine activity
6. Presentation other than vertex with occiput anterior	Malpresentation or malposition
7. Cervix fully dilated and woman has urge to push, but no descent	Prolonged expulsive phase

Exercise 2

Mark the following on the partograph.
What is your diagnosis?
Name of the patient: Mariam Age 20 Gravida 1 Para 0+0 Date of admission May 14, 2015
10.00 Mrs Mariam admitted with history of labour pains. No bleeding per vagina. On examination, the uterine contractions: 2 in 10 min, each lasting less than 20 sec. Foetal head 5/5 palpable. Foetal heart rate is 120 per min. Cervical dilation is 4 cm.

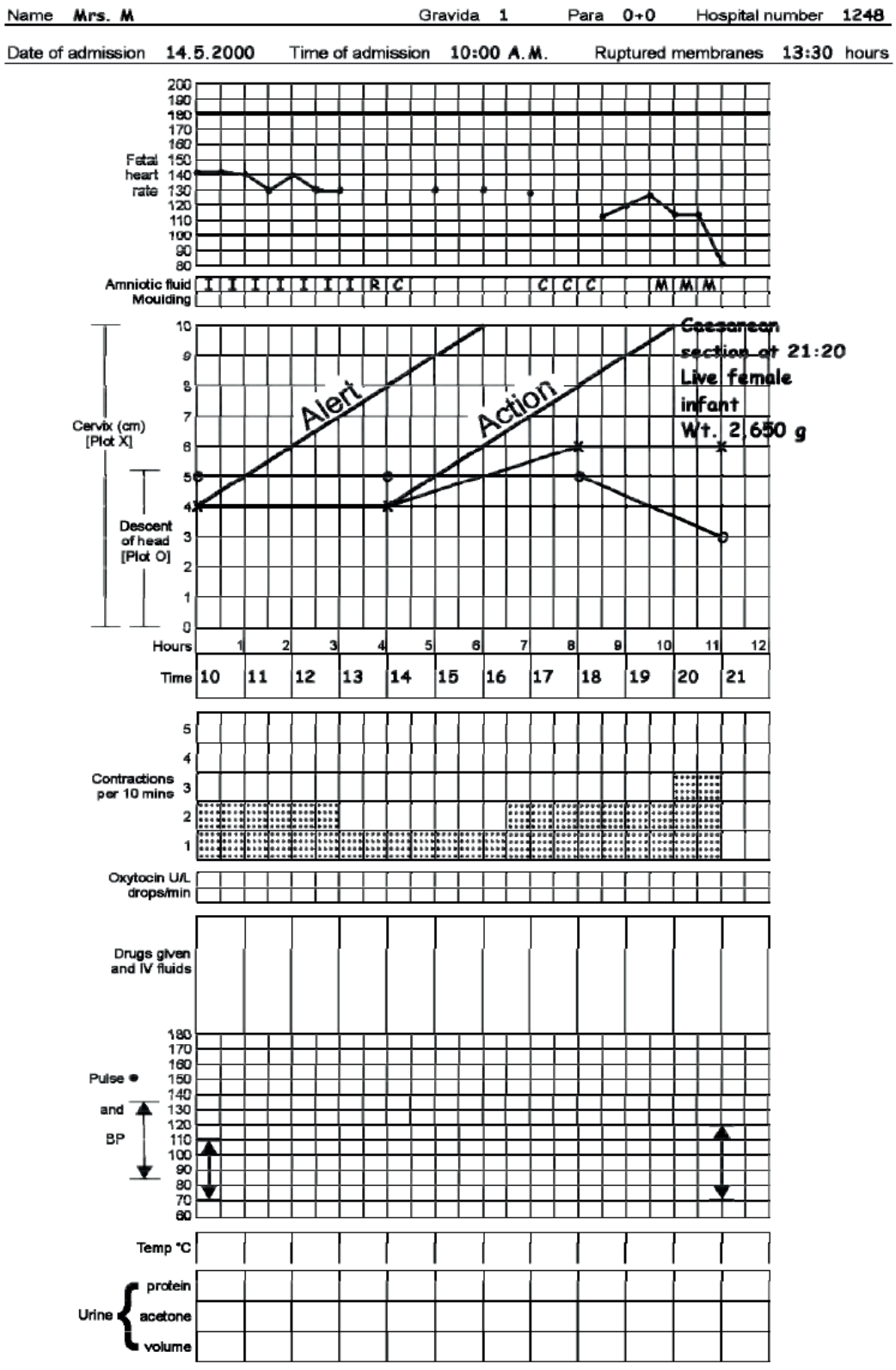
14.00 Uterine contraction 1 in 10 min, each lasting less than 20 sec. Foetal head still 5/5 palpable. Foetal heart rate is Membranes ruptured spontaneously. Amniotic fluid is clear. Cervix is still 4 cm dilation.

1800 Uterine contractions 2 in 10 minutes, lasting less than 20 secs. Foetal head still 5/5 palpable. Cervical dilation 6 cm. Foetal heart rate 80 per minute, amniotic fluid stained with meconium.

What would you do (make your decision using the clinical protocol).
Refer

Exercise 3

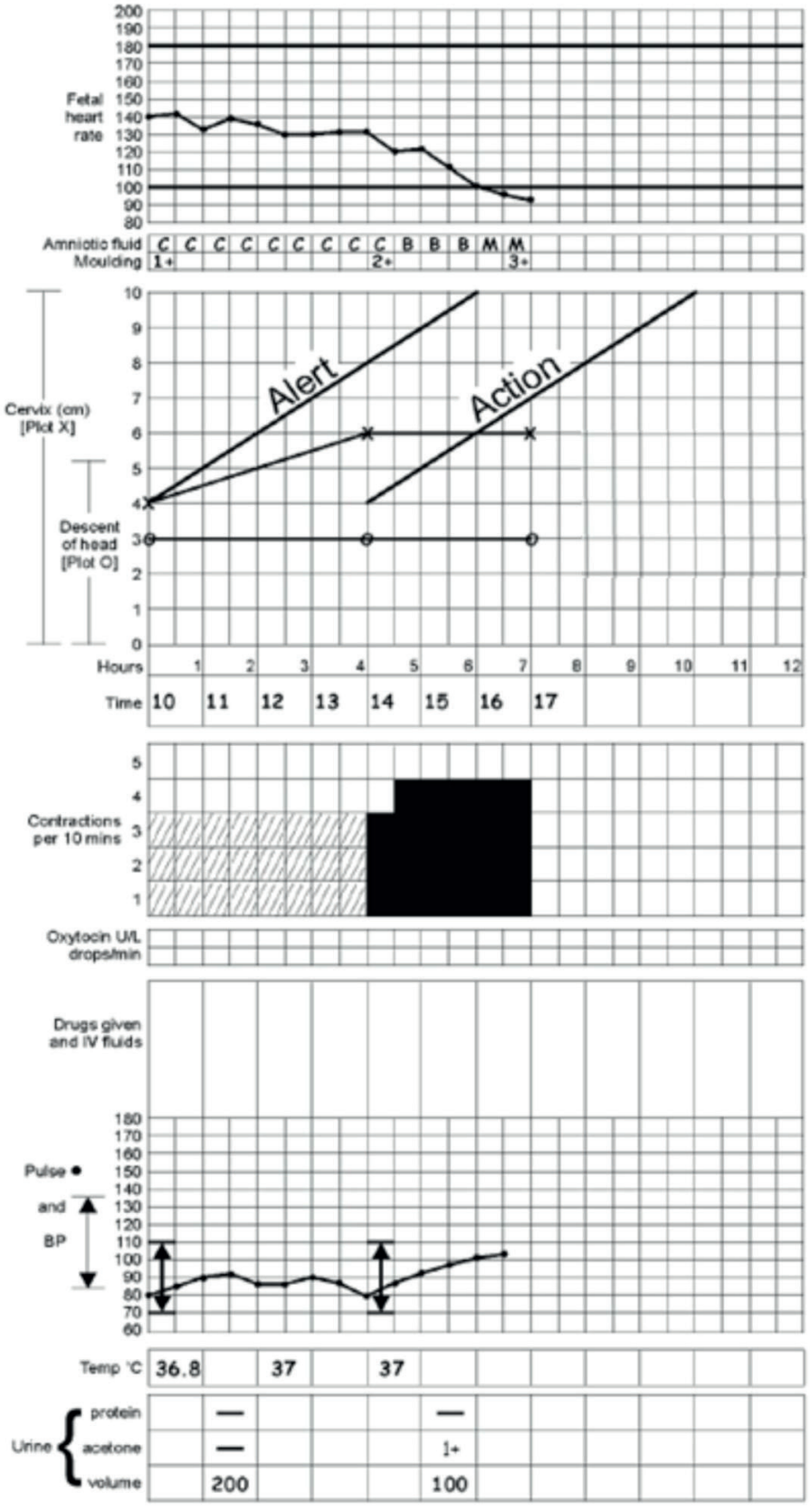
Review the partograph.
What is your diagnosis?
Obstructed labour
How would you manage the case? (make your decision using the clinical protocol)
Prolonged active phase of labour


Name Mrs. M
Gravida 1
Para 0+0
Hospital number 1248
Date of admission 14.5.2000
Time of admission 10:00 A.M.
Ruptured membranes 13:30 hours
Fetal heart rate
Amniotic fluid
Moulding
Cervix (cm) [Plot X]
Descent of head [Plot O]
Alert
Action
Caesarean section at 21:20
Live female infant
Wt. 2,650 g
Hours
Time
Contractions per 10 mins
Oxytocin U/L drops/min
Drugs given and IV fluids
Pulse
and
BP
Temp °C
Urine
protein
acetone
volume

Obstructed labour

Name Mrs. H Gravida 4 Para 3+0 Hospital number 6639

Date of admission 20.5.2000 Time of admission 10:00 A.M. Ruptured membranes 1 hours



Case study: Unsatisfactory progress of labour

Directions

Read and analyse 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 case study. When all groups have finished, the case studies and the answers each group has developed will be discussed.

Case study

Mrs. Amelia is an 18-year-old primi gravida. She was admitted to the health center in active labour at 10:00 am; the foetal head was palpable at 5/5 above the symphysis pubis; the cervix was 4 cm dilated; contractions were two in 10 minutes, each lasting less than 20 seconds. Membranes ruptured spontaneously at 12:00 pm, and amniotic fluid was clear. It is now 2:00 pm, and the foetal head is still 5/5 palpable above the symphysis pubis; the cervix is still 4 cm dilated and is now to the right of the alert line on Mrs. Amelia.'s partograph; contractions continue at a rate of two in 10 minutes, lasting less than 20 seconds.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

6. What will you include in your initial assessment of Mrs. Amelia, and why?

- Mrs. A. should be told what is going to be done and listened to carefully. In addition, her questions should be answered in a calm and reassuring manner.

- An assessment should be made to rule out cephalopelvic disproportion (secondary arrest of cervical dilation and descent of presenting part in the presence of good contractions) and obstruction (secondary arrest of cervical dilation and descent of presenting part with large caput, third degree moulding, cervix poorly applied to the presenting part, oedematous cervix, ballooning of lower uterine segment, formation of retraction band, maternal and foetal distress).

- Mrs. A.'s emotional response to labour should also be assessed to determine her level of anxiety and tolerance of pain.

- Her temperature, pulse, respiration rate and blood pressure should be recorded.

- The foetal heart rate should also be recorded.

7. What particular aspects of Mrs. Amelia's physical examination will help you make a diagnosis or identify her problems/needs, and why?
   - Abdominal and vaginal examinations should be done to rule out cephalopelvic disproportion, as described above, and effectiveness of contractions should be assessed.
8. What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. Amelia, and why?

None at present

Diagnosis (Identification of Problems/Needs)

You have completed your assessment of Mrs. Amelia. and your main findings include the following:

Mrs. Amelia has no symptoms or signs of cephalopelvic disproportion or obstruction. Her vital signs are within normal range, as is the foetal heart rate. She is not dehydrated. She has a high level of anxiety, however, and is finding it difficult to relax between contractions. On assessment, the cervix is found to be favourable.

9. Based on these findings, what is Mrs. Amelia's diagnosis, and why?
    - Mrs. Amelia's symptoms and signs (e.g., less than three contractions in 10 minutes, each lasting less than 40 seconds) are consistent with inadequate uterine activity.

    - In addition, Mrs. Amelia has a high level of anxiety, making it difficult for her to relax between contractions.

Care provision (Planning and Intervention)

10. Based on your diagnosis, what is your plan of care for Mrs. Amelia, and why?
    - Record findings on partograph.
    - Refer to a referral facility as the CHC midwife cannot manage.

Module 5

Management of bleeding in early and later in pregnancy

Training resource package for intrapartum and immediate post-partum care

Every pregnant woman who develops complications during antenatal period that leads to life threatening conditions receives evidence-based, immediate and appropriate care that prevents death and disability, both of her and new born (including appropriate referral)

Clinical protocols: Bleeding in early pregnancy, antepartum haemorrhage

Module: Management of bleeding in early and later in pregnancy

Key tasks
- Diagnosis of different types of bleeding in early and later in pregnancy
- Immediate management/ life-saving steps
- Management of bleeding in early pregnancy
- Post-abortion counselling for family planning
- Initial management of bleeding later in pregnancy and referral

Training schedule
- Key tasks
- Learning objectives
- Sessions plans
- Knowledge assessment

Trainer's guide

Session plan describes objectives of each session, topics, methodology and key points
- Exercise
- Case studies
- Clinical simulation
- Learning guides

Key knowledge
- Differential diagnosis of bleeding in pregnancy
- Return of fertility after abortion
- Differential diagnosis of bleeding later in pregnancy

Critical skills
- Management of different causes of bleeding in early pregnancy
- Digital evacuation
- MVA
- Post-abortion family planning counselling
- Immediate management of bleeding later in pregnancy

Evaluation
- Post Test
- Skill assess: using learning guides
- Module evaluation

Module: Management of bleeding in early and later in pregnancy

Training schedule

Total time: 1230 min **(20 hours 30 min)**

Time	Topic	Method	Resource materials
30 min	Welcome Objective of the module: To enable participants to review and update their knowledge and skills in management of bleeding in early pregnancy Discuss: Key tasks Learning objectives Tools for evaluation of the session	Discussion	Slides 2-3
30 min	Knowledge assessment	Test	
Session 1 30 min	Differential diagnosis of bleeding in early pregnancy	Discussion Exercise 1	MCPC 2017 **(S8)** Clinical protocol on bleeding in early pregnancy Handout 1
Session 2 1 hour	Management of bleeding in early pregnancy	Case study 1 and 2 Discussion	MCPC 2017 **(S10)** Clinical protocol on bleeding in early pregnancy
Session 3 30 min	Performing Digital evacuation	Discussion Skill practice	MCPC 2017 Learning guide
Session 4 4 hours	Performing Manual Vacuum Aspiration	Discussion Skill practice	Slides 4-8 MCPC 2017 **(P75)** Learning guide on post-abortion care and use of manual vacuum aspiration
Session 5 2 hours	Post- abortion counselling on family planning	Discussion Role play Skills practice	MCPC 2017 **(S15)** Learning guide on post-abortion counselling for family planning
Session 6 30 min	Differential diagnosis of bleeding later in pregnancy or in labour	Discussion Exercise 2	MCPC 2017 **(S22)** Clinical protocol on antepartum haemorrhage Handout 2
Session 7 3 hours	Management of bleeding later in pregnancy	Case study on bleeding in later in pregnancy 1 and 2 Skill practice	MCPC 2017 **(S23)** Learning guide on immediate management of bleeding later in pregnancy

			Clinical protocol on antepartum haemorrhage
Session 8 2 hours	Clinical simulation of management of bleeding in early pregnancy and later in pregnancy	Case scenarios	MCPC 2017 Learning guides Clinical protocol on bleeding in early pregnancy and antepartum haemorrhage
Session 9 4 hours	Supervised client practice	Skills practice	Learning guides
Session 10 2 hours	Evaluation	Post-test Skill check Module evaluation	Questionnaire Learning guides Module evaluation form

Session plans

Training process	Resources
Welcome **(30 min)** Objective of the module: To enable participants to review and update their knowledge on diagnosis of bleeding in early pregnancy and practice skills in management of cases of abortion including evacuation of products of conception where indicated and post abortion care Key tasks Present key tasks and discuss whether the participants would like to add any Learning objectives At the end of the session, the participants will be able to : 1. Diagnose different causes of bleeding in early pregnancy and later in pregnancy 2. Perform immediate management of cases of bleeding 3. Manage cases of bleeding in early pregnancy 4. Perform digital evacuation in cases of bleeding in early pregnancy 5. Perform Manual Vacuum Aspiration in cases of bleeding in early pregnancy 6. Provide counselling on FP 7. Manage cases of bleeding later in pregnancy Explain the tools for evaluation of the session	Slides 2-3 List of key tasks Learning objectives
Pre-session test **(30 min)**	
Session 1: Differential diagnosis of bleeding in early pregnancy **(30 min)** *Objective of the session*: To update knowledge in differential diagnosis of bleeding in early pregnancy and its management *Exercise 1* Distribute the table in the differential diagnosis on bleeding before 22 weeks of pregnancy and ask the participants to fill the last column. *Discussion* Ask each participant to discuss the table they have filled in and justify their diagnosis. Next present the right answers and explain the differential diagnosis. Distribute Handout 1. Discuss the signs and symptoms of molar pregnancy and ectopic pregnancy. After all have completed the exercise, ask the participants to share their answers. The trainer should summarise the key points and highlight the importance of recognising ectopic pregnancy.	MCPC 2017 (S7) Clinical protocol on bleeding in early pregnancy Handout 1
Session 2: Management of bleeding in early pregnancy **(30 min)** *Objective of the session*: To develop knowledge on managing bleeding in early pregnancy Ask the participants whether they have managed bleeding in early pregnancy. If so, ask the participant with experience to share the case with the rest of the participants and its management. *Case study* Divide the participants into groups of 2-3. Project the case study 1 on bleeding in early pregnancy up to diagnosis and ask the participants to respond to questions 1-3. after all the participants have completed answering the questions, discuss each of the questions. Focus on immediate assessment and action. Project the rest of the case study. Ask the participants to respond to question 4-6. After all the participants have completed answering the questions,	MCPC 2017 **(S10)** Clinical protocol on bleeding in early pregnancy

discuss each of the questions. The trainer should summarise the key points related to diagnosis and management. Project case study 2 on bleeding in early pregnancy up to diagnosis. Ask the participants to respond to questions 1-3. After all participants have completed answering the questions, one of the groups should be asked to discuss responses to one question, followed by other groups discussing responses to other questions. Project the rest of the case study and ask for responses to questions 4 and 5. After all participants have completed answering the questions, ask the groups to discuss the responses. The trainer should highlight key points and management of referral. Distribute clinical protocol on bleeding in early pregnancy and discuss management of different causes of bleeding in early pregnancy.	
Session 3: Performing digital evacuation **(30 min)** *Objective of the session*: To practice skills in digital evacuation *Discussion* Discuss types of abortions where digital evacuation can be done. *Skill practice*- Digital evacuation (follow the instructions on skill practice and arrange all the supplies needed for the practice) Continue with the same group as in session 2 or make new groups. Distribute the learning guide on digital evacuation (refer to the clinical protocol) . Follow the instructions on skill practice. The trainer should observe each participant using the learning guide/performing the procedure and give feedback. Infection prevention should be emphasised. *Every participant should be provided a chance to practice digital evacuation.*	MCPC 2017 Clinical protocol on bleeding in early pregnancy Learning guide on digital evacuation
Session 4: Performing Manual Vacuum Aspiration (MVA) **(240 min)** *Objective of the session*: To develop skills in MVA for management of incomplete and inevitable abortion *Discussion* Ask the participants whether any of them have done the procedure. If so ask the experienced participant to describe the MVA syringe and how it is used. Trainer should demonstrate the various parts of the MVA syringe and cannulae. Discusses precautions to be taken for effective functioning of the syringe. Discuss decontamination of the syringe and cannula. *Skill practice*: Performing MVA (follow the instructions on skill practice and arrange all the supplies needed for the practice) Continue with the same group as in session 2 or make new groups. Distribute the learning guide on MVA. Follow the instructions on skill practice. Highlight the importance of giving oxytocin during the procedure and the timing of inserting the cannula. The trainer should observe each participant using the learning guide/performing the procedure and give feedback. Infection prevention should be emphasised. *Every participant should be provided a chance to practice MVA.*	Slides 4-8 MCPC 2017 **(P75)** Learning guide on post-abortion care and use of MVA Clinical protocol on bleeding in early pregnancy Power point
Session 5: Post-abortion counselling on family planning **(120 min)** *Objective of the session*: To develop skills in post-abortion counselling for family planning *Discussion* Ask the participants why delaying the next pregnancy is important. Discuss the risk of pregnancy. Ask the participants to list various method of family	MCPC 2017 **(S15)** Learning guide on post-abortion counselling for family planning

planning for post-abortion clients. *Skill practice*: Counselling on family planning (follow instructions on skill practice and arrange all the supplies needed for the practice) Distribute learning guide on counselling for family planning. Follow the instructions on skill practice. The trainer should observe each participant using the learning guide/performing the procedure and give feedback. *Every participant should be provided a chance to counsel on family planning.*	
Session 6: Differential diagnosis of bleeding later in pregnancy or in labour **(30 min)** *Objective of the session*: To update knowledge on differential diagnosis of bleeding later in pregnancy *Exercise* Distribute exercise 2. Ask the participants to fill in the blank column. After all participants have completed, ask participants to share the responses. *Discussion* Discuss types of bleeding after 22 weeks of pregnancy and its signs and symptoms and urgency of management. After discussion, distribute handout 2. In addition to the above, discuss probable non-obstetric causes such as domestic violence which was reported to be a major issue in Timor Leste. Discuss the most likely diagnosis as placenta previa (refer to handout) Discuss the need for counselling in such situations.	Slide 9 MCPC 2017 **(S22)** Clinical protocol on antepartum haemorrhage Handout 2
Session 7: Management of bleeding later in pregnancy *Objective of the session:* To develop skills in management of bleeding later in pregnancy *Discussion* Ask the participants whether any have managed bleeding later in pregnancy. If so, ask the participant with experience to share the case with the rest of the participants and its management. *Case study* Distribute the case study 1 and ask all the participants have completed answering the questions, discuss each of the questions. Distribute case study 2 and after all participants have completed answering the questions, discuss each question. *Skill practice*: Immediate management of bleeding later in pregnancy (follow instructions on skill practice and arrange all the supplies needed for the practice) Distribute learning guide on immediate management of bleeding later in pregnancy. Follow the instructions on skill practice. The trainer should observe each participant using the learning guide/performing the procedure and give feedback. *Every participant should be provided a chance on immediate management of bleeding later in pregnancy.* EMPHASISE THE IMPORTANCE OF NO VAGINAL EXAMINATION	MCPC 2017 **(S23)** Learning guide on immediate management of bleeding later in pregnancy Clinical protocol on antepartum haemorrhage
Session 8: Clinical simulation of management of bleeding in early pregnancy and later in pregnancy *Objective of the session*: To provide simulated experiences to practice problem solving and decision making skills in managing bleeding in early	MCPC 2017 Learning guides Clinical protocol on bleeding in early

pregnancy and later in pregnancy The trainer should read through the instructions and plan the session in advance. Discuss the purpose and process of the simulated exercises. Select one group to play the role of a woman presenting with bleeding in pregnancy and provider and assistants. Provide case scenarios and the trainer should ask questions.	pregnancy and later in pregnancy
Session 9: Supervised client practice *Objective of the session* is to practice skills with clients. This is the final stage of clinical skills developments and participants should be allowed to work with clients only after they have demonstrated skill competency in a simulated situation. Planning for the supervised practice is a critical component so that participants get adequate practice. It is important to respect the rights of clients – permission should be sought, privacy and confidentiality should be maintained and respectful dealings with the clients. Since one trainer may not be sufficient to supervise all the participants, it will be good to identify potential assistants to help the trainer (preceptors) to observe the skill practices. The preceptors could be a doctor or senior midwife who is very proficient in the skills. The preceptors will need to be trained in the use of checklists to familiarise them with the checklists. Before and after each supervised client practice, there should be discussions. Feedback should be provided. Minimum 1 -2 experiences in evacuations using MVA should be planned.	Learning guides
Session 10: Evaluation	Questionnaire Learning guides Course evaluation form

Knowledge assessment questionnaire

Instructions: Write the letter of the single **best** answer to each question in the blank next to the corresponding number on the attached answer sheet.

1. The presenting symptoms for threatened abortion include
   a) heavy vaginal bleeding, dilated cervix and uterus larger than dates
   b) light vaginal bleeding, closed cervix and uterus that corresponds to dates
   c) heavy vaginal bleeding, dilated cervix and uterus that corresponds to dates
   d) light vaginal bleeding, dilated cervix and uterus smaller than dates

2. A woman who has an unruptured ectopic pregnancy usually presents with
   a) collapse and weakness
   b) hypotension and hypovolemia
   c) symptoms of early pregnancy, abdominal distension and rebound tenderness
   d) symptoms of early pregnancy and abdominal and pelvic pain

3. The best way to determine uterine size is by
   a) looking at the cervix
   b) history of amenorrhea based on last menstrual period
   c) bimanual pelvic examination
   d) abdominal examination

4. Manual vacuum aspiration (MVA) is an effective method for treatment of incomplete abortion if the uterine size is not greater than
   1. 8 weeks
   2. 12 weeks
   3. 14 weeks
   4. 16 weeks

5. When performing a MVA, the vacuum will be lost if
   a) the syringe is full
   b) the cannula is withdrawn too far
   c) the uterus is perforated
   d) all of the above

6. The MVA procedure is complete when
   a. the wall of the uterus feels smooth
   b. the vacuum in the syringe decreases
   c. red or pink foam, but no more tissue, is visible in the cannula
   d) the uterus relaxes

7. Assessment of a woman who presents with vaginal bleeding after 22 weeks of pregnancy should
   a) include immediate vaginal examination
   b) exclude immediate vaginal examination
   c) be limited to abdominal examination
   d) none of the above

8. If bleeding is heavy in the case of abruptio placentae and the cervix is fully dilated
   a) unassisted vaginal delivery should be anticipated
   b) delivery should be by vacuum extraction
   c) delivery should be by caesarean section
   d) delivery should be by forceps

Exercise -Differential diagnosis bleeding in early pregnancy (before 22 weeks of pregnancy)

Presenting symptoms and other symptoms and signs typically present	**Symptoms and signs sometimes present**	**Probable diagnosis**
Light bleeding Closed cervix Uterus corresponds to dates	Cramping/lower abdominal pain Uterus softer than normal	
Heavy bleeding Dilated cervix Uterus corresponds to dates	Cramping/ lower abdominal pain Tender uterus No expulsion of products of conception	
Heavy bleeding Dilated cervix Uterus smaller than dates	Cramping/ lower abdominal pain Partial expulsion of products of conception	
Light bleeding Closed cervix Uterus smaller than dates Uterus softer than normal	Light cramping/lower abdominal pain History of expulsion of products of conception	
Light bleeding Abdominal pain Closed cervix Uterus slightly larger than normal Uterus softer than normal	Fainting Tender adenexal mass Amenorrhoea Cervical motion tenderness	
Heavy bleeding Dilated cervix Uterus larger than dates Uterus softer than normal Partial expulsion of products of conception which resembles grapes	Nausea/vomiting Spontaneous abortion Cramping/lower abdominal pain Early onset pre-eclampisa No evidence of a foetus	

Source: MCPC 2017

Exercise 2: Differential diagnosis of antepartum haemorrhage

Presenting symptom and other symptoms and signs typically present	Symptoms and signs sometimes present	Probable diagnosis
Bleeding after 22 weeks gestation (may be retained in the uterus) Intermittent and constant abdominal pain	Shock Tense/tender uterus Decreased/absent foetal movements Foetal distress or absent foetal heart sounds	
Bleeding (intra-abdominal and/or vaginal) Severe abdominal pain (may decrease after rupture)	Shock Abdominal distension/free fluid Abnormal uterine contour Tender abdomen Easily palpable foetal parts Absent foetal movements and foetal heart sounds Rapid maternal pulse	
Bleeding after 22weeks of gestation	Shock Bleeding may be precipitated by intercourse Relaxed uterus Foetal presentation not in pelvis Lower uterine pole feels empty Normal foetal condition	

Source: MCPC 2017

Case study 1: Vaginal bleeding during early pregnancy

Directions

Read and analyse 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 case study. When all groups have finished, the case studies and the answers each group has developed will be discussed.

Case study

Mrs. Ann is 28 years old. She is 12 weeks pregnant when she presents at the health center complaining of light vaginal bleeding. This is Mrs. Ann's first pregnancy. It is a planned pregnancy, and she has been well until now.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

1. What will you include in your initial assessment of Mrs. Ann, and why?

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

3. What causes of bleeding do you need to rule out?

Diagnosis (Identification of Problems/Needs)

You have completed your assessment of Mrs. Ann, and your main findings include the following:

Mrs. Ann's temperature is 36.8º C, her pulse rate is 82 beats/minute and her blood pressure is 110/70 mm Hg.
She has no skin pallor or sweating.
She has slight lower abdominal cramping/pain and light vaginal bleeding.
Her uterine size is equal to dates, she has no uterine tenderness and no cervical motion tenderness, and the cervix is closed.

4. Based on these findings, what is Mrs. Ann's diagnosis, and why?

Care provision (Planning and Intervention)

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

Evaluation

Mrs. A. returns to the health center in 3 days.
She reports that the bleeding became heavier last night, and that since then she has been having cramping and lower abdominal pain.
She has not passed any products of conception, her uterus corresponds to dates and her cervix is now dilated. She has no signs or symptoms of shock.
Mrs. A. is very upset about the possibility of miscarrying.

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

Case study 2: Vaginal bleeding during early pregnancy

Directions

Read and analyse 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 case study. When all groups have finished, the case studies and the answers each group has developed will be discussed.

Case study

Mrs. Betsy is 20 years old. She came to the health center 2 days ago with irregular vaginal bleeding and abdominal and pelvic pain. Symptoms of early pregnancy were detected and confirmed with a pregnancy test. Mrs. Betsy was advised to avoid strenuous activity and sexual intercourse and return immediately if her symptoms persisted. Mrs. Betsy returns to the health center today and reports that irregular vaginal bleeding has continued and she now has acute abdominal pain that started 2 hours ago.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

1. What will you include in your initial assessment of Mrs. Betsy, and why?

2. What particular aspects of Mrs. Betsy's physical examination will help you make a diagnosis, and why?

3. What screening procedures will you include (if available) in your assessment of Mrs. Betsy, and why?

Diagnosis (Identification of Problems/Needs)

You have completed your assessment of Mrs. Betsy and your main findings include the following:
Mrs. Betsy's pulse rate is 130 beats/minute and weak, her blood pressure is 85/60 mm Hg, her respiration rate is 20 breaths/minute and her temperature is 36.8º C.
Her skin is pale and sweaty.
Mrs. Betsy has acute abdominal and pelvic pain, her abdomen is tense and she has rebound tenderness.
She has light vaginal bleeding. The cervix is closed.

4. Based on these findings, what is Mrs. Betsy's diagnosis, and why?

Care provision (Planning and Intervention)

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

Evaluation

Mrs. Betsy has recovered well from surgery.
She is now ready to be discharged; however, her haemoglobin is 9 g/dL.
She has indicated that she would like to become pregnant again, but not for at least a year.

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

Case study 1: Vaginal bleeding in later pregnancy

Directions

Read and analyse 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 case study. When all groups have finished, the case studies and the answers each group has developed will be discussed.

Case study

Mrs. Daphne is a healthy 20-year-old primigravada. Her pregnancy has been uncomplicated. At 38 weeks gestation, Mrs. Daphne walks into the emergency department at the community health centre, accompanied by her husband. She reports that she has painless, bright red vaginal bleeding that started 2 hours ago. Mrs. Daphne has visited the antenatal clinic three times during her pregnancy. At her last antenatal clinic visit, which was 2 weeks ago, there were no abnormal findings.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

1. What will you include in your initial assessment of Mrs. Daphne, and why?

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

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

Diagnosis (Identification of Problems/Needs)

You have completed your assessment of Mrs. Daphne and your main findings include the following:

Mrs. Daphne's pulse rate is 88 beats/minute, her blood pressure is 110/80 mm Hg, her respiration rate is 16 breaths/minute and her temperature is 37º C.
Vaginal bleeding is found to be light to moderate and bright red, and Mrs. Daphne reports soaking 12 pads before coming to the hospital.
Uterine consistency is normal and there is no abdominal pain. The lie is longitudinal, the presentation is vertex, and the head is well above the pelvic brim. The foetus is active and the foetal heart rate is 120 beats/minute.
It has not been possible to do an ultrasound scan.

4. Based on these findings, what is Mrs. Daphne's diagnosis, and why?

Care provision (Planning and Intervention)

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

Case study 2: Bleeding later in pregnancy

Directions

Read and analyse 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 case study. When all groups have finished, the case studies and the answers each group has developed will be discussed.

Case study

Mrs. Celia, who is 32 weeks pregnant, gravida three, has two healthy children. She has attended antenatal clinic regularly and all findings were within normal limits until her clinic visit 10 days ago. At that visit her blood pressure was noted to be 120/96 mm Hg; there were no other signs or symptoms of pregnancy-induced hypertension. Mrs. Celia was counselled about danger signs and what to do if they occur and asked to return to the clinic in 2 weeks. She presents at the district hospital 2 days before her next clinic visit, accompanied by her mother-in-law, with vaginal bleeding, abdominal pain and a bad headache.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

1. What will you include in your initial assessment of Mrs. Celia, and why?

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

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

Diagnosis (Identification of Problems/Needs)

You have completed your assessment of Mrs. C. and your main findings include the following:

Mrs. Celia's pulse rate is 120 beats/minute and weak, blood pressure is 110/60 mm Hg, respiration rate is 20 breaths/minute and her temperature is 37º C.
Her skin is pale and sweaty.
Mrs. Celia has constant abdominal pain, her uterus is tender on palpation, and the foetal heartbeat could not be heard.
She has heavy vaginal bleeding containing some old clotted blood.
Coagulopathy was not detected.

4. Based on these findings, what is Mrs. Celia's diagnosis, and why?

5. What laboratory test would be appropriate at this time?

Care provision (Planning and Intervention)

6. Based on your diagnosis, what is your plan of care for Mrs. Celia, and why?

Clinical simulation: Management of vaginal bleeding in early pregnancy and later in pregnancy

Purpose: The purpose of this activity is to provide a simulated experience for participants to practice problem-solving and decision-making skills in the management of vaginal bleeding in early pregnancy, with emphasis on thinking quickly and reacting (intervening) rapidly.

Instructions: The activity should be carried out in the most realistic setting possible, such as the labour and delivery area of a hospital, clinic or maternity center, where equipment and supplies are available for emergency interventions.

- One participant should play the role of patient and a second participant the role of skilled provider. Other participants may be called on to assist the provider.
- The teacher will give the participant playing the role of provider information about the patient's condition and ask pertinent questions, as indicated in the left-hand column of the chart below.
- The participant will be expected to think quickly and react (intervene) rapidly when the teacher provides information and asks questions. Key reactions/responses expected from the participant are provided in the right-hand column of the chart below.
- Procedures such as starting an IV and bimanual examination should be role-played, using the appropriate equipment.
- Initially, the teacher and participant will discuss what is happening during the simulation in order to develop problem-solving and decision-making skills. The italicized questions in the simulation are for this purpose. Further discussion may take place after the simulation is completed.
- As the participant's skills become stronger, the focus of the simulation should shift to providing appropriate care for the life-threatening emergency situation in a quick, efficient and effective manner. All discussion and questioning should take place after the simulation is over.

Resources: Childbirth simulator, sphygmomanometer, stethoscope, equipment for starting an IV infusion, syringes and vials, bucket for waste disposal, high-level disinfected or sterile surgical gloves, antiseptic solution, MVA double valve syringe, cannula and adaptors, tenaculum, ring forceps, bowls, strainer and equipment for bladder catheterisation.

Learning guides on post abortion care and use of MVA and post abortion family planning counselling, management of bleeding later in pregnancy

SCENARIO 1 **(Information provided and questions asked by the teacher)**	KEY REACTIONS/RESPONSES **(Expected from participant)**
1. Mrs. Ann is 20 years old. This is her first pregnancy. Her family brings her into the health center. Mrs. Ann is able to walk with the support of her sister and husband. She reports that she is 14 or 15 weeks pregnant and that she has had some cramping and spotting for several days. However, she has had heavy bleeding and cramping for the past 6–8 hours. She has not attended an antenatal clinic nor is she being treated for any illnesses. ● What is your first concern? ● What will you do first?	
2. On examination, you find that Mrs. Ann's blood pressure is 100/60 mm Hg, pulse 100 beats/minute, respiration rate 24 breaths/minute. She is conscious. Her skin is not cold or clammy. You notice bright red blood soaking through her dress. ● Is Mrs. Ann in shock? ● What will you do next? ● What questions will you ask?	
3. Mrs. Ann was well until she started bleeding. You can tell from her responses that she wanted this pregnancy. You see no signs of physical violence. She soaks a pad every 4–5 minutes. She has not fainted but she "feels dizzy." She has passed some clots and thinks she may have passed tissue. ● What will you do next and why?	
4. On examination, you find that the uterus is firm, slightly tender and palpable just at the level of the symphysis pubis; there are no adnexal masses. Bimanual examination reveals that the cervix is approx 1–2 cm dilated, uterine size is less than 12 weeks, and no tissue is palpable at the cervix. There is no cervical motion tenderness. ● What is your working diagnosis? ● What will you do now?	
***Discussion Question 1**: Why did you*	

rule out ectopic pregnancy?	
5. MVA was performed and complete evacuation of the products of conception has been assured. • What will you do now?	
6. After 6 hours, Mrs. Ann's vital signs are stable and there is almost no blood loss. She insists on going home. • What will you do before she goes home?	
7. Mrs. Betsy 25 years old. She is 36 weeks pregnant and suddenly started bleeding heavily and was rushed to the health centre. She complains of abdominal pain • What is your first concern? • What will you do first?	
8. On examination, you find that Mrs. Betsy's blood pressure is 100/60 mm Hg, pulse 100 beats/minute, respiration rate 24 breaths/minute. She is conscious. Her skin is cold or clammy. You notice blood soaking through her dress. She complains of constant abdominal pain. Uterus is tender on palpation and foetal heart sounds are not heard. • Is Mrs. Betsy in shock? • What will you do next? • What questions will you ask? • What is the working diagnosis? • What is your plan of action?	

Skills practice session: Postabortion care

The purpose of this activity is to provide opportunities to observe and practice clinical skills, either in a simulated setting or at a clinical site.

Instructions

This activity should be conducted in a simulated setting using the appropriate pelvic and foetal models.

Participants should review the appropriate learning guide before beginning the activity.

The trainer should demonstrate the steps first and should provide opportunity to participants to clarify doubts. In the case of MVA, the trainers should highlight the precautions to be taken for effective functioning of the syringe.
Under the guidance of the trainer, participants should work in groups of three to practice the steps/tasks and observe each other's performance; one plays the role of provider, the second one as woman who is bleeding after childbirth and the third as observer. The observer should use the relevant learning guide related to management of bleeding in early pregnancy using MVA, post-abortion counselling and immediate management of bleeding later in pregnancy. Participants reverse the roles until each has had an opportunity to practice and is competent. The trainer observes each participant when ready for observation and provides feedback. The participants who are not competent are made to repeat the exercise.

During supervised practice at a clinical site, the trainer assesses the skills competency of each participant using learning guides.

IN the case of post-abortion counselling, the participants should practice in groups using the learning guide and the trainer should give feedback.

Resources

- Childbirth simulator
- Sphygmomanometer and stethoscope
- Speculum
- Thermometer
- Syringe and needle
- Soap and water and betadine
- Sterile gloves
- Personal protective barriers
- 0.5% chlorine solution and receptacle for decontamination
- Leak proof container or plastic bag
- IV set
- MVA double valve syringe
- Cannula and adaptors
- Ring forceps
- Tenaculum
- Bowls
- Antiseptic solution
- Learning guides on post abortion care and use of MVA and post abortion family planning counselling, management of bleeding later in pregnancy

Learning guide: Post-abortion care and use of manual vacuum aspiration(MVA)

Rating scale
2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards

Learning guide for manual vacuum aspiration (several steps may have to be carried out at the same time)				
Step/Task	2	1	0	**Comments**
Task 1: Rapid assessment and action				
1.1 Greets the woman respectfully with kindness				
1.2 Assesses for shock and other life threatening conditions				
1.3 If any sign of life threatening condition, starts IV fluids and manages the cause				
Task 2: Confirmation of diagnosis of incomplete or inevitable abortion				
2.1 Takes history ▪ Missing periods and duration ▪ Heavy bleeding ▪ Expulsion of products of conception- whether present or not ▪ Lower abdominal cramping ▪ History of attempted abortion				
2.2 Examines the woman ▪ Vital signs ▪ Pallor ▪ Lower abdomen for tenderness- whether present or not ▪ Uterine size if uterus is palpable ▪ Pelvic examination: amount of bleeding, whether cervical os is open, motion tenderness 2.3 Removes gloves and washes hands				
Task 3: Getting ready				
3.1 Informs the woman about the findings in a compassionate manner and encourages her to ask questions. Informs her about the procedure. ▪ Informs the family about the findings and the procedure				
3.2 Provides continuous emotional support and reassurance as possible				
3.3 Tells her that she may feel discomfort during the procedure				
3.4 Gives paracetamol 500 mg by mouth to the woman 30 minutes prior to the procedure				
3.5Assembles the necessary equipment and arranges then on a sterile tray ▪ Sterile MVA double valve syringe ▪ Sterile cannulas and adaptors ▪ Sterile Cusco's /Sim's Speculum ▪ Ring forceps/sponge holding forceps				

▪ Tenaculum or Allis forceps ▪ Sterile gloves ▪ Sterile bowls ▪ Betadine ▪ Strainer ▪ Syringe and needle ▪ Oxytocin injection ▪ IV fluids				
3.6 Prepares the MVA for use as follows: ▪ Scrubs hands well with soap and water ▪ Inspects the sterilised syringe for any visible cracks and defects to ensure that the syringe can hold vacuum to its maximum capacity ▪ Inspects the sterilised cannulae for any visible cracks or defects as broken tips can cause tissue injury ▪ Closes the pinch valve by pushing the buttons down and forward towards the syringe tip (can feel the valve lock ▪ Pulls back on the plunger until the arms of the plunger snap outward at the end of the syringe barrel holding the plunger in place ▪ Checks the stable positioning of the plunger arms (the plunger must be fully extended to the sides and secured over the edge of the barrel) ▪ Chooses the size of the cannula according to period of gestation (usually size 8-10 mm as the os is likely to be open)				
3.7 Asks the woman to empty her bladder				
3.8 Asks to wash the perineal area				
3.9 Starts IV fluids				
3.10 Wears protective barriers				
3.11 Washes hands with soap and water and air dries hands or wipes with a clean cloth. Wears sterile gloves				
3.12 Cleans the perineum and supra-pubic area with betadine using a sponge holding forceps				
Task 4: Pre-procedure tasks				
4.1 Does a bimanual pelvic examination, checking the size and position of uterus and degree of cervical dilation				
4.2 Inserts the speculum gently and remove blood or tissue from the vagina using sponge forceps and sterile gauze				
4.3 Applies antiseptic solution (povidone iodine) to cervix, starting with cervical os and the vagina three times				
4.4 Removes any products of conception from the cervical os and checks the os for any injury				
Task 5: Performs MVA				
5.1 Holds the anterior lip of the cervix using Allis forceps/single toothed tenaculum (8 inches) and hold the cervix steady while gently applying traction (to straighten the cervical canal and uterine cavity)				
5.2 Inserts the cannula through the cervix into the uterine cavity just past the internal os by rotating the cannula while gently applying pressure				
5.3 Asks the assistant to give Injection Oxytocin 10				

units IM or IV if IV infusion is being given				
5.4 Pushes the cannula slowly into the uterine cavity until it reaches the fundus (noting not more than 10 cm). Notes the uterine depth by the dots visible on the cannula				
5.5 After noting the uterine depth, withdraws the cannula slightly				
5.6 Attaches the prepared syringe to the cannula holding the Allis forceps/ and the end of the cannula in one hand and the syringe in the other ensuring that the cannula does not move forward				
5.7 Releases the pinch valve on the syringe to release the vacuum into the uterine cavity. Bloody tissue and bubbles should begin to flow through the cannula into the syringe				
5.8 Evacuates any remaining contents of the uterine cavity by gently rotating the syringe from side to side (10 to12 o'clock) and then moving the cannula gently and slowly back and forth within the uterine cavity ▪ Ensures that the opening/openings on the cannula are not below the cervical os ▪ Ensures that the cannula is not pushed in too much to avoid perforation ▪ While the vacuum is well established and the cannula is in the uterus, ensures that the syringe is not grasped by the plunger as it may cause the plunger arms to become unlocked and slide back into the syringe pushing the contents back into the uterus				
5.9 If no products are seen or vesicular mole is seen, refers				
5.10 If the syringe gets full, closes the valve of the syringe and disconnects the syringe ▪ taking care not to pull out the tip of the cannula or ▪ push the plunger in				
5.11 Empties the contents of the syringe into the strainer for inspection by opening the pinch valve and pushing the plunger in				
5.12 Re-establishes the vacuum and connect the syringe to the cannula and continue the procedure as above till the signs of complete evacuation are present				

5.13 Checks for signs of complete evacuation. The procedure is complete when: ▪ Red or pink foam and no more tissue is seen in the cannula ▪ A gritty sensation is felt as the cannula passes over the surface of the evacuated uterus ▪ The uterus contracts around cannula (can feel grip)				
5.14 Withdraws the cannula and detach the syringe ▪ Places the cannula in the decontamination solution ▪ With valve open, empties the contents of the MVA syringe into a strainer by pushing on the plunger ▪ Places the syringe on a high-level disinfected tray till sure that the procedure is over and once sure places in disinfectant solution				
5.15 Removes the speculum or retractors and puts them on the high-level disinfected tray until sure that the procedure is over				
5.16 Performs bimanual examination to check the size and firmness of the uterus				
5.17 Quickly inspect the tissue removed from the uterus to: ▪ assesses quantity and presence of products of conception (strains and rinses the tissue to remove excess blood clots and places in a container of clean water) ▪ ensures complete evacuation ▪ checks for a molar pregnancy (rare)				
5.18 If no products of conception are seen, makes arrangements for referral ▪ Informs the woman about the findings after the procedure and the need for referral ▪ Informs the family about referral				
5.19 Gently inserts a speculum into the vagina and examines for bleeding. If the **uterus is still soft and not smaller,** or if there is **persistent, brisk bleeding**, makes arrangements for referral and informs the woman and her family				

Task 6: Post-procedure steps				
Decontamination of MVA syringe and cannula and instruments 6.1 Before removing the gloves, disposes of waste materials in a leak-proof container or plastic bag				
6.2 Places all instruments in 1% chlorine solution for 10 minutes for decontamination				
6.3 Disposes off needle and syringe appropriately after flushing with chlorine solution				
6.4 Attaches used cannula to MVA syringe and flush both with chlorine solution				
6.5 Detaches cannula from syringe and soak them in chlorine solution for 10 minutes for decontamination				
6.6 Flushes out products of conception or empty into a tight-lid container				
6.7 Immerses both gloved hands in chlorine solution and remove the gloves				
6.8 Washes hands thoroughly with soap and water and dry with a clean cloth.				
Task 7: Post-procedure care				
7.1 Observes the woman closely				
7.2 Monitor vital signs				
7.3 Palpates the uterus for the next 4 hours to ensure that the uterus is contracted				
6.12 Checks for excessive bleeding				
5.13 Continues IV fluids				
5.14 Checks Hb after 3 hours of stopping bleeding				
5.15 Counsels the woman for family planning **(See learning guide on post-abortion family planning counselling)**				
5.16 Before discharging the woman, advises the woman about symptoms and signs to requiring immediate attention: ▪ Prolonged cramping (more than a few days) ▪ Prolonged bleeding (more than two weeks) ▪ Bleeding more than normal menstrual bleeding ▪ Severe or increased pain ▪ Fever, chills, malaise ▪ Fainting				
5.17 Gives a date for follow up visit				

Learning guide: Post-abortion counselling for family planning

Rating scale
2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards

Learning guide for post-abortion counselling family planning				
Steps/Tasks	2	1	0	**CASES**
Task 1: Makes initial contact with the woman				
1.1Quickly reviews her antenatal and delivery records prior to meeting the woman				
1.2 Greets the woman and asks her how she is feeling				
1.3 Asks her permission to counsel for family planning EMPHASISE THE IMPORTANCE OF USING A CONTRACEPTIVE AS THE RISK OF GETTING PREGNANT WITHIN A MONTH IS HIGH				
1.4 Assures privacy				
Task 2: Addresses the woman's individual needs, situation and preferences				
2.1 Asks whether she would like to have her spouse to join				
2.2 If she already has children, asks her about other children				
2.3 Asks whether she has ever used contraception and method/methods used particularly prior the pregnancy ▪ Ask how she was using the method ▪ Whether she had any problems				
2.4 Asks her plans for future plans and whether wants to become pregnant soon or later				
2.5 Tells her that she should wait till fully recovered to prevent complications				
2.6 Asks about a preferred method of choice				
2.7 Asks whether she would like to know about other methods and provides information about all methods of family planning ▪ Shows what each method is ▪ How it is used ▪ How the methods work and their effectiveness ▪ Possible side effects				
2.8 Tells the woman which of the methods can be initiated immediately and later				
2.9 Encourages the woman/couple to ask questions				
2.9 Helps the woman begin to choose an appropriate method taking into consideration whether she wants to get pregnant in few weeks' time or after few months				
Task 3: Screens the woman for medical eligibility for the use of method chosen				

3.1 Screens the woman carefully to make sure there is no medical condition that would be a problem for use of the method				
3.2 Screens for STI/HIV and provides condoms if needed (for dual protection)				
3.3 Screens further for eligibility to use the method				
3.4 Repeats how to use the method, explains benefits and potential side effects and what to do if there are side effects				
3.5 If ready to start using the method, provides the method and asks her to repeat the instructions for use				
3.6 Asks the woman whether she has any doubts and responds				
3.7 If not eligible, offers alternate method				
3.7 Thanks the woman and advises her about return visit.				

Learning guide: Immediate management of bleeding later in pregnancy

Rating scale
2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards

Learning guide for immediate management of bleeding later in pregnancy				
Step/Task	2	1	0	**Comments**
Task 1: Rapid assessment and action				
1.1 SHOUTs for help to mobilize all available personnel				
1.2 Puts on personal protective barriers				
1.3 Washes hands with soap and water and dries hands and puts on examination gloves				
1.4 Quickly reviews ANC records				
1.5 Performs rapid assessment of the woman's condition, vital signs (pulse, blood pressure, respiration), level of consciousness, presence of anxiety and /or confusion, volume of blood loss, whether any pain, temperature ▪ If unconscious, keeps her on her back, tilts her backwards and lifts her chin to open airway and to clear secretions from the throat ▪ If not breathing, ventilate her with bag and mask until she starts breathing ▪ If in shock, manages shock				
1.6 Rapid examination of abdomen ▪ Tenderness ▪ Uterus – soft/hard ▪ Foetal heart ▪ Foetal movements				
1.7 Catheterises the woman to monitor urinary output				
1.8 Checks her pulse and blood pressure				
1.9 Starts IV fluids and gives at a rapid rate (1 litre in 15-20 minutes) Watches blood pressure every 15 minutes ▪ Watches for shortness of breath ▪ If shortness of breath, reduces infusion rate				
1.10Makes arrangements for referral ▪ Informs the referral hospital ▪ Informs the woman about the situation (if conscious) ▪ and her family about the situation ▪ Arranges for a donor if not already identified in the complication readiness plan				

Task 2: Make probable diagnosis				
2.1 Takes history from the woman (if she is conscious) ▪ Months of pregnancy ▪ Duration of bleeding ▪ Number of bleeding episodes o Amount of blood loss (pads soaked) o Any associated pain 2.2 Examines the woman ▪ Assesses blood loss ▪ Abdomen: o Contractions o Tenderness o Foetal presentation o Foetal heart sound ▪ DOES NOT PERFORM VAGINAL EXAMINATION				

Module evaluation

Module: Bleeding in pregnancy

Please indicate your opinion of the course components using the following rating scale:

5 Strongly Agree
4 Agree
3 No opinion
2 Disagree
1 Strongly disagree

Course component	Rating
1.The discussions helped me to clarify elements related to basic care.	
2.The exercises were useful for learning about basic management of bleeding in early pregnancy and later in pregnancy.	
3.The role plays on interpersonal communication skills were helpful.	
4.The case studies were useful for practising clinical decision making.	
5.The time for skill practice in a simulated setting was sufficient.	
6.The supervised client practice within the limitations of time was sufficient.	
7.I am confident about managing bleeding in pregnancy.	

BLEEDING IN EARLY PREGNANCY

Causes of Bleeding in early pregnancy

- Different types of abortion
- Molar pregnancy
- Ectopic pregnancy- pregnancy (implantation) outside the uterine cavity

Diagnosis of different types of abortion

Presenting symptom and other symptoms and signs typically present	Symptoms and signs sometimes present	Probable diagnosis
Light bleeding Closed cervix Uterus corresponds to dates	Cramping/lower abdominal pain Uterus softer than normal	Threatened abortion
Heavy bleeding Dilated cervix Uterus corresponds to dates	Cramping lower abdominal pain Tender uterus No expulsion of products of conception	Inevitable abortion
Heavy bleeding Dilated cervix Uterus smaller than dates	Cramping/lower abdominal pain Partial expulsion of products of conception	Incomplete abortion
Light bleeding Closed cervix Uterus smaller than dates Uterus softer than normal	Light cramping/lower abdominal pain History of expulsion of products of conception	Complete abortion

Source: MCPC 2017

Light bleeding: takes five minutes or longer for a clean pad or cloth to be soaked; Heavy bleeding: takes less than five minutes for a clean pad or cloth to be soaked and/or large blood clots are expulsed

Assessment of Blood loss
Bleeding is considered **heavy** if cloth or pad is soaked in <5min.

Digital evacuation

- Clean the vulva with betadine
- Wash hands and wear sterile gloves
- Put finger and gently pull out the products at the os.

Diagnosis of ectopic and molar pregnancy

Light bleeding Abdominal pain Closed cervix Uterus slightly larger than normal Uterus softer than normal	Fainting Tender adnexal mass Amenorrhoea Cervical motion tenderness	Ectopic pregnancy
Heavy bleeding Dilated cervix Uterus larger than dates Uterus softer than normal Partial expulsion of products of conception which resemble grapes	Nausea/vomiting Spontaneous abortion Cramping/lower abdominal pain Early onset pre-eclampsia NO evidence of a foetus	Molar pregnancy

Source: MCPC 2017

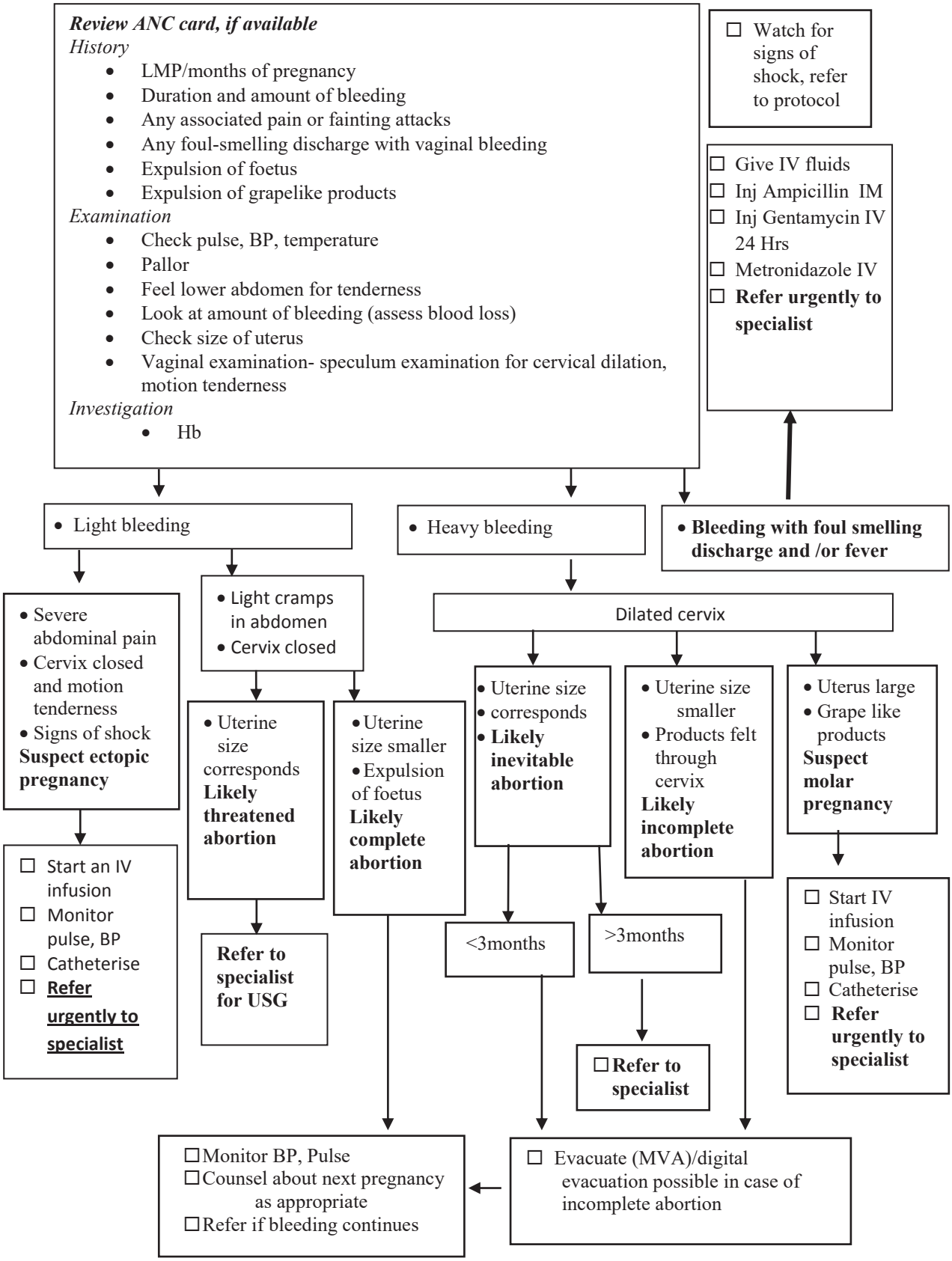
Post abortion care

- Advise on self care
- Counsel about next pregnancy
- ❖ If the woman wants a pregnancy in the near future, advise to wait for 4-6 weeks and counsel to use a short-term FP method
- ❖ If the woman does not want to be pregnant in the near future, counsel about appropriate FP method

Antibiotics

- Ampicillin 2g IM
- Gentamycin 5 mg/ Kg body weight / IV 24 Hrs
- Metronidazole 500 mg IV

BLEEDING IN EARLY PREGNANCY



ANTEPARTUM HAEMORRHAGE

Bleeding in late pregnancy after 22 weeks or in labour before delivery.

Diagnosis of antepartum haemorrhage

Presenting symptom and other symptoms and signs typically present	**Symptoms and signs sometimes present**	**Probable diagnosis**
Bleeding after 22 weeks gestation (may be retained in the uterus) Intermittent and constant abdominal pain	Shock Tense/tender uterus Decreased/absent foetal movements Foetal distress or absent foetal heart sounds	Abruptio placentae
Bleeding (intra-abdominal and/or vaginal) Severe abdominal pain (may decrease after rupture)	Shock Abdominal distension/free fluid Abnormal uterine contour Tender abdomen Easily palpable foetal parts Absent foetal movements and foetal heart sounds Rapid maternal pulse	Ruptured uterus
Bleeding after 22weeks of gestation	Shock Bleeding may be precipitated by intercourse Relaxed uterus Foetal presentation not in pelvis Lower uterine pole feels empty Normal foetal condition	Placenta praevia

Source: MCPC 2017

Bleeding due to other causes: Apart from the above pregnancy complications, bleeding can occur due to other causes which are unclassified or due to local lesions. *Trauma from domestic violence is considered an important cause in Timor Leste.*

Managing airway, breathing

If the woman has difficulty breathing

- Help the woman to find the best position for breathing
- If the woman is not breathing, ventilate with bag and mask until she starts breathing spontaneously

If the woman is unconscious

- Keep her on her back, arms on her side
- Tilt her head backwards
- Lift her chin to open airway and clear secretions from throat

Inserting IV line and giving fluids

While giving fluids at rapid rate

- Monitor every 15 min for blood pressure, pulse
- Shortness of breath or puffiness
- Reduce infusion rate to 3ml/min if (1litre in 6-8hrs) when pulse slows to <100/min, systolic BP rises to 100mm Hg or more
- Reduce the infusion rate to 0.5ml/minute, if breathing difficulty or puffiness develops
- Monitor urine output and record time and amount of fluids given

ANTEPARTUM HAEMORRHAGE

Review ANC card

History

- LMP/months of pregnancy
- Duration of bleeding
- No of bleeding episodes
- Amount of blood loss
- Any associated pain
- Foetal movements

Examination

- Pulse, blood pressure
- Assess blood loss
- Abdominal palpation for
  - ➢ uterine contraction,
  - ➢ uterine tenderness,
  - ➢ foetal presentation
  - ➢ foetal heart sound
- **Do not perform vaginal examination**

☐ **If in shock, manage shock as in protocol**

☐ **Make arrangements for transferring her with a donor to a facility with specialist**

☐ While waiting to transfer:

- ❖ Keep monitoring blood pressure, pulse, catheterise and measure urinary output
- ❖ Communicate in advance with referral facility

↓

☐ Manage the airway, breathing

☐ Give IV fluids rapidly

☐ Catheterize the patient and monitor urinary output

☐ **Refer woman urgently to specialist**

ANSWER KEY – Bleeding early in pregnancy and later in pregnancy

Instructions: Write the letter of the single **best** answer to each question in the blank next to the corresponding number on the attached answer sheet.

1. The presenting symptoms for threatened abortion include
   a) heavy vaginal bleeding, dilated cervix and uterus larger than dates
   b) **light vaginal bleeding, closed cervix and uterus that corresponds to dates**
   c) heavy vaginal bleeding, dilated cervix and uterus that corresponds to dates
   d) light vaginal bleeding, dilated cervix and uterus smaller than dates

2. A woman who has an unruptured ectopic pregnancy usually presents with
   a) collapse and weakness
   b) hypotension and hypovolemia
   c) symptoms of early pregnancy, abdominal distension and rebound tenderness
   d) **symptoms of early pregnancy and abdominal and pelvic pain**

3. The best way to determine uterine size is by
   a) looking at the cervix
   b) history of amenorrhea based on last menstrual period
   c) **bimanual pelvic examination**
   d) abdominal examination

4. Manual vacuum aspiration (MVA) is an effective method for treatment of incomplete abortion if the uterine size is not greater than
   a. 8 weeks
   b. 12 weeks
   c. 14 weeks
   d. 16 weeks

5. When performing a MVA, the vacuum will be lost if
   a) the syringe is full
   b) **the cannula is withdrawn too far**
   c) the uterus is perforated
   d) all of the above

6. The MVA procedure is complete when
   a. the wall of the uterus feels smooth
   b. the vacuum in the syringe decreases
   a. red or pink foam, but no more tissue, is visible in the cannula
   b. the uterus relaxes

7. Assessment of a woman who presents with vaginal bleeding after 22 weeks of pregnancy should
   a) include immediate vaginal examination
   b) **exclude immediate vaginal examination**
   c) be limited to abdominal examination
   d) none of the above

8. If bleeding is heavy in the case of abruptio placentae and the cervix is fully dilated
   a) unassisted vaginal delivery should be anticipated
   b) **delivery should be by vacuum extraction**
   c) delivery should be by caesarean section
   d) all of the above

Handout 1: Differential diagnosis bleeding in early pregnancy (before 22 weeks of pregnancy)

Presenting symptoms and other symptoms and signs typically present	Symptoms and signs sometimes present	Probable diagnosis
Light bleeding Closed cervix Uterus corresponds to dates	Cramping/lower abdominal pain Uterus softer than normal	Threatened abortion
Heavy bleeding Dilated cervix Uterus corresponds to dates	Cramping/ lower abdominal pain Tender uterus No expulsion of products of conception	Inevitable abortion
Heavy bleeding Dilated cervix Uterus smaller than dates	Cramping/ lower abdominal pain Partial expulsion of products of conception	Incomplete abortion
Light bleeding Closed cervix Uterus smaller than dates Uterus softer than normal	Light cramping/lower abdominal pain History of expulsion of products of conception	Complete abortion
Light bleeding Abdominal pain Closed cervix Uterus slightly larger than normal Uterus softer than normal	Fainting Tender adenexal mass Amenorrhoea Cervical motion tenderness	Ectopic pregnancy
Heavy bleeding Dilated cervix Uterus larger than dates Uterus softer than normal Partial expulsion of products of conception which resembles grapes	Nausea/vomiting Spontaneous abortion Cramping/lower abdominal pain Early onset pre-eclampisa No evidence of a foetus	Molar pregnancy

Source: MCPC 2017

Handout 2: Differential diagnosis of bleeding later in pregnancy (after 22 weeks of pregnancy)

Presenting symptom and other symptoms and signs typically present	Symptoms and signs sometimes present	Probable diagnosis
Bleeding after 22 weeks gestation (may be retained in the uterus) Intermittent and constant abdominal pain	Shock Tense/tender uterus Decreased/absent foetal movements Foetal distress or absent foetal heart sounds	Abruptio placentae
Bleeding (intra-abdominal and/or vaginal) Severe abdominal pain (may decrease after rupture)	Shock Abdominal distension/free fluid Abnormal uterine contour Tender abdomen Easily palpable foetal parts Absent foetal movements and foetal heart sounds Rapid maternal pulse	Ruptured uterus
Bleeding after 22weeks of gestation	Shock Bleeding may be precipitated by intercourse Relaxed uterus Foetal presentation not in pelvis Lower uterine pole feels empty Normal foetal condition	Placenta praevia

Source: MCPC 2017

Case study 1: Vaginal bleeding during early pregnancy

Directions

Read and analyse 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.

Case study

Mrs. Ann is 28 years old. She is 12 weeks pregnant when she presents at the health center complaining of light vaginal bleeding. This is Mrs. Ann's first pregnancy. It is a planned pregnancy, and she has been well until now.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

- What will you include in your initial assessment of Mrs. Ann, and why?
    - Mrs. Ann should be greeted respectfully and with kindness.
    - She should be told what is going to be done and listened to carefully. In addition, her questions should be answered in a calm and reassuring manner.
- A rapid assessment should be done to check for the following signs to determine if she is in shock and in need of emergency treatment/resuscitation: rapid, weak pulse; systolic blood pressure less than 90 mm Hg; pallor; sweatiness or cold, clammy skin; rapid breathing; confusion.
- What particular aspects of Mrs. Ann's physical examination will help you make a diagnosis or identify her problems/needs, and why?
- An abdominal examination should be done to check for tenderness and to determine the size, consistency and position of the uterus. A pelvic examination should be done to check for tenderness and to determine whether the cervix is closed, whether there is any tissue protruding from the cervix and the amount of bleeding.
- What causes of bleeding do you need to rule out?
    - Abortion (threatened, inevitable, complete, incomplete)
    - Ectopic pregnancy
    - Molar pregnancy

Diagnosis (Identification of Problems/Needs)

You have completed your assessment of Mrs. Ann, and your main findings include the following:

Mrs. Ann's temperature is 36.8º C, her pulse rate is 82 beats/minute and her blood pressure is 110/70 mm Hg.
She has no skin pallor or sweating.
She has slight lower abdominal cramping/pain and light vaginal bleeding.
Her uterine size is equal to dates, she has no uterine tenderness and no cervical motion tenderness, and the cervix is closed.

- Based on these findings, what is Mrs. Ann's diagnosis, and why?
  Mrs. Ann's symptoms and signs (e.g., light bleeding, closed cervix, uterus corresponds to dates) are consistent with threatened abortion.

Care provision (Planning and Intervention)

- Based on your diagnosis, what is your plan of care for Mrs. Ann, and why?
  - No medical treatment is necessary at this point.
  - Mrs. Ann should be advised to avoid strenuous activity and sexual intercourse.
  - She should be given emotional support and reassurance. Counselling about rest, nutrition and danger signs in pregnancy should be provided, with particular emphasis on vaginal bleeding.
  - If bleeding stops, Mrs. Ann should be followed up at the antenatal clinic.
  - If bleeding continues, she should be advised to return for further assessment.

Evaluation

Mrs. A. returns to the health center in 3 days.
She reports that the bleeding became heavier last night, and that since then she has been having cramping and lower abdominal pain.
She has not passed any products of conception, her uterus corresponds to dates and her cervix is now dilated. She has no signs or symptoms of shock.
Mrs. A. is very upset about the possibility of miscarrying.

- Based on these findings, what is your continuing plan of care for Mrs. Ann, and why?
  - Mrs. Ann's signs and symptoms are now consistent with those of inevitable abortion.
  - She should be counselled about the potential outcome for her pregnancy and given emotional support and reassurance.
  - Because she is less than 16 weeks pregnant, arrangements should be made for evacuation of the uterus, using manual vacuum aspiration.
  - If evacuation is not immediately possible, ergometrine 0.2 mg IM should be given and, if necessary, repeated after 15 minutes; OR misoprostol 400 µg should be given by mouth and, if necessary, repeated once after 4 hours.
  - Arrangements should then be made for evacuation of the uterus as soon as possible.

- Provide emotional support and reassurance to Mrs. Ann, explain what to expect, listen to
  her carefully and respond to any fears or concerns she may have.

- After the evacuation procedure, Mrs. Ann should be reassured about the chances of a subsequent successful pregnancy and encouraged to delay the next pregnancy until she has completely recovered.

- Counselling about suitable family planning methods should be provided.

- Mrs. Ann should be advised to return for immediate attention if she has:

  - Prolonged cramping (more than a few days)
  - Prolonged bleeding (more than 2 weeks)
  - Severe or increased pain
  - Fever, chills or malaise
  - Fainting

- Identify any other reproductive health services (e.g., tetanus prophylaxis or tetanus booster, treatment of STIs, cervical cancer screening) that Mrs. Ann may need.

Case study 2: Vaginal bleeding during early pregnancy

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.

Case study

Mrs. Betsy is 20 years old. She came to the health center 2 days ago with irregular vaginal bleeding and abdominal and pelvic pain. Symptoms of early pregnancy were detected and confirmed with a pregnancy test. Mrs. Betsy was advised to avoid strenuous activity and sexual intercourse and return immediately if her symptoms persisted. Mrs. Betsy returns to the health center today and reports that irregular vaginal bleeding has continued and she now has acute abdominal pain that started 2 hours ago.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

1. What will you include in your initial assessment of Mrs. Betsy, and why?

- Mrs. Betsy should be greeted respectfully and with kindness.
- She should be told what is going to be done and listened to carefully. In addition, her questions should be answered in a calm and reassuring manner.
- A rapid assessment should be done to check for the following signs to determine if she is in shock and in need of emergency treatment/resuscitation: rapid, weak pulse; systolic blood pressure less than 90 mm Hg; pallor; sweatiness or cold, clammy skin; rapid breathing; confusion. She should also be assessed to determine whether vaginal bleeding has increased or products of conception have been passed.

2. What particular aspects of Mrs. Betsy's physical examination will help you make a diagnosis, and why?

- An abdominal examination should be done to check for distension and rebound tenderness, which may indicate ectopic pregnancy; and to determine whether the uterus is softer or larger than normal for dates, which may indicate molar pregnancy.
- A gentle bimanual examination should be performed to check for cervical motion tenderness and tender adenexal mass, which may indicate ectopic pregnancy; and to check for products of conception in the cervical os, which may indicate incomplete abortion.

3. What screening procedures will you include (if available) in your assessment of Mrs. Betsy, and why?

- An ultrasound scan may help to distinguish a threatened abortion or twisted ovarian cyst from an ectopic pregnancy.

Diagnosis (Identification of Problems/Needs)

You have completed your assessment of Mrs. Betsy and your main findings include the following:
Mrs. Betsy's pulse rate is 130 beats/minute and weak, her blood pressure is 85/60 mm Hg, her respiration rate is 20 breaths/minute and her temperature is 36.8º C.
Her skin is pale and sweaty.
Mrs. Betsy has acute abdominal and pelvic pain, her abdomen is tense and she has rebound tenderness.
She has light vaginal bleeding. The cervix is closed.

4. Based on these findings, what is Mrs. Betsy's diagnosis, and why?

Mrs. Betsy's symptoms and signs (e.g., signs of shock, acute abdominal and pelvic pain, rebound tenderness, light vaginal bleeding, closed cervix) are consistent with ruptured ectopic pregnancy.

Care provision (Planning and Intervention)

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

- Mrs. Betsy should be treated for shock immediately:
  - Position her on her side.
  - Ensure that her airway is open.
  - Give her oxygen at 6–8 L/minute by mask or cannula.
  - Keep her warm.
  - Elevate her legs.
  - Monitor her pulse, blood pressure, respiration and temperature.
  - Start an IV using a large bore needle for rapid infusion of fluids (1 L of normal saline or Ringer's lactate in 15–20 minutes).
  - Monitor her intake and output (an indwelling catheter should be inserted to monitor urinary output).

- Blood should be drawn for haemoglobin and cross-matching, and blood for transfusion should be made available as soon as possible.
- Arrangements should be made for immediate transfer to the district hospital :
  - for an emergency laparotomy. Surgery should not be delayed while waiting for blood to be made available for transfusion.
  - Inform woman
  - Inform family
  - Arrange for donor
- Provide emotional support and reassurance to Mrs. Betsy and her family (or support person), explaining the situation and what to expect, and answering questions and concerns.

Evaluation

Mrs. Besty has recovered well from surgery.
She is now ready to be discharged; however, her hemoglobin is 9 g/dL.
She has indicated that she would like to become pregnant again, but not for at least a year.

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

- Mrs. Betsy's anemia should be treated with ferrous sulfate or ferrous fumarate 60 mg by mouth plus folic acid 400 µg by mouth once daily for 6 months.
- Counseling and advice should be provided on prognosis for fertility and the increased risk of a future ectopic pregnancy.
- Family planning counseling should be provided and her family planning method of choice provided to Mrs. Betsy before discharge.
- A follow up visit should be arranged for Mrs. Betsy in 4 weeks, and she should be encouraged to return before then if she has any questions or concerns.

Case study 1: Vaginal bleeding in later pregnancy

Directions

Read and analyse 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.

Case study

Mrs. Daphne is a healthy 20-year-old primigravada. Her pregnancy has been uncomplicated. At 38 weeks gestation, Mrs. Daphne walks into the emergency department at the community health centre, accompanied by her husband. She reports that she has painless, bright red vaginal bleeding that started 2 hours ago. Mrs. Daphne has visited the antenatal clinic three times during her pregnancy. At her last antenatal clinic visit, which was 2 weeks ago, there were no abnormal findings.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

1. What will you include in your initial assessment of Mrs. Daphne, and why?
   - Mrs. Daphne and her husband should be greeted respectfully and with kindness.
   - They should be told what is going to be done and listened to carefully. In addition, their questions should be answered in a calm and reassuring manner.
   - A rapid assessment should be done to check for the following signs to determine if she is in shock and in need of emergency treatment/resuscitation: rapid, weak pulse; systolic blood pressure less than 90 mm Hg; pallor; sweatiness or cold, clammy skin; rapid breathing; confusion. She should also be assessed to determine the amount of blood lost since vaginal bleeding started.
   - A vaginal examination **should not** be carried out as part of the initial assessment; however, a careful speculum examination should be done to rule out incidental causes of bleeding (e.g., cervicitis, trauma, cervical polyps).
2. What particular aspects of Mrs. Daphne's physical examination will help you make a diagnosis and identify her problems/needs, and why?
   - An abdominal examination should be done to establish the lie and presentation of the foetus (abnormal lie and malpresentation can be associated with placenta praevia, as can a high foetal head in a primigravida with placenta praevia). The consistency of the uterus should be checked and the presence of pain determined to differentiate between symptoms and signs for abruptio placentae. (Abruptio placentae is usually accompanied by a tense, tender uterus.)
   - Foetal condition should be assessed by listening to the foetal heart sounds (the foetal condition should be normal if Mrs. Daphne has placenta praevia, whereas for an abruption, there may be foetal distress or absent foetal heart sounds).
3. What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. Daphne, and why?
   - An ultrasound scan should be performed, if possible, to localize the placenta.

Diagnosis (Identification of Problems/Needs)

You have completed your assessment of Mrs. Daphne and your main findings include the following:

Mrs. Daphne's pulse rate is 88 beats/minute, her blood pressure is 110/80 mm Hg, her respiration rate is 16 breaths/minute and her temperature is 37º C.
Vaginal bleeding is found to be light to moderate and bright red, and Mrs. Daphne reports soaking 12 pads before coming to the hospital.
Uterine consistency is normal and there is no abdominal pain. The lie is longitudinal, the presentation is vertex, and the head is well above the pelvic brim. The foetus is active and the foetal heart rate is 120 beats/minute.
It has not been possible to do an ultrasound scan.

4. Based on these findings, what is Mrs. Daphne's diagnosis, and why?
    - Mrs. D.'s symptoms and signs (e.g., painless vaginal bleeding, high foetal head in a primigravida, normal foetal condition) are consistent with placenta praevia.

Care provision (Planning and Intervention)

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

    - Make arrangements for referral
        - Inform the referral hospital
        - Inform the woman about the complication and likely impact on mother and child and the need for surgery. Encourage the woman to ask questions, express her concern and give emotional support and reassurance.
        - Arrange to send a blood donor (if not already identified in complication readiness plan).
    - An intravenous infusion should be started, using normal saline or Ringer's lactate, to replace blood loss.

    - Blood should be drawn for haemoglobin and cross-matching and blood for transfusion should be made available, if required.

Case study 2: Bleeding later in pregnancy

Directions

Read and analyse 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.

Case study

Mrs. Celia, who is 32 weeks pregnant, gravida three, has two healthy children. She has attended antenatal clinic regularly and all findings were within normal limits until her clinic visit 10 days ago. At that visit her blood pressure was noted to be 120/96 mm Hg; there were no other signs or symptoms of pregnancy-induced hypertension. Mrs. Celia was counselled about danger signs and what to do if they occur and asked to return to the clinic in 2 weeks. She presents at the health centre 2 days before her next clinic visit, accompanied by her mother-in-law, with vaginal bleeding, abdominal pain and a bad headache.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

1) What will you include in your initial assessment of Mrs. Celia, and why?
   - Mrs. Celia and her mother-in-law should be greeted respectfully and with kindness.
   - They should be told what is going to be done and listened to carefully. In addition, their questions should be answered in a calm and reassuring manner.
   - A rapid assessment should be done to check for the following signs to determine if she is in shock and in need of emergency treatment/resuscitation: rapid, weak pulse; systolic blood pressure less than 90 mm Hg; pallor; sweatiness or cold, clammy skin; rapid breathing; confusion. She should also be assessed to determine when vaginal bleeding started, the amount of blood lost, and whether the blood is bright and contains clots.
   - It will also be important to determine:
     - when abdominal pain started (e.g., at the same time as vaginal bleeding) and the nature of the pain
     - whether foetal movement has been felt since the onset of bleeding and pain
     - when headache started and whether there has been/is any visual disturbance (abruptio placentae can be associated with pregnancy-induced hypertension)

2) What particular aspects of Mrs. Celia's physical examination will help you make a diagnosis and identify her problems/needs, and why?
   - An abdominal examination should be done to establish the location and nature of pain, to feel the consistency of the uterus and check for guarding, and to detect foetal movement (a tense/tender uterus and decreased foetal movements are signs of abruptio placentae). Palpation should be kept to a minimum, however, to avoid exacerbating the symptoms.
   - An attempt should be made to detect foetal heart sounds, which may be absent with an abruption.

3) What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. Celia, and why?
   - No laboratory tests are required to make a diagnosis. However, an ultrasound scan may be performed if possible to locate placenta if placenta praevia is suspected.

Diagnosis (Identification of Problems/Needs)

You have completed your assessment of Mrs. C. and your main findings include the following:

Mrs. Celia's pulse rate is 120 beats/minute and weak, blood pressure is 110/60 mm Hg, respiration rate is 20 breaths/minute and her temperature is 37º C.
Her skin is pale and sweaty.
Mrs. Celia has constant abdominal pain, her uterus is tender on palpation, and the foetal heartbeat could not be heard.
She has heavy vaginal bleeding containing some old clotted blood.
Coagulopathy was not detected.

4) Based on these findings, what is Mrs. Celia's diagnosis, and why?
   - Mrs. C.'s signs and symptoms (e.g., signs of shock, constant abdominal pain, uterine tenderness, vaginal bleeding, and absent foetal heart sounds) are consistent with abruptio placentae.

5) What laboratory test would be appropriate at this time?
   - A bedside clotting test should be performed to detect or rule out coagulopathy (coagulopathy can be triggered by abruptio placentae).

Care provision (Planning and Intervention)

6) Based on your diagnosis, what is your plan of care for Mrs. Celia, and why?

   - Mrs. C. should be treated for shock immediately:
     - Position her on her side.
     - Ensure that her airway is open.
     - Give her oxygen at 6–8 L/minute by mask or cannula.
     - Keep her warm.
     - Elevate her legs.
     - Monitor her pulse, blood pressure, respiration and temperature.
     - Start an IV using a large bore needle for rapid infusion of fluids (1 L of normal saline or Ringer's lactate in 15–20 minutes).
     - Monitor her intake and output (an indwelling catheter should be inserted to monitor urinary output).

   - Blood should be drawn for hemoglobin and cross-matching and blood for transfusion should be made available as soon as possible.
   - Arrangements for referral should be made by contacting the referral facility
     - The plans for referral and the reasons for the same should be explained to the woman and also the risk to the mother and the baby. She should be encouraged to ask questions and treated with compassion. Should be provided emotional support and reassurance.
     - The family should be informed about the findings and the decision for referral and the urgency of the same.
     - Arrange for a blood donor (if not already identified in the complication readiness plan).

   - The steps taken to manage the complication should be explained to Mrs. C. and her mother-in-law. Provide emotional support and reassurance, and answer any questions and concerns.

Clinical simulation exercises (Direct to clinical guidelines)

SCENARIO 1 (Information provided and questions asked by the teacher)	KEY REACTIONS/RESPONSES **(Expected from learner)**
1. Mrs. Ann is 20 years old. This is her first pregnancy. Her family brings her into the health center. Mrs. Ann is able to walk with the support of her sister and husband. She reports that she is 14 or 15 weeks pregnant and that she has had some cramping and spotting for several days. However, she has had heavy bleeding and cramping for the past 6–8 hours. She has not attended an antenatal clinic nor is she being treated for any illnesses. • What is your first concern? • What will you do first?	• Q 1States that first concern is to determine whether or not Mrs. Ann is in shock • Q 2 Makes a rapid evaluation of her general condition, including vital signs (temperature, pulse, blood pressure and respiration rate), level of consciousness, color and skin temperature • Explains to Mrs. Ann (and her family) what is going to be done, listens to them and responds attentively to their questions and concerns
2. On examination, you find that Mrs. Ann's blood pressure is 100/60 mm Hg, pulse 100 beats/minute, respiration rate 24 breaths/minute. She is conscious. Her skin is not cold or clammy. You notice bright red blood soaking through her dress. • Is Mrs. Ann in shock? • What will you do next? • What questions will you ask?	• Q 1States that Mrs. Ann is not in shock • Q2 Starts an IV infusion of normal saline or Ringer's lactate • Q 2Asks Mrs. Ann if anything happened to her or if anyone did anything to her which may have caused the bleeding • Q 3Asks how long it takes to soak a pad • Asks if Mrs. Ann has passed any tissue • Asks if she has fainted
3. Mrs. Ann was well until she started bleeding. You can tell from her responses that she wanted this pregnancy. You see no signs of physical violence. She soaks a pad every 4–5 minutes. She has not fainted but she "feels dizzy." She has passed some clots and thinks she may have passed tissue. • What will you do next and why?	• Palpates Mrs. Ann's abdomen for uterine size, tenderness and consistency; checks for tender adnexal mass to rule out ectopic pregnancy; checks for large, boggy uterus to rule out molar pregnancy • Does a bimanual examination to rule out inevitable or incomplete abortion • Takes Mrs. Ann's temperature to rule out sepsis
4. On examination, you find that the uterus is firm, slightly tender and palpable just at the level of the symphysis pubis; there are no adnexal masses. Bimanual examination reveals that the cervix is approx 1–2 cm dilated, uterine size is less than 12 weeks, and no tissue is palpable at the cervix.	• Q 1States that Mrs. Ann has an incomplete abortion • Q 2 Explains findings to Mrs. Ann (and her family) • Prepares Mrs. Ann for MVA

• What is your working diagnosis? • What will you do now?	
***Discussion Question 1**: Why did you rule out ectopic pregnancy?*	***Expected Responses**: Bleeding is heavier than for ectopic; no adnexal masses were palpable abdominally or vaginally; no cervical motion tenderness; cervix is dilated; no history of fainting*
9. MVA was performed and complete evacuation of the products of conception has been assured. • What will you do now?	• Monitors Mrs. Ann's vital signs and blood loss • Ensures that Mrs. Ann is clean, warm and comfortable • Encourages her to eat and drink as she wishes
10. After 6 hours, Mrs. Ann's vital signs are stable and there is almost no blood loss. She insists on going home. • What will you do before she goes home?	• Talks to Mrs. Ann about whether or not she wants to get pregnant and when; provides family planning counseling and a family planning method, if necessary • Provides reassurance about the chances for a subsequent successful pregnancy • Advises Mrs. Ann to seek medical attention immediately if she develops prolonged cramping, prolonged bleeding, bleeding more than normal menstrual bleeding, severe or increased pain, fever, chills or malaise, foul-smelling discharge, fainting • Talks to her and her husband about safe sex • Asks about her tetanus immunization status and provides immunization if needed
11. Mrs. Betsy 25 years old. She is 36 weeks pregnant and suddenly started bleeding heavily and was rushed to the health centre. She complains of abdominal pain • What is your first concern? • What will you do first?	• Q 1States that first concern is to determine whether or not Mrs. Betsy is in shock • Q 2 Makes a rapid evaluation of her general condition, including vital signs (temperature, pulse, blood pressure and respiration rate), level of consciousness, colour and skin temperature • Explains to Mrs. Betsy (and her family) what is going to be done, listens to them and responds attentively to their questions and concerns
12. On examination, you find that Mrs. Betsy's blood pressure is 100/60 mm Hg, pulse 100 beats/minute, respiration rate 24 breaths/minute. She is conscious. Her skin is cold or clammy. You notice blood soaking through her dress. She complains of constant abdominal pain. Uterus is tender on palpation and foetal heart sounds are not heard.	• Q 1States that Mrs. Betsy is not in shock but shock is imminent if action is not taken • Q2 Starts an IV infusion of normal saline or Ringer's lactate • Q 3Asks how long it takes to soak a pad • Q 4 Abruptio placenta • Q 5: Makes arrangements for referral • Informs the woman about the findings in a compassionate manner and asks and encourages her to ask questions. Provides continuous emotional support.

• Is Mrs. Betsy in shock? • What will you do next? • What questions will you ask? • What is the working diagnosis? • What is your plan of action?	• Informs the family about the condition of the mother and foetus and the need for urgent referral • Arranges for a donor if not already identified in the complication readiness plan

Module 6

Management of vaginal bleeding after childbirth

Training resource package for intrapartum and immediate post-partum care

Standard: Every woman who develops complications during labour and delivery receive evidence-based appropriate care including appropriate referral.
Quality statement: Every woman who has excessive bleeding after delivery of the baby receives immediate and appropriate interventions.
Clinical protocols: Primary postpartum haemorrhage,, Retained placenta, Inversion of uterus, Rupture of uterus, Secondary postpartum haemorrhage

Module: Management of vaginal bleeding after childbirth

Key tasks
- Differential diagnosis of vaginal bleeding after childbirth
- Immediate management/ life-saving steps
- Specific management of PPH
- Communicating findings with the woman compassionately
- Educating and counselling for care and future pregnancies

Training schedule
- Key tasks
- Learning objectives
- Sessions plans
- Knowledge assessment

Trainer's guide
Session plan describes objectives of each session, topics, methodology and key points
- Exercis
- Case studies
- Role plays
- Clinical simulation
- Learning guides

Key knowledge
- Diagnosis of PPH
- Differential diagnosis
- Risk factors for primary PPH
- Diagnosis of retained placenta
- Risk factors for and diagnosis of ruptured uterus
- Diagnosis of inversion of uterus
- Diagnosis of secondary PPH

Critical skills
- Diagnosis of PPH and cause
- Immediate management of bleeding within 24 hours of childbirth
- Bimanual compression
- Aortic compression
- Intrauterine balloon tamponade
- Application of NASG
- Examination for cervical /vaginal tear and initial management
- Manual removal of placenta
- Digital removal of clots/ membranes
- Initial management of ruptured uterus
- Repositioning uterus
- Management of secondary PPH
- Education and counselling for care and future pregnancies

Evaluation
- Post Test
- Skill assess: using learning guides
Module evaluation

Module: Management of vaginal bleeding after childbirth

Training schedule

Total time: 2235 min (37 hours and 15 min)

Time	Topic	Method	Resource materials
30 min	Welcome Objective of the module: To update the knowledge and skills to prevent and manage vaginal bleeding after childbirth as well as to identify best practices Discuss: Key tasks Learning objectives Tools for evaluation of the session	Discussion	Slides 2-3
30 min	Knowledge assessment	Test	
Session 1 45 min	Diagnosis of PPH and differential diagnosis of vaginal bleeding after childbirth	Discussion Exercise 1	Slides 4-7 MCPC 2017 **(S31)** Handout 1
Session 2 30 min	Prevention of post-partum bleeding (PPH) through active management of third stage of labour	Demonstration by participant Discussion	MCPC 2017 **(C102)** Learning guide on assisting during delivery
Session 3 I hr	Communicating with woman about complications	Discussion Role play	MCPC 2017 **(C 5-12)** JHPIEGO Bleeding after birth complete (BABC) providers' guide, flip chart
Session 4 2 hr	Immediate management/life-saving steps	Discussion Case study 1 Skill practice	MCPC 2017 **(S30)** Learning guide on management of primary PPH
Session 5 6 hr	Placenta delivered and immediate bleeding Managing uterine atony Bimanual compression of the uterus Aortic compression Intrauterine balloon tamponade Applying Non-pnuematic antishock garment (NASG)	Discussion Case study Skill practice	MCPC 2017 **(S32)** Learning guide on management of primary PPH, bimanual compression of the uterus, aortic compression, intrauterine balloon tamponade and applying NASG Clinical protocol on primary PPH Handouts Power points JHPIEGO BABC providers' guide, flip chart and action plan
Session 6	Placenta delivered and	Discussion	MCPC 2017 **(S44)**

2 hr	immediate bleeding Managing retained placental fragments/ clots	Skill practice	Learning guide on removal of clots/membranes Clinical protocol on primary PPH
Session 7 2 hr	Placenta delivered and immediate bleeding Managing cervical /vaginal tear	Discussion Skill practice	MCPC 2017 **(S33)** Learning guide on examination and initial management of cervical/vaginal tears Clinical protocol on management of primary PPH
Session 8 4 hr	Placenta not delivered Managing retained placenta	Discussion Case study Skill practice	MCPC 2017 **(S43)** Learning guide on manual removal of placenta Clinical protocol on retained placenta Power points
Session 9 4 hr	Managing inversion of uterus	Discussion Skill practice	MCPC 2017 **(S45)** Learning guide on repositioning uterus Clinical protocol on inversion of uterus
Session 10 1 hr	Managing ruptured uterus	Discussion Skill practice	MCPC 2017 Learning guide on initial management of ruptured uterus Clinical protocol on ruptured uterus
Session 11 2 hr	Managing secondary PPH	Discussion Case study Skill practice	MCPC 2017 **(S46)** Learning guide on management of secondary PPH Clinical protocol on Secondary PPH
Session 12 1 hr	Clinical simulation of management of bleeding after childbirth	Clinical simulation using case scenarios	MCPC 2017 **(S29-48)** Scenarios Learning guides and clinical protocols related to PPH
Session 13 2hr	Education and counselling about care and future pregnancies	Discussion Skills practice	MCPC 2017 Learning guide on education and counselling about care and future pregnancies
Session 14 6 hr	Supervised client practice	Skills practice	Learning guides
Session 15 2 hr	Evaluation	Post-test Skills check Module evaluation	Questionnaire Learning guides Module evaluation form

Session plan

Training process	Resources
Welcome the participants and introduce yourself Objective of the module: To update the knowledge and skills to prevent and manage vaginal bleeding after childbirth as well as to identify best practices Discuss the key tasks and ask the participants to contribute Discuss the learning objectives. Learning objectives: At the end of the module, the midwife will be able to: 1. Recognize postpartum haemorrhage (PPH) and identify probable causes 2. Perform rapid assessment and immediate management of bleeding after childbirth 3. Diagnose the specific cause of bleeding through history and physical examination as per the clinical protocols 4. Manage specific cause of bleeding through appropriate management as per the clinical protocols 5. Communicate compassionately about the problems and management/referral with the woman and her family 6. Educate and counsel about care and future pregnancies Explain the tools for evaluation of the session	Slides 2-3
Pre-session knowledge assessment	Questionnaire
Session 1: Diagnosis of PPH and differential diagnosis of bleeding after childbirth *Objective of the session*: To enable the participants to update knowledge about diagnosis of PPH and differential diagnosis Start the session by asking the participants the importance of the module on PPH. Ask whether in the facilities they work or in the villages they cover whether there have been any deaths due to bleeding after childbirth *Discussion* Ask one of the participants to define PPH and types of PPH. *Exercise 1*: Distribute the table on differential diagnosis *with the column on probable diagnosis blan*k. Ask the participants to fill the column. Ask the participants to share probable diagnosis for each set of signs and symptoms. Discuss the correct probable diagnosis. Distribute the table with the correct answers and clarify doubts if any.	Slide 4-7 MCPC 2017 **(S31)** Handout 1 on differential diagnosis

Session 2: Prevention of PPH through active management of third stage of labour *Objective of the session*: To enable participants to refresh their skills in active management of third stage of labour *Demonstration* by participant Ask one of the participants to demonstrate active management of third stage of labour using a childbirth simulator. Ask the rest of the participants to observe using the learning guide on childbirth and immediate postpartum. The participants are asked to provide feedback and the trainer should sum up the observations. *Discussion* Ask the participants to explain how the steps of active management of labour prevents PPH (focus on role of oxytocin, controlled cord traction, uterine massage)	MCPC 2017 **(S102)** Learning guide on assisting during assisting with childbirth and immediate postpartum
Session 3: Communicating with woman about complications *Objective of the session*: To develop skills in communicating with woman about complications Emphasize the importance of compassionate communication about problems with the woman and her family and encouraging the woman and the family to ask questions. Distribute pages **C 9-12 of MCPC**. Ask the participants to review the same. Ask one of the participants to list the elements of complication readiness plan. Discuss briefly the elements of the plan. *Role play* Distribute the write up on the role play on communicating complications. Divide the participants into groups of three and follow the instructions in the role play. Ask one of the groups to do the role play while the trainer and the rest of the groups will observe. Ask others to respond to the questions. The trainer should sum up the observations and highlight the importance of compassionate communication.	MCPC **2017 (C 5-12)** JHPIEGO BABC providers' guide, flip chart Handout 2 on Emotional and psychological support in EmONC
Session 4: Immediate management/life-saving steps *Objective of the session:* To enable participants to practice immediate management of PPH *Discussion* Ask the participants about key points in history that will help to decide on management (details of delivery, placenta delivered, blood loss/clots, fever, foul smelling discharge, medication) *Case study* Project the case study on uterine atony up to diagnosis. Ask the participants to read the case study individually and each group (same as in session 3) to respond to the questions under assessment. Discuss the response to each of the questions. The trainer should sum up the responses. Project the rest of the case study. Ask one of the groups to give a diagnosis based on the findings provided in the case study. Discuss the findings supporting the diagnosis. Ask one of the groups to explain immediate care. Ask about key signs and symptoms to watch out for. Ask another group to discuss the points on about immediate management. The trainer should sum up the discussions highlighting the key points in history, assessment and diagnosis and management. The trainer should remind the participants that giving oxytocin	MCPC 2017 **(S30)** Learning guide on management of primary PPH Clinical protocol on primary PPH

injection is one of the signal functions of emergency obstetric care.	
Session 5: Placenta delivered with immediate PPH Managing primary PPH (uterine atony) *Objective of the session*: To enable participants to develop skills in diagnosing and managing uterine atony and performing bimanual compression, aortic compression, balloon tamponade and application of NASG *Case study* Continue with the same case study as in session 4 *focusing on the section on evaluation*. Ask one of the groups to respond to the question on continuing plan. Discuss the answer and add any missing points. Distribute the learning guide on management of primary PPH as well as the clinical protocol on primary PPH and ask the participants to review the same. *Discussion* • Key points in history and examination (whether placenta delivered, placental examination for completeness, uterine contraction, size, perineal (genitals, bleeding, peri-urethra, vaginal and cervical inspection) • Diagnosis of uterine atony – key findings • Care of the woman • Management Discuss conditions that increases the risk of uterine atony. *Skill practice*- bimanual compression (follow the instructions on skill practice and arrange all the supplies needed for the practice) Continue with the same group as in session 3 or make new groups. Distribute the learning guide on bimanual compression. Follow the instructions on skill practice. The trainer should observe each participant using the learning guide and give feedback. Infection prevention should be emphasised. *Every participant should be provided a chance to practice bimanual compression.* *Skill practice- aortic compression* (follow the instructions on skill practice and arrange all the supplies needed for the practice) Distribute the learning guide on aortic compression and follow instructions. *Every participant should be provided a chance to practice aortic compression.* *Skill practice*- on *intrauterine balloon tamponade* (follow the instructions on skill practice and arrange all the supplies needed for the practice) Distribute the learning guide on intrauterine balloon tamponade and follow instructions. Each participant should be competent in preparation, insertion, inflation and deflation. *Every participant should be provided a chance to practice intrauterine tamponade (all the four critical steps)* *Skill practice*-Applying non-pnuematic anti-shock garment (NASG) (follow the instructions on skill practice and arrange all the supplies needed for the practice)	MCPC 2017 **(S32)** Learning guides management of primary PPH Clinical protocol on primary PPH JHPIEGO BABC providers' guide, flip chart and action plan Learning guide on bimanual compression Power point Learning guide on aortic compression Power point Learning guide on intrauterine balloon tamponade Handout Learning guide on NASG Handout

Distribute the learning guide on applying NASG and follow the instructions for skill practice using the child birth simulator. Each participant should be competent in the application and removal. *Every participant should be provided a chance to practice application of NASG.*	
Session 6: Placenta delivered and immediate bleeding Removal of placental fragments/clots *Objective of the session*: To update skills to manage retained placental tissue or clots after the placenta is delivered *Discussion:* Ask about the signs and symptoms of retained placental fragments or clots Ask the participants to review the clinical protocol on primary PPH and key points in history and examination. *Skill practice*- removal of retained placental fragments/clots (follow the instructions on skill practice and arrange all the supplies needed for the practice) Distribute learning guide on removal of retained placental fragments/clots and follow the instructions on skill practice. *Every participant should be provided a chance to practice removal of placental fragments/clots.*	MCPC 2017 Learning guide on removal of retained placental fragments/clots Handout on differential diagnosis
Session 7: Placenta delivered and immediate bleeding Cervical /vaginal tear *Objective of the session*: Update skills to manage cervical /vaginal tear *Discussion* Ask about the signs and symptoms of tears of the cervix /vagina. Ask the participants to review the clinical protocol on primary PPH and key points in history and examination. *Skill practice*- Inspection of tears of cervix and vagina and preliminary management(follow the instructions on skill practice and arrange all the supplies needed for the practice) Distribute learning guide on examination of tears of cervix and vagina and preliminary management and follow the instructions on skill practice. Discuss communicating with the woman and her family about the need for referral and the importance of sending a donor.	MCPC 2017 Learning guide on examination of cervical/vaginal tears and preliminary management Clinical protocol on primary PPH Handout on differential diagnosis
Session 8: Managing retained placenta *Objective of the session*: Updating skills to identify retained placenta and manually remove the placenta. *Case study* Continue with the same groups as in session 3 or create new groups. Project the case study up to diagnosis. and ask participants to review the case study and discuss the response to the questions among the members of the group. Discuss the response to each of the questions. The trainer should sum up the responses. Project the rest of the case study. Ask one of the groups to give a diagnosis based on the findings provided in the case study. Discuss the findings supporting the diagnosis. Discuss the question on plan of care.	MCPC 2017 P-91 Learning guide on manual removal of placenta Clinical protocol on retained placenta Power point

Ask the groups to focus on the section on evaluation and respond to the question. Trainer should sum up the responses to the questions. Distribute the clinical protocol on retained placenta and ask the participants to review the same. *Skill practice*- Manual removal of placenta (follow the instructions on skill practice and arrange all the supplies needed for the practice) Distribute the learning guide on manual removal of placenta and follow instructions on skill practice. Ask if any of the participants have done the procedure. If so ask the participant to demonstrate. The trainer should provide feedback and demonstrates manual removal of the placenta. *Every participant should be provided a chance to practice manual removal of placenta.* Discuss the likely complications of manual removal of placenta. Reiterate the importance of manual removal of placenta as a life saving measure and remind the class that it is one of the signal functions of basic emergency obstetric care. Ask the participants if a woman presents with a retained placenta and no bleeding, what is the probable diagnosis. The trainer should provide the right answer and discuss various types of retained placenta using the power point on retained placenta and management.	Power point
Session 9: Managing inversion of the uterus *Objective of the session*: Develop skills in diagnosis and management of inversion of the uterus *Discussion* Ask the participants how to diagnose inversion of the uterus. Discuss the key points in history (difficulty during labour, whether placenta delivered, abdominal pain) and examination (vital signs, palpation of uterus, genitalia) Distribute the clinical protocol and ask the participants to review the management (immediate management and repositioning of uterus) *Skill practice* –repositioning of the inverted uterus (follow the instructions on skill practice and arrange all the supplies needed for the practice) Distribute the learning guide on repositioning of uterus and follow instructions on skill practice. Ask if any of the participants have done the procedure. If so ask the participant to demonstrate. The trainer provides feedback and demonstrates repositioning of the uterus. *Every participant should be provided a chance to practice repositioning of uterus.* Refer to the clinical protocol and discuss post-procedure care.	MCPC 2017 Learning guide on reposition of uterus Clinical protocol on inversion of uterus Power point
Session 10: Managing rupture of the uterus *Objective of the session*: To provide skills in diagnosing and providing immediate care in case of ruptured uterus *Discussion* Ask the participants about the distinguishing signs and symptoms of ruptured uterus. Discuss key points to be asked in history (past and present), medication during labour and key	MCPC 2017 Learning guide on management of rupture of uterus Clinical protocol on rupture of the uterus

examination (ruling out shock, abdomen and perineum) Distribute the clinical protocol and ask the participants to review the management (preliminary management and referral). Discuss the likely management in the referral facility (repair, sub-total hysterectomy if cannot be repaired) *Skill practice*- management of ruptured uterus (follow the instructions on skill practice and arrange all the supplies needed for the practice) Distribute the learning guide on ruptured uterus and follow the instructions. Focus on diagnosis and immediate management. Discuss the importance of counselling the woman and her spouse about using a permanent method of contraception in situations where the uterus was repaired.	
Session 11: Managing secondary PPH *Objective of the session*: To provide skills in recognizing and managing bleeding after 24 hours Ask the participants to define secondary PPH. Discuss the common signs and symptoms. Discuss the likely causes of secondary PPH. Ask the participants about signs of normal involution. *Case study* on secondary PPH Project the case study up to diagnosis. Ask the groups to discuss the questions in the section. Ask one of the groups to answer the first question and move on to another group with the next question. The trainer sums up the discussions. Project the rest of the case study and discuss the questions on diagnosis and management. Ask the participants to focus on the section on evaluation and discuss the question on plan for continuing care. *Discussion* Key points to be asked in history and key examination Immediate management and care afterwards *Skill practice*: Secondary PPH ((follow the instructions on skill practice and arrange all the supplies needed for the practice) Distribute the learning guide on secondary PPH and follow the instructions.	MCPC 2017 Learning guide on management of secondary PPH Clinical protocol on secondary PPH Power point on involution (Module on postpartum care)
Session 12: Clinical simulation of management of bleeding after childbirth *Objective of the session*: To provide simulated experiences to practice problem solving and decision making skills in managing bleeding after child birth The trainer should read through the instructions and plan the session in advance. Discuss the purpose and process of the simulated exercises. Select one group to play the role of a woman presenting with PPH and provider and assistants. Provide case scenarios and the trainer should ask questions.	Case scenarios Learning guides Clinical protocol
Session 13: Education and counselling about care and future pregnancies *Objective of the session*: To develop skills in educating and counselling women who had suffered from vaginal bleeding after child birth *Discussion*	MCPC 2017 Learning guide on education and counselling about care and future pregnancies

Ask why do women who suffered from bleeding after childbirth require special care. Ask about the principles of general care. Discuss the key points in education of the woman (nutrition, infection prevention, treatment of anaemia and contraception). Emphasise the importance of using contraceptives to enable mothers to recover. Refer to the importance of permanent method in the case of ruptured uterus. *Skill practice*: Education and counselling ((follow the instructions on skill practice and arrange all the supplies needed for the practice) Distribute the learning guide on education and counselling on care and future pregnancies and follow instructions. *Each participant should be provided a chance to do the task.*	
Session 14: Supervised client practice *Objective of the session* is to practice skills with clients. This is the final stage of clinical skills developments and participants should be allowed to work with clients only after they have demonstrated skill competency in a simulated situation. Planning for the supervised practice is a critical component so that participants get adequate practice. It is important to respect the rights of clients – permission should be sought, privacy and confidentiality should be maintained and respectful dealings with the clients. Since one trainer may not be sufficient to supervise all the participants, it will be good to identify potential assistants to help the trainer (preceptors) to observe the skill practices. The preceptors could be a doctor or senior midwife who is very proficient in the skills. The preceptors will need to be trained in the use of checklists to familiarise them with the checklists. Before and after each supervised client practice, there should be discussions. Feedback should be provided. While uterine atony and retained placenta cases may be available during training, It will not be possible for all the participants to get a chance to practice on clients in the case of most of the conditions described above. Plans to release participants for supervised client practice will need to be developed beyond the specified timing allocated for the procedure. Minimum of 3-4 experiences in screening and assessing progress should be planned for each of the participants (may vary depending on the baseline skill level). The participants should be divided into groups	
Session 15: Evaluation (post-test and skill check)	Post-test (same as pre-test) Learning guides Module evaluation form

Knowledge assessment questionnaire

Instructions: **Mark the single best answer**

1. Postpartum haemorrhage is defined as
   a) vaginal bleeding of any amount after childbirth
   b) sudden bleeding after childbirth
   c) vaginal bleeding in excess of 300 mL after childbirth
   d) vaginal bleeding in excess of 500 mL after childbirth

2. Immediate postpartum haemorrhage can be due to
   a) atonic uterus
   b) trauma to the genital tract
   c) retained placenta
   d) all of the above

3. Tears of the cervix, vagina or perineum should be suspected when there is immediate postpartum haemorrhage and
   a) a complete placenta and a contracted uterus
   b) an incomplete placenta and a contracted uterus
   c) a complete placenta and an atonic uterus
   d) an incomplete placenta and an atonic uterus

4. If the uterus is inverted following childbirth
   a) the uterine fundus is not felt on abdominal palpation
   b) there may be slight or intense pain
   c) the inverted uterus may be apparent at the vulva
   d) all of the above

5. Delayed postpartum haemorrhage is characterized by
   a) bleeding that occurs more than 24 hours after childbirth
   b) bleeding that is uniform and heavy
   c) bleeding that increases with breastfeeding
   d) bleeding that stops and starts irregularly

6. Continuous slow bleeding or sudden bleeding after childbirth
   a) should be monitored closely for 24 hours before treatment
   b) should be measured accurately and treated when more than 500 mL of blood is lost
   c) requires early and aggressive intervention
   d) does not require oxytocic drugs
7. If the uterus is ruptured during childbirth
   a) bleeding is immediate with severe abdominal pain
   b) bleeding is heavy
   c) bleeding is delayed
   d) only on the multipara

8. If an atonic uterus fails to contract after fundal massage, the next step is to
   a) give additional oxytocic drugs
   b) perform bimanual compression of the uterus
   c) start an IV infusion
   d) explore the uterus for for remaining placental fragments

9. If a retained placenta is undelivered after 30 minutes of oxytocin administration and controlled cord traction and the uterus is contracted
   a) more aggressive controlled cord traction should be attempted
   b) controlled cord traction and fundal pressure should be attempted
   c) manual removal should be attempted
   d) ergometrine should be given

10. If manual removal of the placenta is performed
   a) give ergometrine prior to the procedure
   b) give antibiotics 24 hours after the procedure
   c) place one hand in the uterus and use the other hand to apply traction on the cord
   d) place one hand in the uterus and one hand on the abdomen to provide counter traction on the uterine fundus

12. Bimanual compression of the uterus involves
   a) placing a gloved fist into the anterior fornix and applying pressure against the anterior wall of the uterus, while the other hand presses against the posterior wall of the uterus through the abdomen
   b) placing a gloved fist into the anterior fornix and applying pressure against the posterior wall of the uterus, while the other hand presses against the anterior wall of the uterus through the abdomen
   c) placing both hands on the abdomen and applying pressure downward toward the spine
   d) placing both hands on the abdomen and applying pressure upward toward the
   e) diaphragm

13. When performing abdominal aortic compression to control postpartum hemorrhage, the point of compression is
   a) just below and slightly to the right of the umbilicus
   b) just below and slightly to the left of the umbilicus
   c) just above and slightly to the right of the umbilicus
   d) just above and slightly to the left of the umbilicus

14. When performing manual removal of the placenta, if the placenta does not separate from the uterine surface by gentle lateral movement of the fingertips at the line of cleavage
   a) uterine inversion should be suspected
   b) placenta accreta should be suspected
   c) abruptio placentae should be suspected
   d) uterine rupture should be suspected

15. If the cervix is dilated in the case of delayed (secondary) postpartum hemorrhage
   a) manual exploration of the uterus should be performed to remove large clots and placental fragments
   b) manual vacuum aspiration should be performed to evacuate the uterus
   c) dilatation and curettage should be performed to evacuate the uterus
   d) none of the above

Handout 1

Diagnosis of vaginal bleeding after childbirth

Common presenting symptoms	Signs and symptoms that may be present	Probable diagnosis
• Primary PPH[a,b] Uterus soft and not contracted	• Shock	
• Primary PPH [a,b]	• Complete placenta • Uterus contracted	
• Placenta not delivered within 30 minutes after delivery	• Primary PPH [a,b] • Uterus contracted	
• Portion of maternal surface of placenta missing or torn membranes with vessels	• Primary PPH[a,b] • Uterus contracted	
• Uterine fundus not felt on abdominal palpation • Slight or intense pain	• Inverted uterus apparent at vulva • Primary PPH[a,c]	
• Primary PPH[a] (bleeding is intra-abdominal and/or vaginal) • Severe abdominal pain (may decrease after rupture)	• Shock • Tender abdomen • Rapid maternal pulse	
• Bleeding occurs more than 24 hours after delivery • Uterus softer and larger than expected for elapsed time since delivery	• Bleeding is variable (light or heavy, continuous or irregular) and foul-smelling • Anaemia	

a: bleeding the first 24 hr of delivery
b: bleeding may be light if the clots block the cervix or if the woman is lying on her back
c: there may be no bleeding with complete inversion

Case study 1: Vaginal bleeding after childbirth

Directions

Read and analyse 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 case study. When all groups have finished, the case studies and the answers each group has developed will be discussed.

Case study

Mrs. Ann is 20 years old. She gave birth to a full-term newborn 2 hours ago at home. Her birth attendant was the local traditional birth attendant (TBA), who has brought Mrs. Ann to the health center because she has been bleeding heavily since childbirth. The duration of labour was 12 hours, the birth was normal and the placenta was delivered 20 minutes after the birth of the newborn.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

1. What will you include in your initial assessment of Mrs. Ann, and why?

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

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

Diagnosis (Identification of Problems/Needs)

You have completed your rapid assessment of Mrs. Ann, and your main findings include the following:

Mrs. Ann's pulse rate is 100 beats/minute, her blood pressure is 120/70 mm Hg, her respiration rate is 12 breaths/minute and her temperature is 36.8º C.
Her uterus is soft and does not contract with fundal massage. She has heavy, bright red vaginal bleeding.
The TBA says that she thinks the placenta and membranes were complete.

4. Based on these findings, what is Mrs. Ann's diagnosis, and why?

Care provision (Planning and Intervention)

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

Evaluation

Ten minutes after the initiation of treatment, however, she continues to have heavy vaginal bleeding. Her pulse is 110 beats/minute and her blood pressure 100/60 mm Hg.

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

Case study 2: Vaginal bleeding after childbirth

Directions

Read and analyse 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 case study. When all groups have finished, the case studies and the answers each group has developed will be discussed.

Case study

Mrs. Beth is a 30-year-old, para three. She gave birth at the health center to a full-term healthy newborn weighing 3.2 kg. Active management of labour was practised after the birth of the newborn. The placenta was not delivered for 30 minutes after the delivery.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

7. What will you include in your initial assessment of Mrs. Beth, and why?

8. What particular aspects of Mrs. Beth's physical examination will help you make a diagnosis immediately or identify her problems/needs, and why?

9. What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. Beth, and why?

Diagnosis (Identification of Problems/Needs)

You have completed your assessment of Mrs. Beth and your main findings include the following:

Mrs. Beth's pulse rate is 88 beats/minute, her blood pressure is 110/80 mm Hg, her respiration rate is 14 breaths/minute and her temperature is 37º C.
Her uterus is firm and well contracted. Her bladder is not full. There is heavy bleeding per vagina.

10. Based on these findings, what is Mrs. Beth's diagnosis, and why?

Care provision (Planning and Intervention)

11. Based on your diagnosis, what is your plan of care for Mrs. Beth, and why?

Evaluation
After half an hour after manual removal of placenta, bleeding has not stopped.

12. Based on these findings, what is your continuing plan of care for Mrs. Beth, and why?

Case study 3: Vaginal bleeding after childbirth

Directions

Read and analyse 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 case study. When all groups have finished, the case studies and the answers each group has developed will be discussed.

Case study

Mrs. Alison. is 20 years old. She gave birth at the district hospital 6 days ago to a healthy newborn, with no apparent complications. She has come back to the hospital today complaining that she feels weak, light-headed and generally unwell. She says that she has vaginal bleeding equal to a heavy period.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

1. What will you include in your initial assessment of Mrs. Alison, and why?

2. What particular aspects of Mrs. Alison'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 Mrs. Alison, and why?

Diagnosis (Identification of Problems/Needs)

You have completed your assessment of Mrs. Alison and your main findings include the following:

Mrs. Alison's pulse rate is 90 beats/minute, her blood pressure is 120/80 mm Hg, her respiration rate is 20 breaths/minute and her temperature is 37º C.
Her uterus is soft and almost to the level of her umbilicus. She has no signs of cervical, vaginal or perineal trauma. However, vaginal bleeding has become progressively heavier and Mrs. A.'s lochia now has a slightly offensive odour. She also has mild conjunctival and palmar pallor, and her haemoglobin is 9 g/dL.
Mrs. Alison's hospital record does not indicate blood loss after childbirth or whether the placenta was complete.

4. Based on these findings, what is Mrs. Alison's diagnosis, and why?

Care provision (Planning and Intervention)

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

Evaluation

Two hours later Mrs. Alison is resting after having had placental remnants removed from her uterus. Her uterus is now well contracted and she has light vaginal bleeding. Her pulse is 82 beats/minute, her blood pressure is 120/80 mm Hg, her respiration rate is 20 breaths/minute and her temperature 37.2º C.

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

Role play: Communicating about postpartum complications

Directions

The trainer will select three participants to perform the following roles: skilled provider, postpartum patient and support person. The three participants participating in the role play should take a few minutes to prepare for the activity by reading the background information provided below. The remaining participants, who will observe the role play, should at the same time read the background information.

The purpose of the role play is to provide an opportunity for participants to appreciate the importance of good interpersonal communication skills when providing care for a woman who experiences a postpartum complication.

Participant roles

Provider: The provider is an experienced midwife who has good interpersonal communication skills.

Patient:	Mrs. Arizona is 20 years old. She gave birth at home 2 hours ago.
Support person:	Village traditional birth attendant (TBA) who attended Mrs. Arizona's birth.

Situation

Mrs. Arizona has been brought to the health center by the TBA because she has been bleeding heavily since childbirth 2 hours ago. The duration of labour was 12 hours and the TBA reports that there were no complications. The midwife has assessed Mrs. Arizona and treated her for shock and atonic uterus. Although the bleeding has decreased since Mrs. Arizona first arrived at the health center, her uterus is not well contracted, despite fundal massage and the administration of oxytocin. Mrs. Arizona, who is very frightened, must be transferred to the district hospital for further management. The TBA is anxious and feels guilty about Mrs. Arizona's condition. The midwife must explain the situation to Mrs. Arizona and the TBA and attempt to provide emotional support and reassurance as preparations are made for transfer.

Focus of the play

The focus of the role play is the interpersonal interaction among the midwife, Mrs. Arizona and the TBA, and the appropriateness of the information provided and the emotional support and reassurance offered.

Discussion questions

The trainer should use the following questions to facilitate discussion after the role play:

1. How did the midwife explain the situation to Mrs. Arizona and the TBA and the need to transfer Mrs. Arizona to the district hospital?
2. How did the midwife demonstrate emotional support and reassurance during her interaction with Mrs. Arizona and the TBA?
3. What verbal/nonverbal behaviours did Mrs. Arizona and the TBA use that would indicate they felt supported and reassured?

Clinical simulation: Management of vaginal bleeding after childbirth

Purpose: The purpose of this activity is to provide a simulated experience for participants to practice problem-solving and decision-making skills in the management of vaginal bleeding after childbirth, with emphasis on thinking quickly and reacting (intervening) rapidly.

Instructions: The activity should be carried out in the most realistic setting possible, such as the labour and delivery area of a hospital, clinic or maternity center, where equipment and supplies are available for emergency interventions.

- One participant should play the role of patient and a second participant the role of skilled provider. Other participants may be called on to assist the provider.

- The trainer will give the participant playing the role of provider information about the patient's condition and ask pertinent questions, as indicated in the left-hand column of the chart below.

- The participant will be expected to think quickly and react (intervene) rapidly when the trainer provides information and asks questions. Key reactions/responses expected from the participant are provided in the right-hand column of the chart below.

- Procedures such as starting an IV, examination of the perineum, cervix and vagina and manual reposition of uterus, should be role played, using models and appropriate equipment.

- Initially, the trainer and participant will discuss what is happening during the simulation in order to develop problem-solving and decision-making skills. The italicized questions in the simulation are for this purpose. Further discussion may take place after the simulation is completed.

- As the participant's skills become stronger, the focus of the simulation should shift to providing appropriate care for the life-threatening emergency situation in a quick, efficient and effective manner. All discussion and questioning should take place after the simulation is over.

Resources: Learning Guides for management of primary PPH, involution of uterus, ruptured, vaginal and cervical Inspection, sphygmomanometer, stethoscope, equipment for starting an IV infusion, oxygen cylinder, mask and tubing, syringes and vials, speculum, sponge forceps, high-level disinfected or sterile surgical gloves.

SCENARIO (Information provided and questions asked by the teacher)	Key Reactions/Responses (Expected from participants)
A. Mrs. Beth is 24 years old and has just given birth to a healthy baby girl after 7 hours of labour. Active management of the third stage was performed, and the placenta and membranes were complete. Approximately 30 minutes later, a nurse rushes to tell you that Mrs. B. Is bleeding profusely. What will you do?	
2. On examination, you find the Mrs. Beth's blood pressure is 86/60 mm Hg and pulse 120 beats/minute and weak. Her skin is not cold and clammy. a. What is Mrs. Beth's problem? b. What will you do now?	
***Discussion Question 1**: How do you know when a woman is in shock?*	
3. After 5 minutes, Mrs. Beth's uterus is contracted, and she continues to bleed heavily. What will you do now?	
4. On further examination of the placenta, you find that it is complete. On examination of Mrs. Beth's cervix, vagina and perineum, you find a cervical tear. She continues to bleed heavily. What will you do now?	
Discussion Question: What would you have done if examination of the placenta had shown a missing piece (placenta incomplete)?	

Scenario (Information provided and questions asked by the teacher)	KEY REACTIONS/RESPONSES (Expected from participants)
5. Mrs. Melania is 26 years old and delivered a healthy baby girl in a health centre. The midwife performed active management of third stage of labour. The placenta did not deliver for 30 minutes. There was no bleeding. a. What is Mrs. Melania's problem and why do you say so? b. What will you do?	
6. Mrs. Elana is 30 years old, gravida 4, was delivered in a health centre by a midwife. A live baby was born. While trying to deliver the placenta, intense pain was felt and the woman was perspiring intensely. On examination, fundus could not be felt in the abdomen and was found at the vulva. The placenta was not delivered. a. What do you think is Mrs.Elana's problem? b. What are the immediate steps you will take? c. What are the subsequent management steps you would follow?	
7. Mrs. Suzan, 32 years old, gravida 2, was in labour for about 12 hours and was being looked after by the local midwife. She was brought to the hospital with severe abdominal pain and was cold and clammy. She bled little and had feeling of fainting. Her blood pressure was 90/60 and her pulse was 120 per minute. a. What is Mrs. Suzan's problem? b. What are the immediate steps of management? c. What is your diagnosis? d. What are the subsequent management steps you would follow?	

Skills practice session: Managing a woman with bleeding after childbirth

Purpose

The purpose of this activity is to provide opportunities to observe and practice clinical skills, either in a simulated setting or at a clinical site.

Instructions

This activity should be conducted in a simulated setting using the appropriate pelvic and foetal models.

Participants should review the appropriate learning guide before beginning the activity. Under the guidance of the trainer, participants should work in groups of three to practice the steps/tasks and observe each other's performance; one plays the role of provider, the second one as woman who is bleeding after childbirth and the third as observer. The observer uses the relevant learning guide related to management of bleeding after childbirth. Participants reverse the roles until each has had an opportunity to practice and and competent. The trainer observes each participant when ready for observation and provides feedback. The participants who are not competent are made to repeat the exercise.

In the case of bimanual compression, aortic compression, balloon tamponade, application of NASG, digital removal of clots or membranes, examination of cervical/vaginal tear and manual removal of placenta, the trainer asks one of the experienced participants to first demonstrate and points out gaps if any or compliments the participant. The trainer should demonstrate the procedure.

During supervised practice at a clinical site, the trainer assesses the skills competency of each participant using learning guides.

The above process should be repeated for each of the skills practice session.

Resources

- Childbirth simulator
- Placenta model
- Sphygmomanometer and stethoscope
- Delivery kit
- Speculum
- Thermometer
- Catheter
- Syringe and needle
- Soap and water and betadine
- Sterile gloves
- Personal protective barriers
- IV set
- 0.5% chlorine solution and receptacle for decontamination
- Leak proof container or plastic bag
- NASG
- Learning guides on management of primary PPH, bimanual compression, aortic compression, inspection of cervix and vagina for tears, intrauterine balloon tamponade, application of non-pnuematic anti-shock garment (NASG), digital evacuation of clots, manual removal of placenta, reposition of uterus, management of rupture of uterus, management of secondary PPH and education and counselling on care and future pregnancies

Additional resources (specific to procedures)

- Inspection of cervical or vaginal tears and referral)- Lights and ring forceps, suture needle and chromic catgut 0 or Vicryl 2-0, sterile gauze for packing
- Condom balloon tamponade- Foley's catheter, Condom, sterile suture string, infusion bag with saline
- Manual removal of placenta- Receptacle for placenta
- Long sterile gloves – Reposition of uterus

Learning guide: Management of primary PPH

Rating scale
2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards

Learning guide for management of primary PPH (Some of the following steps/tasks should be performed simultaneously.)				
Step/Task	2	1	0	**Comments**
Task 1: Rapid assessment				
1.1 Shouts for help to mobilize all available personnel				
1.2 Puts on personal protective barriers				
1.3 Puts on examination gloves				
1.4 Reviews delivery records or takes quick history of delivery, whether placenta is delivered and complete and amount of bleeding (in case of home deliveries)				
1.5 Performs rapid evaluation of: ▪ woman's general condition ▪ vital signs (pulse, blood pressure, respiration), level of consciousness, presence of anxiety and/or confusion, blood loss and skin colour and temperature				
1.6 If the woman is conscious, tells the woman the findings and what is going to be done. If not conscious informs the accompanying person				
Task 2: Immediate management				
2. If shock is suspected, immediately begins management. EVEN IF SIGNS OF SHOCK ARE NOT PRESENT, shock could develop any time as her condition may deteriorate rapidly. WATCHES OUT FOR SHOCK				
2.2 Massages the uterus to expel blood and blood clots				
2.3 Gives oxytocin 10 units IM or IV if infusion line is in place				
2.4 Starts an IV infusion of normal saline or Ringer's lactate				
2.5 Prior to giving fluids, collects blood for Hb and cross matching in case of transfusion and send				
2.6 Catheterises the bladder (after changing to sterile gloves)				
Task 3: Manages the specific cause of PPH				
Determines the cause of PPH and manages accordingly as per clinical protocols on primary PPH 3.1 If placenta is not delivered, proceeds to do manual removal of placenta (see learning guide)				

3.2 If the placenta is delivered, examines the placenta to see whether complete a. In case of incomplete placenta (follows the clinical protocol) ▪ Continues to massage the uterus ▪ Performs digital evacuation (see learning guide)				
3.3 Palpates the uterus to see whether palpable and contracted a. If uterus is contracted, examines the cervix, vagina and perineum for tears and refers after primary treatment (see learning guide on examination of cervix and vagina and primary management of tears)				
b. If uterus is not contracted, does the following as per clinical protocol on primary PPH: ▪ Gives Oxytocin 20 units IV infusion as fast as possible ▪ Continues 20 units at 40 drops per minute ▪ Continues massaging the uterus ▪ Monitors bleeding c. If bleeding does not stop: ▪ gives sublingual misoprostol 800 mcg d. If bleeding continues, makes arrangements for referral. ▪ Informs the woman about the need for referral in a compassionate manner and encourages her to ask questions ▪ Informs her family members about the need for referral ▪ If a blood donor is not identified in the complication readiness plan, identifies a donor to accompany the woman e. While waiting for referral, performs bimanual compression or aortic compression or intrauterine balloon tamponade (see specific learning guides) f. Refers with NASG if available (see learning guide for application of NASG)				
Task 4: Care after emergency care of PPH				
1. Checks Hb (? 3 hrs /24 hrs after bleeding stops) If Hb is less than 7gm/dL, manage in referral facility If Hb is between 7-11 gm/dL advisesferrous sulphate (60 mg) and folic acid 400 mcg daily for 3 months				
Task 5: Advice on discharge				
6.1 Advises the woman and her family members ▪ about danger signs such as increased or persistent bleeding, fever, foul smelling discharge, severe pallor ▪ good nutrition especially iron-rich foods				
6.2 Counsels for birth spacing (learning guide on post-partum family planning) focusing on the need to recovery of mother				
6.3 Schedules follow up visit within one week				

Learning guide: Bimanual compression of the uterus

Rating scale
2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards

Learning guide for bimanual compression of the uterus (Some of the following steps/tasks should be performed simultaneously)				
Step/Task	2	1	0	**Comments**
Task 1: Immediate management				
1.1 If not already done, performs all the steps under tasks 1-2 and 3.3.b as in learning guide on management of primary PPH				
Task 2: Getting ready				
2.1 Tells the woman what is going to be done, listen to her, and respond attentively to her questions and concerns.				
2.2 Provides continual emotional support and reassurance, as feasible.				
2.3 Puts on personal protective barriers (if not already done)				
Task 3: Performs bimanual compression				
3.1 Washes hands and forearms thoroughly with soap and water and dries with a clean, dry cloth or air dry.				
3.2 Puts on sterile gloves				
3.3 Cleans the vulva and perineum with antiseptic solution.				
3.4 Puts high-level disinfected or sterile surgical gloves on both hands.				
3.5 Inserts one hand into the vagina and forms a fist.				
3.6 Places the fist into the anterior vaginal fornix and applies pressure against the anterior wall of the uterus.				
3.7 Places the other hand on the abdomen behind the uterus.				
3.8 Presses the abdominal hand deeply into the abdomen and applies pressure against the posterior wall of the uterus.				
3.9 Maintains compression until bleeding is controlled and the uterus contracts				
3.10 Monitors vital signs for every 15 minutes while waiting for referral				
Task 4: Post-procedure tasks				
4.1 Immerses both gloved hands briefly in a container filled with 0.5% chlorine solution; then removes gloves by turning them inside out: ▪ If disposing of gloves (examination gloves and surgical gloves that will not be reused), places in a plastic bag or leak proof, covered waste container; ▪ If reusing surgical gloves, submerges in 0.5% chlorine solution for 20 minutes for decontamination.				
4.2 Washes hands thoroughly with soap and water and dries with a clean, dry cloth or air dry.				

CONISDER DELETING AFTER DISCUSSION 4.3 Monitors vaginal bleeding and takes the woman's V/S: ▪ Every 15 minutes for one hour; ▪ Then every 30 minutes for three hours				
4.4 Palpates the uterine fundus to ensure that the uterus remains firmly contracted.				

Learning guide: Compression of abdominal aorta

Rating scale
2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards

Learning guide on compression of abdominal aorta (Some of the following steps/tasks should be performed simultaneously.)				
Step/Task	2	1	0	**Comments**
Task 1: Immediate management				
1.1 If not already done, performs all the steps under tasks 1 -2 and 3.3.b as in learning guide on management of primary PPH				
Task 2: Getting ready				
2.1Tells the woman what is going to be done, listen to her, and respond attentively to her questions and concerns.				
2.2 Provides continual emotional support and reassurance, as feasible.				
2.3 Puts on personal protective barriers and gloves (if not already done)				
Task 3: Performs compression of the abdominal aorta				
3.1 Places a closed fist just above the umbilicus and slightly to the left.				
3.2 Applies downward pressure over the abdominal aorta directly through the abdominal wall.				
3.3With the other hand, palpates the femoral pulse to check the adequacy of compression: ▪ If the pulse is palpable during compression, the pressure is not adequate ▪ If the pulse is not palpable during compression, the pressure is adequate				
3.4 Maintains compression until bleeding is controlled				
3.5 Monitors vital signs for every 15 minutes while waiting for referral				
Task 4: Post-procedure tasks				
4.1.Immerses both gloved hands briefly in a container filled with 0.5% chlorine solution; then remove gloves by turning them inside out: ▪ If disposing of gloves (examination gloves and surgical gloves that will not be reused),				

places in a plastic bag or leakproof, covered waste container; ▪ If reusing surgical gloves, submerges in 0.5% chlorine solution for 20 minutes for decontamination.				
4.2 Washes hands thoroughly with soap and water and dry with a clean, dry cloth or air dry				
CONSIDER DELETING AFTER DISCUSSION 4.3Monitors vaginal bleeding and take the woman's vital signs: ▪ Every 15 minutes for one hour; ▪ Then every 30 minutes for three hours.				
4.4 Palpates the uterine fundus to ensure that the uterus remains firmly contracted				

Learning guide: Intrauterine balloon tamponade NEEDS to discuss whether CHC staff can do

Rating scale
2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards

Learning guide on intrauterine balloon tamponade (Some of the following steps/tasks should be performed simultaneously.)				
Step/Task	2	1	0	**Comments**
Task 1: Immediate management				
1.1 If not already done, performs all the steps under tasks 1 -2 and 3.3 as in learning guide on management of primary PPH				
Task 2: Getting ready				
2.1 Gets the necessary equipment and supplies ▪ Sim's speculum ▪ Ring forceps ▪ Foley's catheter (? Sterile) ▪ Condom (in cover) ▪ Suture string (sterile)/umbilical cord thread ▪ IV set ▪ Infusion bag with saline ▪ Betadine ▪ Cotton				
2.2 Puts on personal protective barriers and gloves (if not already done)				
2.3 Washes hands thoroughly with soap and water and dries with a clean cloth or air dries				
2.4 Wears sterile gloves				
2.5 Prepares the condom balloon catheter ▪ Places the condom (already taken out of the cover by assistant) over Foley's catheter leaving a small portion beyond the catheter empty				

▪ Takes a sterile string and ties and tie the lower end of the condom to the catheter (tight but not strangulating) ▪ The remaining thread is twisted on the knot until there is only 5 cm left then tie once more with a square knot. ▪ If no infusion bag with saline, prepares 500 mL of HLD water to fill the condom				
2.6Tells the woman what is going to be done, listen to her, and respond attentively to her questions and concerns				
2.7 Provides continual emotional support and reassurance, as feasible				
2.8 If the woman is not catheterised already, inserts a catheter,				
2. 9 Positions the woman in lithotomy position (if she is not)				
2.10 Applies antiseptic lotion to the perineum and vagina				
Task 3: Inserting condom balloon catheter				
3.1 Inserts the sterile speculum to view the cervix				
3.2 Gently grasps the anterior lip of the cervix with a ring forceps				
3.3 Holds the joint between the condom and the catheter with a sterile forceps and gently introduces it through the cervix. Ensures that the catheter is beyond the internal cervical os				
3.3 Once the balloon end has been placed in the uterine cavity, inflates the condom with 300–500 mL of warm saline solution until it is visible in the cervix ▪ Beware of overfilling the balloon as this might cause the balloon to bulge out of the cervix and get expelled				
3.5 Watches for bleeding and if it is stopped, the tamponad is successful				
3.6 Packs the upper vagina with sterile rolled gauze to prevent expulsion of the balloon.				
3.7 Palpates the uterine fundus abdominally and mark with a pen (as a reference line from which any uterine enlargement or distension would be noted during the period of observation)				
3.6 Fixes the catheter on mother's thigh with an adhesive band				
3.7 Monitors vital signs while waiting for referral				
CONSIDER DELTETING AFTER DISCUSSION AS MAY NOT BE APPLICABLE AT CHC 3.7 Maintains in-situ for 12-24 hours if bleeding is controlled and client is stable				
3.8 Continues to monitor the woman				
3.9 If the bleeding is not controlled, makes arrangements to refer to a specialist				

3.10 Administers 20 IU of oxytocin in IV infusion (Normal saline or Ringer's lactate at 60 drops/30 drops /minute?? (ALREADY received probably 40-60 units)				
3.11 Administers a single dose of antibiotics ampicillin 2 g IV				
Task 4: Post-procedure tasks				
4.1.Immerses both gloved hands briefly in a container filled with 0.5% chlorine solution; then remove gloves by turning them inside out: ▪ If disposing of gloves (examination gloves and surgical gloves that will not be reused), places in a plastic bag or leak proof, covered waste container; ▪ If reusing surgical gloves, submerges in 0.5% chlorine solution for 20 minutes for decontamination				
4.2 Washes hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.				
Task 5: Post-procedure care				
CONSIDER DELTETING AFTER DISCUSSION AS MAY NOT BE APPLICABLE AT CHC 5.1 Monitors vital signs, bleeding and uterine fundal height for contraction of uterus every 15 minutes				
5.2 Monitors urine output every hour				
5.3 After 6-24 hours, if the uterus fundus remains at the same level and there is no active bleeding, deflates the balloon 50-100 ml, every hour and checks for bleeding. as long as there is no further bleeding				
5.4 If there is no further vaginal bleeding, 30 minutes after the balloon is completely deflated, removes the balloon and stop the oxytocin infusion				
5.5 If there is bleeding after the balloon is removed or oxytocin is stopped, arranges for referral ▪ Applies NASG (see learning guide) ▪ Informs the mother and family and responds to queries ▪ If a blood donor is not identified in the complication readiness plan, identifies a donor to accompany the woman				
5.6 Removes the urinary catheter when the woman is stable				

Learning guide: Applying Non-pnuematic anti-shock garment (NASG)

Rating scale
2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards

Learning guide on applying NASG (Some of the following steps/tasks should be performed simultaneously.)				
Step/Task	2	1	0	**Comments**
Task 1: Immediate management				
1.1 If not already done, performs all the steps under tasks 1 -2 as in learning guide on management of primary PPH and while waiting for specialist care, apply NASG as a temporizing measure				
Task 2: Getting ready				
2.1Tells the woman about the need for referral and what is going to be done till help arrives. Listens to her, and responds attentively to her questions and concerns.				
2.2 Provides continual emotional support and reassurance, as feasible				
Task 3: Applying NASG				
3.1 Gets the NASG ready ensuring that segments 1-6 are available				
3.2 Places the NASG under the woman with the top edge at the level of the lowest rib				
3.3 Closes segments 1 tightly around the ankles; check for snap sound				
3.4 Close segments 2 tightly around each calf; check for snap sound; leave the knee free so that the leg can bend				
3.5 Closes segments 3 tightly around each thigh; check for snap sound; leave the knee free so that the leg can bend				
3.6 Closes segment 4 around pelvis with lower edge at level of pubic bone				
3.7 Closes segment 5 with pressure ball over the umbilicus				
3.8 Finishes closing the NASG using segment 6. Ensures that the woman can breath easily				
Task 4: Removal of NASG (MAY NOT BE APPLICABLE AT CHC)				
▪ **ONLY REMOVE NASG** when the woman has been stable for two hours and the bleeding is less and the pulse and BP show no signs of shock (pulse above 100/minute and BP more than 90/60 ▪ NASG should be removed only by a trained provider				

4.1 Checks pulse and BP and ensures that they are above 100/minute and 90/60 and stable.				
4.2 Simultaneously removes segment 1 from both ankles ▪ Waits for 15 minutes ▪ Checks pulse and BP ▪ If stable, proceeds to remove segment 2				
4.3 Simultaneously removes segment 2 from both calves ▪ Waits for 15 minutes ▪ Checks pulse and BP ▪ If stable, proceed to removes segments 3				
4.4 Simultaneously removes segment 3 from both thighs ▪ Waits for 15 minutes ▪ Checks pulse and BP ▪ If stable, proceed to removes segments 4				
4.5 Simultaneously removes segment 4 from the pelvis Waits for 15 minutes ▪ Checks pulse and BP ▪ If stable, proceed to removes segments 5				
4.5 Simultaneously removes segment 5 and 6 from around the abdomen ▪ Waits for 15 minutes ▪ Checks pulse and BP ▪ Waits for 15 minutes before allowing the woman to sit up				
4.6 If BP falls by 20mm/HG or pulse becomes rapid, ▪ Rapidly replaces the segment/s ▪ Starts IV infusion with saline (if not already on IV) ▪ Makes arrangements for referral				
4.7 Continues to monitor BP and pulse				

Learning guide: Digital /manual removal of clot or membranes

Rating scale
2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards

Learning guide on digital removal of clots or membranes (Some of the following steps/tasks should be performed simultaneously.)				
Steps/task	2	1	0	**Comments**
Task 1: Immediate management				
1.1 If not already done, performs all the steps under tasks 1 -2 and 3.2 as in learning guide on management of primary PPH				
Task 2: Getting ready				
2.1 Prepares the necessary equipment.				
2.2 Tells the woman what is going to be done, listen to her, and respond attentively to her questions and concerns.				
2.3 Provides continual emotional support and reassurance, as feasible.				
2.4 Asks the woman to empty her bladder or insert a catheter, if necessary.				
2.5 Gives a single dose of prophylactic antibiotics: ▪ Ampicillin 2 g IV PLUS metronidazole 500 mg IV				
Task 3: Removal of clots or placental fragments or membranes				
3.1 Continues massaging the uterus to expel clots and fragments (with the help of an assistant)				
3.2 Inserts one hand /manual into the uterine cavity and places the other hand over the abdomen in order to support the uterus and to provide counteraction during removal of clots or fragments to prevent inversion of the uterus				
3.3 Explores the entire cavity and removes clots or placental fragments				
Task 4: Post-procedure tasks				
4.1 Immerses both gloved hands briefly in a container filled with 0.5% chlorine solution; then remove gloves by turning them inside out: ▪ If disposing of gloves (examination gloves and surgical gloves that will not be reused), places in a plastic bag or leak proof, covered waste container; ▪ If reusing surgical gloves, submerges in 0.5% chlorine solution for 20 minutes for decontamination				
4.2 Washes hands thoroughly with soap and water and dry with a clean, dry cloth or air dry				
Task 5: Post-procedure care				

5.1 Observes the woman closely				
5.2 Monitors vaginal bleeding and takes the woman's vital signs: ▪ Every 15 minutes for one hour; ▪ Then every 30 minutes for three hours				
5.3 Palpates the uterus for the next 4 hours to ensure that the uterus is contracted				
5.4 Checks for excessive bleeding				
5.5 Continues IV fluids till the vital signs are normal and uterus is conracted				
5.6 Removes urinary catheter once the woman is stable				
5.7 Checks Hb after 3 hours (?24 hours) of stopping bleeding a. If less than 7g/dL, refers for further care ▪ Informs the woman about the need for referral and encourages her to ask questions ▪ Informs the family about the need for referral ▪ If a blood donor is not identified in the complication readiness plan, identifies a donor to accompany the woman b.If Hb is between 7-11 g/dL, ferrous sulphate (60 mg) and folic acid 400 mcg daily for 3 months				
Task 6: Advice on discharge				
6.1 Advises the woman and her family members a. about danger signs such as increased or persistent bleeding, fever, foul smelling discharge, severe pallor b. good nutrition especially iron-rich foods				
6.2 Counsels for birth spacing (learning guide on post-partum family planning) focusing on the need to recovery of mother.				
6.3 Schedules follow up visit within one week				

Learning guide: Vaginal and cervical inspection for tears and preliminary management (NEED TO DISCUSS WHETHER APPLICABLE AT CHC)

Rating scale
2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards

Learning guide for inspection of vaginal and cervical tears and preliminary management (Some of the following steps/tasks should be performed simultaneously)				
Step/Task	2	1	0	**Comments**
Task 1: Immediate management				
1.1 If not already done, performs all the steps under tasks 1 -2 and 3.3 as in learning guide on management of primary PPH				
Task 2: Getting ready				
2.1 Gets necessary equipment and supplies ready ▪ Light ▪ Speculum ▪ Ring/sponge forceps				
2.2 Tells the woman what is going to be done, listen to her, and respond attentively to her questions and concerns				
2.3 Provides continual emotional support and reassurance, as feasible				
2.4 Puts on personal protective barriers (if not wearing)				
Task 3: Inspecting the upper vagina				
3.1 Washes hands thoroughly with soap and water and dry with a clean, dry cloth or air dry				
3.2 Puts high-level disinfected or sterile surgical gloves on both hands				
3.3 Separates the woman's labia with one hand				
3.4 Have an assistant shine a light into the vagina				
3.5 Looks carefully for any tears or hematomas				
3.6 Presses firmly on the back wall of the vagina with the fingers of the other hand and look for bleeding points in the vagina				
3.7 Continues to press firmly on the wall of the vagina: • Moves fingers up the side of the wall of the vagina to the cervix, looking for bleeding points • Repeats on the opposite wall of the vagina				
Task 4: Inspecting the cervix				

4.1 Have an assistant place one hand on the woman's abdomen and press firmly on her uterus to move the cervix lower into the vagina				
4.2 Inserts two high-level disinfected specula into the vagina: • Places one speculum in the anterior position. • Places the second speculum in the posterior position • Have an assistant hold the specula in position. • If no specula are available, uses one hand to press firmly on the back wall of the vagina to expose the cervix				
4.3 Inserts a ring or sponge forceps and clamp it on the anterior lip of the cervix at the 12 o'clock positio				
4.4 Inserts a second ring or sponge forceps and clamp it on the cervix at the 3 o'clock position.				
4.5 Inspects the cervix between the two forceps for bleeding points, using a gauze swab to wipe blood away, if necessary, for better inspection				
4.6 Unclamps the forceps from the anterior lip of the cervix (the 12 o'clock position)				
4.7 Reclamps the forceps on the cervix at the 6 o'clock position				
4.8 Inspects the cervix between the forceps at the 3 o'clock and the 6 o'clock positions for bleeding points, using a gauze swab to wipe blood away, if necessary, for better inspection				
4.9 Unclamps the forceps at the 3 o'clock position				
4.10 Reclamp the forceps on the cervix at the 9 o'clock position				
4.11 Inspects the cervix between the forceps at the 6 o'clock and the 9 o'clock positions for bleeding points, using a gauze swab to wipe blood away, if necessary, for better inspection				
4.12 Unclamps the forceps at the 6 o'clock position				
4.13 Reclamps the forceps on the cervix at the 12 o'clock position				
4.14 Inspects the cervix between the forceps at the 9 o'clock and the 12 o'clock positions for bleeding points, using a gauze swab to				

wipe blood away, if necessary, for better inspection				
4.15 Unclamps the forceps at the 9 o'clock position and remove				
4.16 Unclamps the forceps at the 12 o'clock position and remove				
4.17 Removes the vaginal specula (if used)				
ASK ABOUT tWO STICHES AND VAGINAL PACK- change title if added				
Task 5: Pre-referral tasks				
5.1 Informs the woman about the findings and the need for referral. Encourage the woman to ask questions. ▪ Inform the family about the situation and the need for referral. ▪ Arrange for a donor to accompany to the woman (either identified in the emergency plan or another person)				
5.2 Puts two stitches (continuous with chromic catgut 0) at the apex of the tear and pack the vagina with sterile gauze.				
Task 5: Post procedure tasks				
5.1 Before removing gloves, disposes of waste materials in a leak proof container or plastic bag				
5.2 Places all instruments in 0.5% chlorine solution for 10 minutes for decontamination				
5.3 Immerses both gloved hands in 0.5% chlorine solution. Removes gloves by turning them inside out • If disposing of gloves, places them in a leakproof container or plastic bag • If reusing surgical gloves, submerge them in 0.5% chlorine solution for 10 minutes for decontamination				
5.4 Washes hands thoroughly with soap and water and dry with a clean, dry cloth or air dry				

Learning guide: Manual removal of placenta

Rating scale
2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards

Learning guide on manual removal of placenta (Some of the following steps/tasks should be performed simultaneously.)				
Step/Task	2	1	0	**Comments**
Task 1: Immediate management				
1.1 Performs steps 1-2 and 3.1 of learning guide on primary PPH if not already performed (assessment and management that incudes massaging the uterus, Oxytocin 10 units, IV fluids and catheterisation)				
Task 2: Getting ready				
2.1 Prepares the necessary equipment (elbow-length gloves)				
2.2 Tells the woman what is going to be done, listen to her, and respond attentively to her questions and concerns.				
2.3 Provides continual emotional support and reassurance, as feasible.				
2.4 Starts IV fluids (normal saline) if not already started				
2.5 Asks the woman to empty her bladder or inserts a catheter, if necessary.				
2.6 Gives diazepam 5 mg IV slowly				
2.7 Gives a single dose of prophylactic antibiotics: ▪ Ampicillin 2 g IV PLUS metronidazole 500 mg IV				
2.8 Gives injection Tramadol 50 mg IM				
2.9 Puts on personal protective barriers (may not be necessary if already started).				
Task 3: Performs manual removal of placenta				
3.1 Washes hands and forearms thoroughly with soap and water and dry with a clean, dry cloth or air dry.				
3.2 Puts high-level disinfected or sterile surgical gloves on both hands. (Note: elbow-length gloves should be used, if available.)				
3.3 Holds the umbilical cord with a clamp.				
3.4 Pulls the cord gently until it is parallel to the floor.				
3.5 Inserts the other hand into the vagina and up into the uterus.				
3.6 When the placenta has been located, lets go off the cord and moves that hand onto the abdomen to support the fundus abdominally and to provide counter-traction to prevent uterine inversion.				
3.7 Moves the fingers of the hand in the uterus				

laterally until the edge of the placenta is located.				
3.8 Detaches the placenta from the implantation site by keeping the fingers tightly together and using the edge of the hand to gradually make a space between the placenta and the uterine wall.				
3.9 Proceeds slowly all around the placental bed until the whole placenta is detached from the uterine wall: ▪ If the placenta does not separate from the uterine surface by gentle lateral movement of the fingertips, suspect placenta accreta and arrange for surgical intervention.				
3.10 When the placenta is completely separated: ▪ Hold the placenta and slowly withdraw the hand from the uterus, bringing the placenta with it; ▪ With the other hand, continue to provide counter-traction to the fundus by pushing it in the opposite direction of the hand that is being withdrawn.				
3.11 Palpate the inside of the uterine cavity to ensure that all placental tissue has been removed.				
3.12 Give oxytocin 20 units in 1 L IV fluid (normal saline or Ringer's lactate) at 60 drops/minute.				
3.13 Have an assistant massage the fundus to encourage a tonic uterine contraction.				
3.14. Examines the uterine surface of the placenta to ensure that it is complete: ▪ If incomplete (any placental lobe or tissue is missing) make arrangements for referral (including informing the woman and family and arranging a donor)(EXPLORE UTERUS?)				
3.15 If there is continued bleeding: ▪ Makes arrangements for referral ▪ Informs the women and her family o refer to specialist (including informing the woman and her family and arranging a donor)				
3.16 Palpates the uterus to see whether contracted. ▪ If not contracted, manage as per atonic uterus: o Continue massaging and continue oxytocin infusion at 40 drops/minute o If still not contracted and bleeding, give misoprostol 800 mcg sublingual o Refer if bleeding continues ▪ If contracted: o Bleeding stopped, monitor vital signs o If bleeding not stopped, make				

arrangements for referral				
Task 4: Post-procedure tasks				
4.1.Immerses both gloved hands briefly in a container filled with 0.5% chlorine solution; then remove gloves by turning them inside out: ▪ If disposing of gloves (examination gloves and surgical gloves that will not be reused), places in a plastic bag or leak proof, covered waste container; ▪ If reusing surgical gloves, submerges in 0.5% chlorine solution for 20 minutes for decontamination.				
4.2 Washes hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.				
Task 5: Post procedure care				
5.1Monitors vaginal bleeding and take the woman's vital signs: ▪ Every 15 minutes for one hour; ▪ Then every 30 minutes for three hours.				
5.2 Palpates the uterine fundus to ensure that the uterus remains firmly contracted				
5.4 Checks for excessive bleeding				
5.5 Continues IV fluids till the vital signs are normal and uterus is conracted				
5.6 Removes urinary catheter once the woman is stable				
5.7 Checks Hb after 3 hours (?24 hours) of stopping bleeding a. If less than 7g/dL, refers for further care ▪ Informs the woman about the need for referral and encourages her to ask questions ▪ Informs the family about the need for referral ▪ If a blood donor is not identified in the complication readiness plan, identifies a donor to accompany the woman b. If Hb is between 7-11 g/dL, ferrous sulphate (60 mg) and folic acid 400 mcg daily for 3 months				
Task 6: Advice on discharge				
6.1 General care: Advises the woman and her family members a. about danger signs such as increased or persistent bleeding, fever, foul smelling discharge, severe pallor b. good nutrition especially iron-rich foods				
6.2 Counsels for birth spacing (learning guide on post-partum family planning) focusing on the need to recovery of mother.				
a. Schedules follow up visit within one week				

Learning guide: Repositioning of inverted uterus

Rating scale
2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards

Learning guide on repositioning of inverted uterus (some of the following steps/tasks should be carried out simultaneously)				
Step/Task	**2**	**1**	**0**	**Comments**
Task 1: Rapid assessment				
1.1 Reviews delivery records or takes quick history of delivery (birth attendant, problems during delivery of baby or placenta) (if home delivery), history of abdominal pain, bleeding				
1.2 Puts on personal protective barriers				
1.3 Washes hands with soap and water and air dries or dries with clean towel and puts on appropriate gloves				
1.4 Performs rapid evaluation of: ▪ woman's general condition ▪ vital signs (pulse, BP, respiration), level of consciousness, blood loss, skin colour, temperature ▪ rules out shock				
1.5 Palpates abdomen for uterus - Uterus not felt				
1.6 Examines the perineum - Inverted uterus seen at the vulva				
1.7 Informs the woman about the findings and what is going to be done and also informs her family				
Task 2: Getting ready				
2.1 Starts IV fluids (if not already started)				
2.2 Keeps supplies ready to manage shock				
2.3 Gives Tramadol 50-100 mg IM and diazepam 5 mg IV slowly (*do not mix in the same syringe)*				
Task 3: Performs manual correction				
3.1Changes gloves to long sterile gloves (covering up to elbow)				
3.2 Thoroughly cleanses the inverted uterus using an antiseptic solution				
3.3 Applies compression to the inverted uterus with a moist, warm, sterile towel until ready for the procedure				
3.4 Performs manual correction as follows: ▪ Wearing sterile long gloves (covering up to elbow), grasp the uterus and push it through the cervix toward the umbilicus to normal position, using the other hand to support the uterus.				

IT IS IMPORTANT THAT THE PART OF THE UTERUS THAT CAME OUT LAST (THE PART CLOSER TO THE CERVIX) GOES IN FIRST				
3.5 IF THE PLACENTA IS STILL ATTACHED, performs manual removal after correction				
3.6 If the procedure fails, facilitates urgent referral (informs the woman and her family)				
Task 4: Steps after repositioning				
4.1 Starts oxytocin infusion (20 units) in 500 ml of normal saline or Ringer's lactate, 10 drops per minute				
4.2 If evidence of haemorrhage is suspected, ▪ increases the infusion to 60 drops per minute ▪ arranges for referral ▪ Informs the woman and her family and clarifies concerns				
Task 5: post procedure tasks				
5.1Immerses both gloved hands briefly in a container filled with 0.5% chlorine solution; then remove gloves by turning them inside out: ▪ If disposing of gloves (examination gloves and surgical gloves that will not be reused), places in a plastic bag or leak proof, covered waste container; ▪ If reusing surgical gloves, submerges in 0.5% chlorine solution for 20 minutes for decontamination				
5.2 Washes hands thoroughly with soap and water and dry with a clean, dry cloth or air dry				
5.3 Gives single dose of prophylactic antibiotic Ampicillin 2 gm IV plus metronidazole 500 mg				
5.4 Give analgesics orally as needed				
5.5 Watches for signs of shock, bleeding				
5.6 Measures fundal height every half an hour				
5.7Measures Hb 2-3 hours after bleeding stops				

Repositioning should be done immediately as with passage of time the constriction ring around the inverted uterus becomes more rigid and uterus may become more engorged with blood.

Learning guide: Management of rupture of uterus

Rating scale
2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards

Learning guide on immediate management and preliminary care of ruptured uterus(some of the following steps/tasks should be carried out simultaneously)				
Step/Task	**2**	**1**	**0**	**Comments**
Task 1: Rapid assessment				
1.1 Reviews delivery records or takes quick history of delivery (birth attendant, problems during delivery of baby or placenta) (if home delivery), history of abdominal pain, bleeding				
1.2 Puts on personal protective barriers				
1.3 Washes hands with soap and water and air dries or dries with clean towel and puts on appropriate gloves				
1.4 Performs rapid evaluation of: ▪ woman's general condition ▪ vital signs (pulse, BP, respiration), level of consciousness, blood loss, skin colour, temperature ▪ rules out shock				
1.5 Palpates abdomen ▪ Distension, tenderness ▪ Feels the uterus: o Abnormal uterine contour o Easily palpable foetal parts ▪ Absent foetal movement or foetal heart				
1.6 Examines the perineum for bleeding				
Task 2: Stabilize and refer				
2.1 Catheterizes the bladder (after wearing sterile gloves)				
2.2 Starts IV fluids (normal saline or Ringer's lactate)				
2.3 Keeps supplies ready to manage shock				
2.4 Gives Tramadol 50-100 mg IM and diazepam 5 mg IV slowly (*do not mix in the same syringe)*				
2.5 Gives a single dose of Ampicillin 2gm IV				
2.5 Makes arrangements for referral.				
2.6 Informs the woman about findings and discusses with compassion the need for referral and likely treatment in the referral facility. Encourages the woman to ask questions and provides her emotional support. ▪ Informs the family about the findings and referral and likely treatment. ▪ If a blood donor is not identified in the complication readiness plan, identifies a donor to accompany the woman				
2.8 Monitors vital signs while waiting for referral				
Post referral advice in case of repair				
Because there is an increased risk of rupture with subsequent pregnancies, the option of permanent contraception needs to be discussed with the woman after the emergency is over				

Learning guide: Secondary postpartum haemorrhage

Rating scale
2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards

Learning guide on secondary postpartum haemorrhage (some of the steps may have to be carried out simultaneously)				
Step/Task	**2**	**1**	**0**	**Comments**
Task 1: Rapid assessment				
1.1 Reviews delivery records or takes quick history of delivery (birth attendant, problems during delivery of baby or placenta) (if home delivery), history of PROM, procedures done, history of fever, foul smelling discharge				
1.2 Puts on personal protective barriers				
1.3 Washes hands with soap and water and air dries or dries with clean towel and puts on appropriate gloves				
1.4 Performs rapid evaluation of: ▪ woman's general condition ▪ vital signs (pulse, BP, respiration), level of consciousness, blood loss, skin colour, temperature ▪ *rules out shock*				
1.5 Palpates abdomen ▪ tenderness ▪ feels the uterus: o Size (reduced as per normal standards)				
1.6 Examines the perineum: ▪ for bleeding and discharge ▪ cervical os dilated or not				
1.7 If bleeding is heavy starts immediate management as follows: ▪ Starts IV fluids (normal saline or Ringer's lactate) ▪ Adds 20 units of oxytocin to the infusion				
1.8 If the cervix is dilated: ▪ Wears sterile gloves ▪ Cleans the perineum, vagina and cervix with antiseptic ▪ Does manual exploration to remove clots and placental fragments				
1.9 Starts Ampicillin 2 gm IV, followed by 1 gm 6 hourly, Gentamycin 5 mg/kg body weight IV/24 hours and Metronidazole 500 mg IV 8 hourly				
1.10 Makes arrangements for referral: ▪ if the involution of the uterus is not normal (based on the findings) ▪ if the cervix is not dilated ▪ if the bleeding continues after manual exploration				
1.11 Informs the woman about the findings and the need for referral. Encourages her to ask questions. ▪ Informs the family about the referral ▪ If a blood donor is not identified in the complication readiness plan, identifies a donor to accompany the woman				

Task 2: Post-assessment tasks				
2.1 Immerses both gloved hands briefly in a container filled with 0.5% chlorine solution; then remove gloves by turning them inside out: ▪ If disposing of gloves (examination gloves and surgical gloves that will not be reused), places in a plastic bag or leak proof, covered waste container; ▪ If reusing surgical gloves, submerges in 0.5% chlorine solution for 20 minutes for decontamination.				
2.2 Washes hands thoroughly with soap and water and dry with a clean, dry cloth or air dry				
Task 3: Continuing care at the CHC				
3.1 Monitors the woman's vital signs: ▪ Every 15 minutes for one hour; ▪ Then every 30 minutes for three hours.				
3.2 Monitors bleeding				
3.3 Palpates the fundus to ensure that the uterus remains contracted				
3.3 Stops IV fluids if bleeding has stopped and the vital signs are normal				
3.4 Continues antibiotics				
3.5 Removes urinary catheter when the woman is stable				
3.6Checks Hb after 3 hours (?24 hours) of stopping bleeding a. If less than 7g/dL, refers for further care ▪ Informs the woman about the need for referral and encourages her to ask questions ▪ Informs the family about the need for referral ▪ If a blood donor is not identified in the complication readiness plan, identifies a donor to accompany the woman b.If Hb is between 7-11 g/dL, ferrous sulphate (60 mg) and folic acid 400 mcg daily for 3 months				
Task 4: Advice on discharge				
6.1Advises the woman and her family members a. about danger signs such as increased or persistent bleeding, fever, foul smelling discharge, severe pallor b. good nutrition especially iron-rich foods				
6.2 Counsels for birth spacing (learning guide on post-partum family planning) focusing on the need to recovery of mother				
6.3 Schedules follow up visit within one week				

Learning guide: Education and counselling on care and future pregnancies

Rating scale
2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards

Learning guide on education and counselling on care and future pregnancies				
STEP/TASK	2	1	0	**Comments**
Task 1: Makes initial positive contact with the woman				
1.1 Greets the woman and asks her how she is feeling and how is the baby				
1.2 Reviews delivery records to obtain information about parity, previous obstetric history, and current obstetric history.				
1.3 Asks whether she would like her spouse to join in the discussion				
1.4 Assures privacy and confidentiality				
Task 2: Educating about care				
2.1 Informs about the risk of anaemia from blood loss and likely problems such as continued bleeding, breathlessness and tiredness. a. If diagnosed as anaemic and given treatment, encourages to continue as advised b. If Hb not checked, advises to get Hb check and appropriate care as advised c. Advises about iron-rich foods.				
2.2 Informs about signs and symptoms of intrauterine infection and return to health facility, if any fever, persistent pelvic pain and /or foul smelling discharge.				
2.3 Informs about keeping clean including perineal hygiene.				
2.4 Asks whether breastfeeding now or has intentions to breast feed and encourages to breastfeed. ▪ Tells about the importance of breast feeding for the baby and also in contraction of the uterus which will help in expelling clots and prevent infections.				
Task 3: Advises about future pregnancies				
3.1 Discusses importance of maternal recovery, neonatal development and the role of healthy spacing for at least 2-3 years. 3.2 Encourages the woman and her spouse to ask questions. 3.3 Asks about their plans for future pregnancies. ▪ If the woman had a ruptured uterus and was repaired, discuss the high risk of repeated rupture in the pregnancy and the need to avoid another pregnancy.				

3.4 Tells about likely return of fertility in 6 weeks even if menses has not returned or she is breast feeding and the need for contraception. **3.5 Advises on delaying sexual relationships due to the trauma to the genital tract from various procedures that was done to stop the bleeding.**				
Task 4: Addresses the woman's individual needs and preferences of contraceptives				
4.1 If the couple has used a contraceptive method, asks about the experience with the method. Complements the couple for using contraceptives 4.2 Enquires whether the couple have heard about other methods. Discusses all available methods of contraception; benefits and side effects. Discusses also the lactational amenorrhoea method. 4.3 Asks the woman whether she has preference for any method.				
4. Helps the woman to make an informed choice of a FP method				
4.1 Explains about the preferred method: ▪ What the method is ▪ Effectiveness ▪ Benefits ▪ Side effects ▪ Eligibility for use ▪ How to use				
4.2 Encourages the couple to ask questions and clarifies doubts.				
4.3 Advises the couple to return in six weeks to get the method. ▪ If the choice is permanent methods or as in the case of a repaired uterus, arranges for the couple to go to a referral facility.				
4.4 Records the information in the postpartum record as well as in the FP client card.				
4.5 Thanks the woman and advises her about return visit.				

Module evaluation

Module: Bleeding after childbirth

Please indicate your opinion of the course components using the following rating scale:

5. Strongly Agree
4. Agree
3. No opinion
2. Disagree
1. Strongly disagree

Course component	Rating
1.The discussions helped me to clarify elements related to basic care.	
2.The exercises were useful for learning about basic management of bleeding after childbirth.	
3.The role plays on interpersonal communication skills were helpful.	
4.The case studies were useful for practising clinical decision making.	
5.The time for skill practice in a simulated setting was sufficient.	
6.The supervised client practice within the limitations of time was sufficient.	
7.I am confident about managing bleeding after childbirth.	

PRIMARY POSTPARTUM HAEMORRHAGE

Vaginal bleeding in excess of 500 ml after childbirth is defined as postpartum haemorrhage. Increased vaginal bleeding may occur within the first 24 hours after childbirth (Primary PPH) or increased vaginal bleeding may occur 24 hours after childbirth (Secondary PPH). Post-partum haemorrhage is the most common cause of death during pregnancy and childbirth.

Active management of 3rd stage of labour reduces the incidence of PPH

PPH is considered if:

- Pad or cloth soaked in <5 min
- Constant trickling of blood
- delivered outside the health centre and still bleeding

Risk Factors: Identify early and transfer if concerned)

- Large Baby
- Precipitated labour
- Antepartum haemorrhage
- Prolonged Labour
- Grand Multipara
- Polyhydramnios
- Chorioamnionitis/foul smelling liquor
- Multiple pregnancy

Diagnosis of vaginal bleeding after childbirth

Common presenting symptoms	Signs and symptoms that may be present	Probable diagnosis
• Primary PPH [ab] Uterus soft and not contracted	Shock	Atonic uterus
• Primary PPH [ab]	Complete placenta Uterus contracted	Tears of cervix, vagina or perineum
• Placenta not delivered within 30 minutes after delivery	Primary PPH [ab] Uterus contracted	Retained placenta
• Portion of maternal surface of placenta missing or torn membranes with vessels	Primary PPH [ab] Uterus contracted	Retained placental fragments
• Uterine fundus not felt on abdominal palpation • Slight or intense pain	Inverted uterus apparent at vulva Primary PPH [a] (could be with no bleeding in complete inversion)	Inverted uterus
• Bleeding occurs more than 24 hours after delivery • Uterus softer and larger than expected for elapsed time since delivery	• Bleeding is variable (light or heavy, continuous or irregular) and foul-smelling • Anaemia	Delayed PPH
• Primary PPH [a] (bleeding is intra-abdominal and/or vaginal) • Severe abdominal pain (may decrease after rupture)	• Shock • Tender abdomen • Rapid maternal pulse	Ruptured uterus

Source: MCPC 2017 a-Bleeding within 24 hrs after childbirth b-Bleeding may be light if a clot blocks the cervix or if the woman is lying on her back

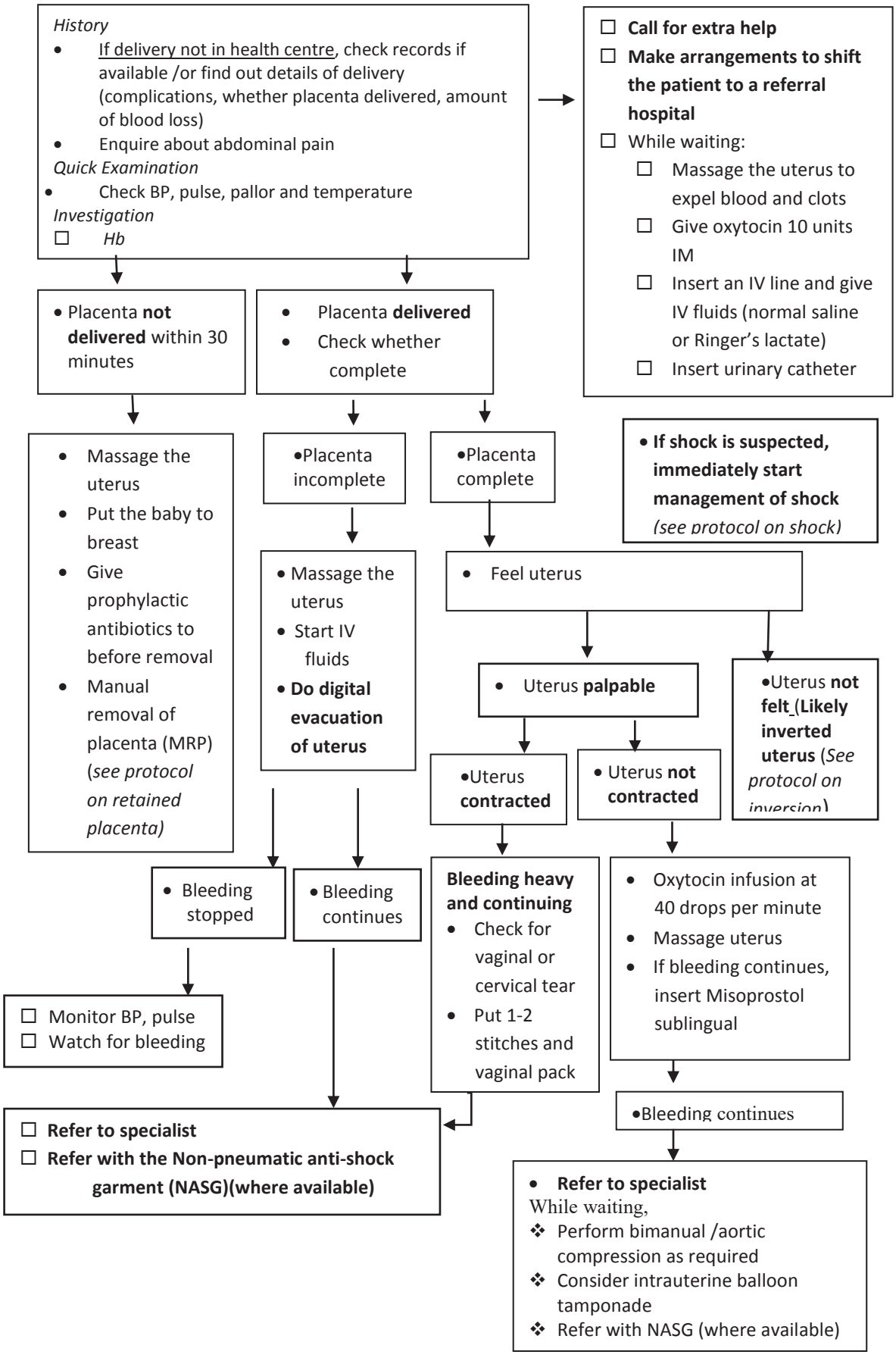
Bimanual compression of uterus

- Wearing sterile glove, insert a hand into the vagina and remove any blood clots from the lower part of the uterus or cervix
- Form a fist and place it into the anterior fornix and apply pressure against the anterior wall of the uterus.
- With the other hand, press deeply into the abdomen behind the uterus, applying pressure against the posterior wall of the uterus
- Maintain compression until bleeding is controlled and the uterus contracts.

Drugs

- Oxytocin infusion 20 units (in 1 Litre of NS/Ringers)
- Misoprostol 800 mcg sub-lingual

PRIMARY POSTPARTUM HAEMORRHAGE



RETAINED PLACENTA

Placenta not delivered within 30 minutes after delivery

Causes of retained placenta

- Trapped placenta - is when the placenta is detached/ separated but merely trapped behind a closed cervix.
- Adherent Placenta - is when the placenta is adherent to the uterine wall (associated with previous caesarean section, uterine surgery

Adherent placenta

A placenta may be adherent partially or completely. Partial adherence is often associated with partial separation and hence with bleeding. A completely adherent placenta does not give rise to bleeding and should be suspected with a well contracted uterus when placenta is retained and there is no bleeding

Manual removal of placenta (MRP)

- Inform woman about the procedure and why it is needed
- Start IV infusion with normal saline (if not already started)
- Catheterise bladder if needed or make sure that it is empty
- Give diazepam 5 mg IV (dilute with distilled water) slowly
- Give a single dose of ampicillin 2 g IV plus metronidazole 500mg IV
- Give Injection Tramadol 50mg IM
- Put the woman in lithotomy position
- Change gloves to wear a sterile long glove covering the forearm (if available) or wear
- Hold the umbilical cord with a clamp. Pull the cord gently until it is parallel to the floor
- Insert the other hand into the vagina and up into the uterus
- Let go of the cord and move the hand up over the abdomen in order to support the fundus of the uterus and to provide counter –traction during removal to prevent inversion of the uterus
- Move the fingers of the hand in the uterus laterally until the edge of the placenta is located
- If the cord has been detached previously, insert a hand into the uterine cavity; explore the uterine cavity until a line of cleavage is identified between the placenta and the uterine wall
- Detach the placenta by using the edge of the hand to gradually make a space between the placenta and the uterine wall
- Hold the placenta and slowly withdraw the hand from the uterus, bringing the placenta with it.
- With the other hand, continue to provide counter traction to the fundus by pushing it in the opposite direction of the hand that is being withdrawn
- Palpate the inside of the uterine cavity to ensure that all placental tissue has been removed
- Give oxytocin 20 units in IV fluid / 1 litre at 60 drops per minute
- Continue massaging the uterus to encourage contraction
- Examine the uterine surface of the placenta for completeness

➢ If incomplete, **refer to a specialist for further management** as very adherent pieces may lead to heavy bleeding. **Monitor BP and pulse while transferring**

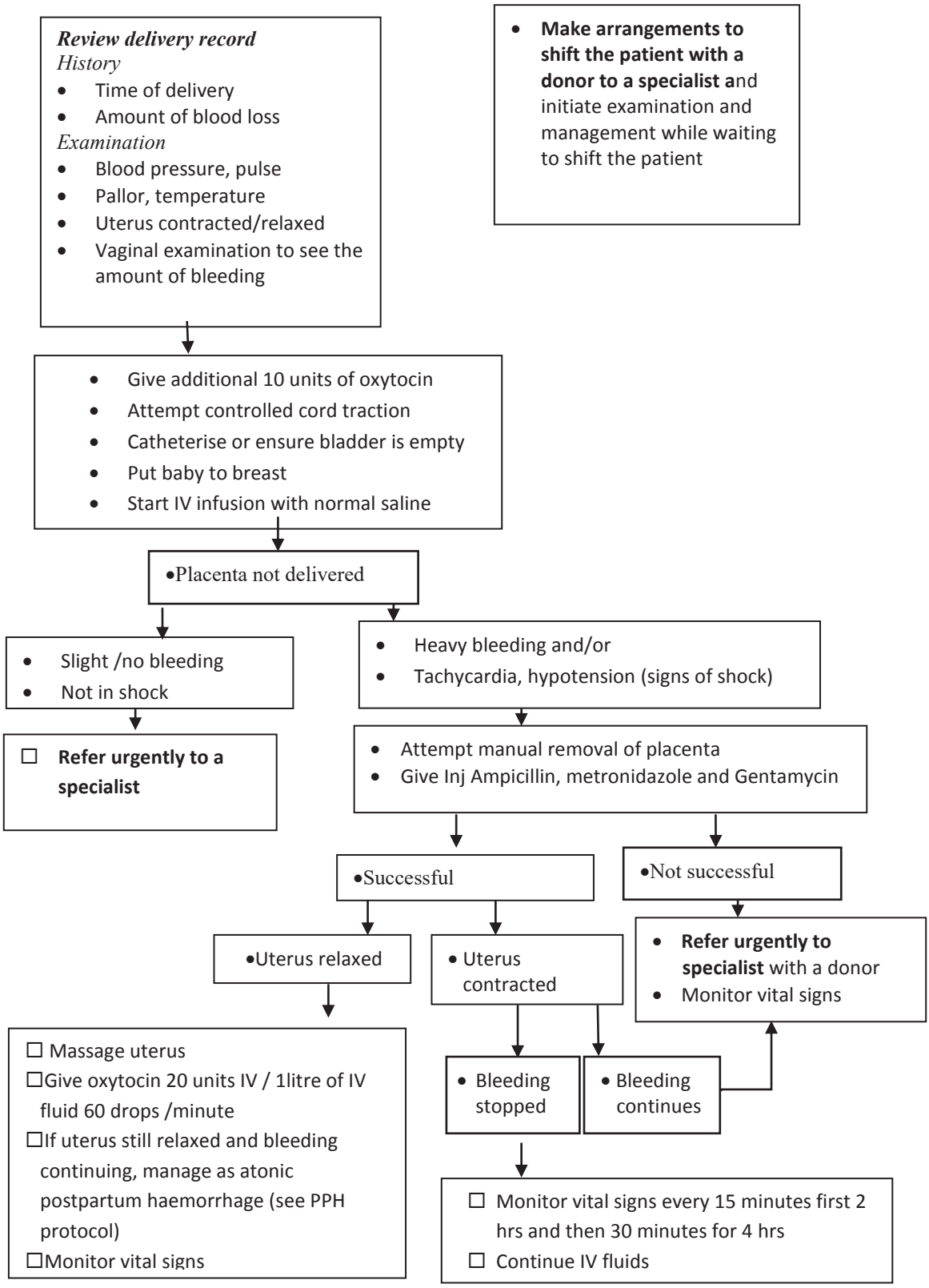
- **Monitor vital signs and bleeding every 15 minutes for first 2 hours and then every 30 minutes for next 4 hours.**

Antibiotics

- Ampicillin 2 g I/V then 1 gm IV 6 hourly
- Gentamicin 5 mg/kg body weight IV / 24 hrs
- Metronidazole 500 mg I/V 8 hourly

Complications of manual removal of placenta: Haemorrhage, perforation of uterus and sepsis

RETAINED PLACENTA



RUPTURED UTERUS

A ruptured uterus may be suspected during delivery or after delivery

Risk Factors

- Obstructed labour
- Transverse lie
- Previous scarred uterus
- Inappropriate use of oxytocin or prostaglandin
- Grand multipara
- Putting extra pressure on fundus at the time of delivery
- Foetal malformation

Diagnosis

- **Generalised continuous abdominal discomfort following strong contractions and pain followed by sudden relief of pain for half an hour**
- Bleeding intra-abdominal or vaginal)
- Shock (may or may not be present)
- Abdominal distension
- **Abnormal uterine contour**
- Tender abdomen
- Easily palpable foetal parts
- Absent foetal heart sound
- Rapid maternal pulse
- Pallor

Analgesics and antibiotics
Tramadol 100 mg IM
Ampicillin 2gm IV

Differential diagnosis

Presenting symptom/typically present	Sometimes present	Probable diagnosis
• Palpable contraction • Blood stained mucus discharge or watery discharge after 37 weeks	• Cervical dilation and effacement • Light vaginal bleeding	Possible term labour
• Intermittent or constant abdominal pain • Bleeding after 22weeks of pregnancy	• Shock • Tense/tender uterus • Decreased/absent foetal movements	Abruptio placenta
• Severe abdominal pain • Bleeding intra-abdominal or vaginal	• Shock • Abdominal distension • Abnormal uterine contour • Tender abdomen • Easily palpable foetal parts • Absent foetal movements and foetal hear sound	Ruptured uterus

RUPTURED UTERUS

Review ANC and delivery records

History

- LMP/months of pregnancy
- Abdominal pain
- Duration of labour
- Malpresentation
- Previous scar on the uterus
- History of treatment outside

General physical examination

- Pulse
- BP
- Mucus membranes (for pallor)

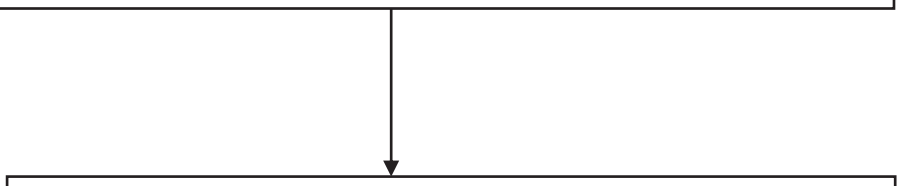
Abdomen

- Uterine contour
- Foetal parts
- Foetal heart sound
- Iliac fossa for mass

Local examination

- Look for vaginal bleeding
- Vaginal examination

If in shock, treat as in in protocol



☐ Start IV fluids: Ringer's lactate
☐ Analgesics
☐ Antibiotics
☐ Catheterise the bladder
☐ Counsel mother and family
☐ **Refer to a specialist with donor**
☐ Monitor BP, Pulse and watch for bleeding
☐ Written consent

☐ Because there is an increased risk of rupture with subsequent pregnancies, the option of permanent contraception needs to be discussed after the emergency is over

INVERSION OF UTERUS

The uterus is said to be inverted if it turns inside –out during the delivery of the placenta and it is a life-threatening complication.

Uterine inversion is usually associated with excessive cord traction *(usually without counter-traction by stabilizing the fundus*), fundal pressure, abnormal attachment of placenta, precipitate labour etc.
PREVENTION by correct management of third stage of labour and controlled cord traction of delivery of placenta is important.

Clinical features

- Severe abdominal pain during delivery of the placenta
- Uterine fundus not felt on abdominal palpation
- Woman has features of shock
- Mass in the vagina
- Postpartum haemorrhage
- Placenta may or may not be delivered

Manual replacement of the inverted uterus

> Repositioning should be done immediately as with passage of time the constriction ring around the inverted uterus becomes more rigid and uterus may become more engorged

- Start IV fluids (if not already started).
- Keep all drugs and other supplies ready to manage shock.
- If the woman is in severe pain, give Tramadol 50-100 mg IM and diazepam 5 mg IV slowly (do not mix in the same syringe)
- Wearing sterile gloves, grasp the inverted uterus and push it through the cervix in the direction of the umbilicus to its normal anatomic position, using the other hand to stabilize the uterus
- It is important that the part of the uterus that came out last (the part closest to the cervix) goes in first
- If the placenta is still attached, manually remove the placenta after correction

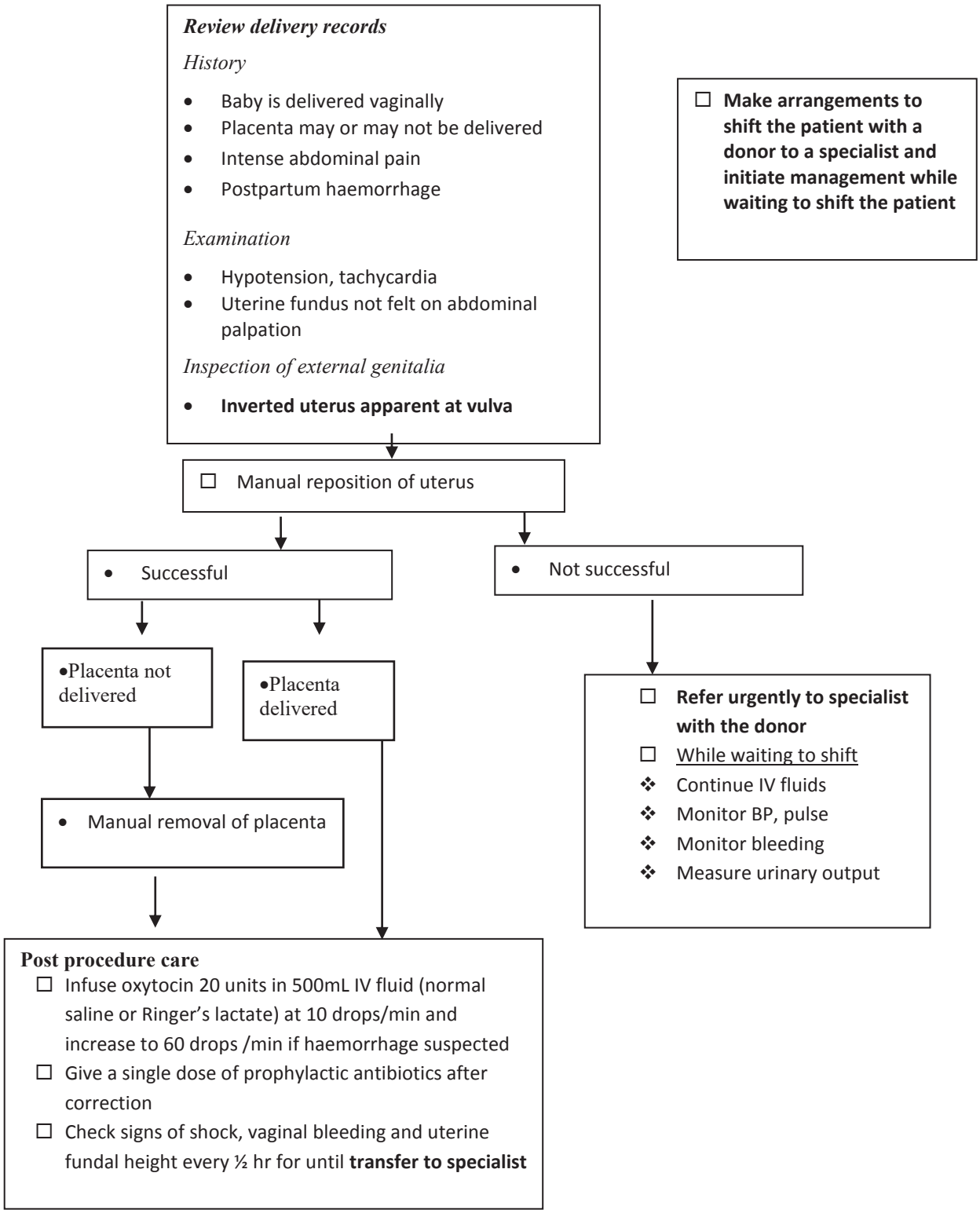
Antibiotics

- Give a single dose of ampicillin 2 g IV plus metronidazole 500mg

Watch

- for signs of shock
- for bleeding
- fundal height every half an hour.

INVERSION OF UTERUS



SECONDARY POST-PARTUM HAEMORRHAGE

Bleeding occurs 24 hours after delivery.

Bleeding is considered heavy if cloth or pad is soaked in less than 5 minutes.

Diagnosis

- Uterus softer and larger than expected for elapsed time since delivery (sub-involution)

Prolonged or delayed PPH may be a sign of endometritis

History

- Events in pregnancy such as pre-labour rupture of membranes (PROM)
- Duration of labour: Prolonged
- Time of delivery: How many days ago the baby was delivered
- Details about delivery: Any history of difficult delivery, operative delivery
- Amount of blood loss: Estimate amount of blood lost
- Expulsion of placenta: Was placenta delivered completely or not
- Any manipulation: To speed up delivery or to stop bleeding
- Any surgery performed
- History of foul smelling discharge after delivery

Examination

- General condition
- BP, pulse, temperature: for shock or infection
- Skin and mucous membrane for anaemia
- Hb, blood grouping & cross matching
- Foul smelling vaginal discharge

Per abdominal exam

To ascertain whether the uterus is contracted or not

Per vaginal exam

Any foul-smelling discharge
If cervix is dilated explore by hand to remove clots and placental fragments

Antibiotics

Antibiotics must be given

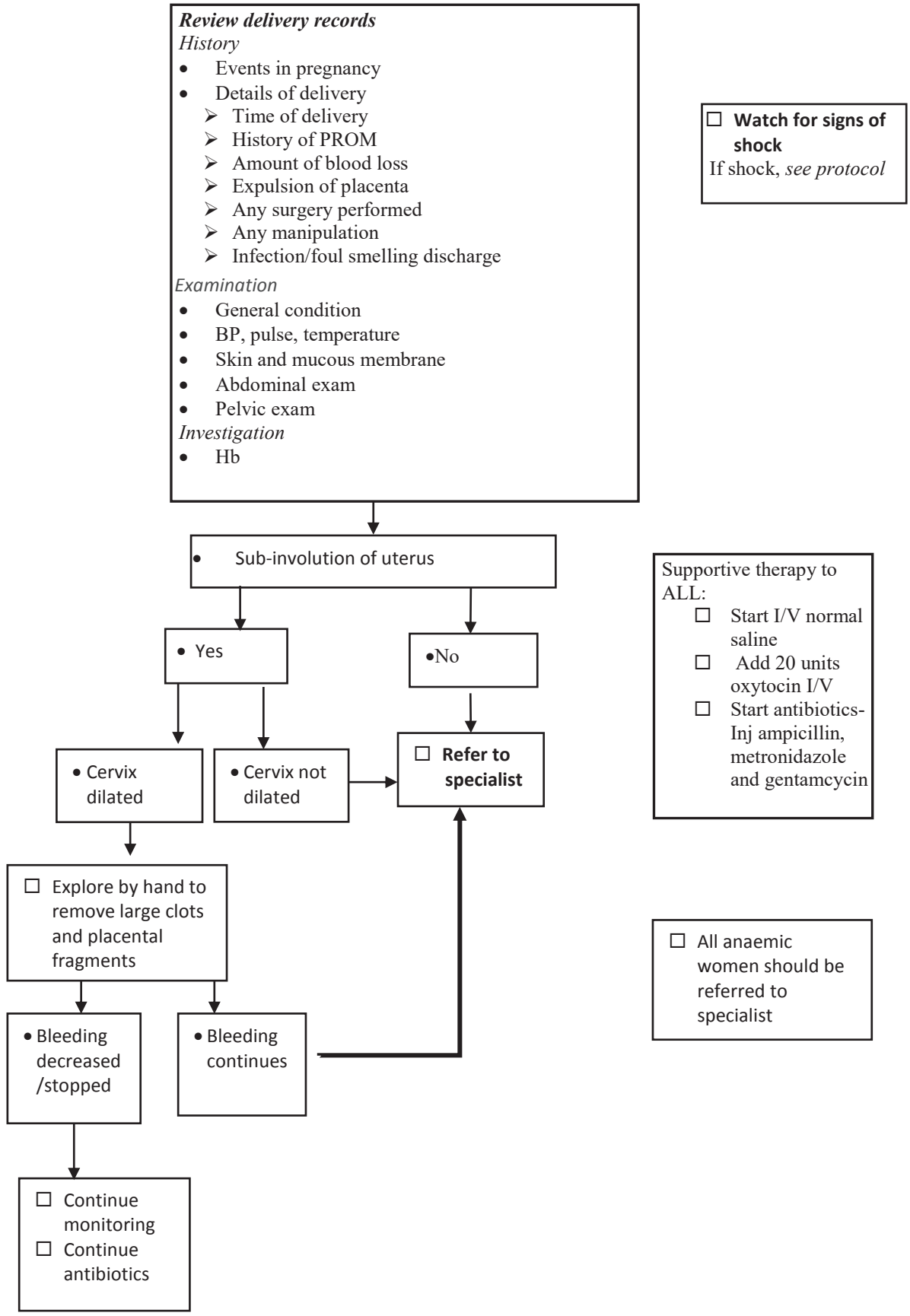
- Ampicillin 2 g I/V then 1 gm IV 6 hourly
- Gentamicin 5 mg/kg body weight IV / 24 hrs
- Metronidazole 500 mg I/V 8 hourly

Follow up care

Counselling and education on:

- FP
- Immunization
- Iron Supplementation
- Recording and reporting

SECONDARY POST-PARTUM HAEMORRHAGE



ANSWER KEY –Bleeding after childbirth
Knowledge assessment questionnaire

Instructions: **Mark the single best answer**

1. Postpartum haemorrhage is defined as
   a) vaginal bleeding of any amount after childbirth
   b) sudden bleeding after childbirth
   c) vaginal bleeding in excess of 300 mL after childbirth
   d) **vaginal bleeding in excess of 500 mL after childbirth**

2. Immediate postpartum haemorrhage can be due to
   a) atonic uterus
   b) trauma to the genital tract
   c) retained placenta
   d) **all of the above**

3. Tears of the cervix, vagina or perineum should be suspected when there is immediate postpartum haemorrhage and
   a) **a complete placenta and a contracted uterus**
   b) an incomplete placenta and a contracted uterus
   c) a complete placenta and an atonic uterus
   d) an incomplete placenta and an atonic uterus

4. If the uterus is inverted following childbirth
   the uterine fundus is not felt on abdominal palpation
   a) there may be slight or intense pain
   b) the inverted uterus may be apparent at the vulva
   c) **all of the above**
   d)
5. Delayed postpartum haemorrhage is characterized by
   a) **bleeding that occurs more than 24 hours after childbirth**
   b) bleeding that is uniform and heavy
   c) bleeding that increases with breastfeeding
   d) bleeding that stops and starts irregularly

6. Continuous slow bleeding or sudden bleeding after childbirth
   a) should be monitored closely for 24 hours before treatment
   b) should be measured accurately and treated when more than 500 mL of blood is lost
   c) **requires early and aggressive intervention**
   d) does not require oxytocic drugs

7. If the uterus is ruptured during childbirth
   a) **bleeding is immediate with severe abdominal pain**
   b) bleeding is heavy
   c) bleeding is delayed
   d) only on the multipara

8. If an atonic uterus fails to contract after fundal massage, the next step is to
   a) **give additional oxytocic drugs**
   b) perform bimanual compression of the uterus
   c) start an IV infusion
   d) explore the uterus for remaining placental fragments

9. If a retained placenta is undelivered after 30 minutes of oxytocin administration and controlled cord traction and the uterus is contracted
   a) more aggressive controlled cord traction should be attempted
   b) controlled cord traction and fundal pressure should be attempted
   c) **manual removal should be attempted**
   d) ergometrine should be given

10. If manual removal of the placenta is performed
   a) give ergometrine prior to the procedure
   b) give antibiotics 24 hours after the procedure
   c) place one hand in the uterus and use the other hand to apply traction on the cord
   d) **place one hand in the uterus and one hand on the abdomen to provide counter traction on the uterine fundus**

12. Bimanual compression of the uterus involves
   a) **placing a gloved fist into the anterior fornix and applying pressure against the anterior wall of the uterus, while the other hand presses against the posterior wall of the uterus through the abdomen**
   b) placing a gloved fist into the anterior fornix and applying pressure against the posterior wall of the uterus, while the other hand presses against the anterior wall of the uterus through the abdomen
   c) placing both hands on the abdomen and applying pressure downward toward the spine
   d) placing both hands on the abdomen and applying pressure upward toward the diaphragm

13. When performing abdominal aortic compression to control postpartum hemorrhage, the point of compression is
   a) just below and slightly to the right of the umbilicus
   b) just below and slightly to the left of the umbilicus
   c) just above and slightly to the right of the umbilicus
   d) **just above and slightly to the left of the umbilicus**

14. When performing manual removal of the placenta, if the placenta does not separate from the uterine surface by gentle lateral movement of the fingertips at the line of cleavage

   a) uterine inversion should be suspected
   b) **placenta accreta should be suspected**
   c) abruptio placentae should be suspected
   d) uterine rupture should be suspected

15. If the cervix is dilated in the case of delayed (secondary) postpartum hemorrhage
   a) **manual exploration of the uterus should be performed to remove large clots and placental fragments**
   b) manual vacuum aspiration should be performed to evacuate the uterus
   c) dilatation and curettage should be performed to evacuate the uterus
   d) none of the above

Exercise 1

Diagnosis of vaginal bleeding after childbirth

Common presenting symptoms	Signs and symptoms that may be present	Probable diagnosis
• Primary PPH[a,b] Uterus soft and not contracted	• Shock	Atonic uterus
• Primary PPH [a,b]	• Complete placenta • Uterus contracted	Tears of cervix, vagina or perineum
• Placenta not delivered within 30 minutes after delivery	• Primary PPH [a,b] • Uterus contracted	Retained placenta
• Portion of maternal surface of placenta missing or torn membranes with vessels	• Primary PPH[a,b] • Uterus contracted	Retained placental fragments
• Uterine fundus not felt on abdominal palpation • Slight or intense pain	• Inverted uterus apparent at vulva • Primary PPH[a,c]	Inverted uterus
• Primary PPH[a] (bleeding is intra-abdominal and/or vaginal) • Severe abdominal pain (may decrease after rupture)	• Shock • Tender abdomen • Rapid maternal pulse	Ruptured uterus
• Bleeding occurs more than 24 hours after delivery • Uterus softer and larger than expected for elapsed time since delivery	• Bleeding is variable (light or heavy, continuous or irregular) and foul-smelling • Anaemia	Secondary PPH

a: bleeding the first 24 hr of delivery
b: bleeding may be light if the clots block the cervix or if the woman is lying on her back
c: there may be no bleeding with complete inversion

Case study 1: Vaginal bleeding after childbirth

Directions

Read and analyse 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 case study. When all groups have finished, the case studies and the answers each group has developed will be discussed.

Case study

Mrs. Ann is 20 years old. She gave birth to a full-term newborn 2 hours ago at home. Her birth attendant was the local traditional birth attendant (TBA), who has brought Mrs. Ann to the health center because she has been bleeding heavily since childbirth. The duration of labour was 12 hours, the birth was normal and the placenta was delivered 20 minutes after the birth of the newborn.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

13. What will you include in your initial assessment of Mrs. Ann, and why?
    - Mrs. Ann and the TBA should be greeted respectfully and with kindness.
    - Listen to the information provided by the TBA. Inform Mrs. Ann, the TBA and family what is going to be done and respond to their queries in a calm and reassuring manner.
    - A rapid assessment should be done to check for the following signs to determine if she is in shock and in need of emergency treatment/resuscitation: rapid, weak pulse; systolic blood pressure less than 90 mm Hg; pallor; sweatiness or cold, clammy skin; rapid breathing; confusion. She should also be assessed to determine whether the uterus contracted well after the delivery of the placenta and whether the placenta and membranes were complete.

    - What particular aspects of Mrs. Ann's physical examination will help you make a diagnosis immediately or identify her problems/needs, and why?
    - Mrs. Ann's uterus should be checked immediately to see whether it is contracted. If the uterus is contracted and firm, the most likely cause of bleeding is genital trauma. If the uterus is not contracted and the placenta is complete, the most likely cause of bleeding is an atonic uterus. The most important causes of bleeding can be suspected by palpating the uterus. If the uterus is not contracted, uterine massage should be started immediately.

    - Mrs. Ann's perineum, vagina and cervix should be carefully examined later for tears.

14. What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. Ann, and why?
    - None at present

Diagnosis (Identification of Problems/Needs)

You have completed your rapid assessment of Mrs. Ann, and your main findings include the following:

Mrs. Ann's pulse rate is 100 beats/minute, her blood pressure is 120/70 mm Hg, her respiration rate is 12 breaths/minute and her temperature is 36.8º C.
Her uterus is soft and does not contract with fundal massage. She has heavy, bright red vaginal bleeding.
The TBA says that she thinks the placenta and membranes were complete.

15. Based on these findings, what is Mrs. Ann's diagnosis, and why?
    - Mrs. Ann's symptoms and signs (e.g., immediate postpartum haemorrhage, uterus soft and not contracted) are consistent with atonic uterus.

Care provision (Planning and Intervention)

16. Based on your diagnosis, what is your plan of care for Mrs. Ann, and why?

- Call for help/assistance, as many things have to be done simultaneously. Mrs. Ann should **not** be left unattended.
- Uterine massage should continue.
- Oxytocin 10 units should be given IM to help the uterus contract, and uterine massage should continue.
- Start I V fluids (normal saline or Ringer's lactate)
- Catheterise

Evaluation

Ten minutes after the initiation of treatment, however, she continues to have heavy vaginal bleeding. Her pulse is 110 beats/minute and her blood pressure 100/60 mm Hg.

17. Based on these findings, what is your continuing plan of care for Mrs. Ann, and why?

- Watch out for signs of shock
- If the uterus does not contract:
  - Give oxytocin infusion 20 units at the rate of 60 drops per minute.
  - If bleeding still continues, give misoprostol 800 mcg sub-lingual.
  - If still bleeding, make arrangements for referral.
  - While waiting, do a bimanual compression or aortic compression or consider balloon tamponade.
  - Refer with non-pnuematic anti-shock garment (NASG) if available.
- If the uterus is contracted:
  - Rule out vaginal or cervical tear.
  - Put 1-2 stiches and vaginal pack and refer NASG if available.
- The steps taken to manage the complication should be explained to Mrs. Ann, she should be encouraged to express her concerns, listened to carefully, and provided emotional support and reassurance.
- If not already identified in the complication readiness plan, identify a donor to go with Mrs. Ann.
- The steps taken for continuing management of the complication should be explained to Mrs. Ann, she should be encouraged to express her concerns, listened to carefully, and provided continuing emotional support and reassurance.
- Communication about Mrs. Ann's condition should be maintained between the health center (referring facility) and the district hospital (referral facility), particularly about her healthcare needs following discharge from hospital.

Case study 2: Vaginal bleeding after childbirth

Directions

Read and analyse 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 case study. When all groups have finished, the case studies and the answers each group has developed will be discussed.

Case study

Mrs. Beth is a 30-year-old, para three. She gave birth at the health center to a full-term healthy newborn weighing 3.2 kg. Active management of labour was practised after the birth of the newborn. The placenta was not delivered for 30 minutes after the delivery.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

18. What will you include in your initial assessment of Mrs. Beth, and why?
    - Mrs. Beth should be told about the problem and what is going to be done. Her queries must be answered in a calm and reassuring manner. Her family also should be kept posted.
    - Rapid assessment should be done for signs of shock (rapid, weak pulse, systolic BP less than 90mm Hg, pallor, sweatiness and rapid breathing)

19. What particular aspects of Mrs. Beth's physical examination will help you make a diagnosis immediately or identify her problems/needs, and why?
    - Uterus should be checked immediately to see whether is contracted. If the uterus is contracted and no bleeding, it is likely to be an adherent placenta.
    - Lower abdomen should be checked to rule out full bladder as a full bladder could delay the delivery of the placenta.
    - Vaginal examination should be done to check the amount of bleeding.
20. What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. Beth, and why?
    - None at this stage

Diagnosis (Identification of Problems/Needs)

You have completed your assessment of Mrs. B. and your main findings include the following:

Mrs. B.'s pulse rate is 88 beats/minute, her blood pressure is 110/80 mm Hg, her respiration rate is 14 breaths/minute and her temperature is 37º C.
Her uterus is firm and well contracted. Her bladder is not full. There is heavy bleeding per vagina.

21. Based on these findings, what is Mrs. Beth's diagnosis, and why?
    Retained placenta

Care provision (Planning and Intervention)

22. Based on your diagnosis, what is your plan of care for Mrs. Beth, and why?
    - Monitor for signs of shock
    - Give additional 10 units of oxytocin
    - Attempt controlled cord traction
    - Put the baby to breast
    - Ensure that the bladder is empty (catheterise if the bladder is full)
    - Inform the woman and her relatives about the problem and what is going to be done.
    - Start IV fluids with normal saline (if not already started)
    - Prepare for manual removal of placenta

Evaluation

After half an hour after manual removal of placenta, bleeding has not stopped.

23. Based on these findings, what is your continuing plan of care for Mrs. Beth, and why?
    - Continue monitoring for signs of shock
    - Feel the uterus.
    - If not contracted:
        - If not contracted, massage the uterus
        - Continue oxytocin infusion
        - If still bleeding, give misoprostol 800 mcg sub-lingual
        - Refer if bleeding continues
    - If contracted and bleeding stopped, monitor vital signs
    - If contracted and bleeding not stopped, refer urgently.

Case study 3: Vaginal bleeding after childbirth

Directions

Read and analyse 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 case study. When all groups have finished, the case studies and the answers each group has developed will be discussed.

Case study

Mrs. Alison is 20 years old. She gave birth at the district hospital 6 days ago to a healthy newborn, with no apparent complications. She has come back to the hospital today complaining that she feels weak, light-headed and generally unwell. She says that she has vaginal bleeding equal to a heavy period.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

1. What will you include in your initial assessment of Mrs. Alison, and why?
   - Mrs. Alison should be greeted respectfully and with kindness.
   - She should be told what is going to be done and listened to carefully. 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: her temperature, pulse, respiration rate and blood pressure should be taken check for signs of shock, and she should be asked about changes in the colour, amount and odour of lochia since birth.
   - Mrs. Alison's hospital record should be checked for information about amount of blood loss immediately after childbirth, completeness of the placenta, and genital trauma.

2. What particular aspects of Mrs. Alison's physical examination will help you make a diagnosis or identify her problems/needs, and why?
   - Mrs. Alison's uterus should be checked immediately to see whether it is contracted (a uterus that is not contracted would suggest atonic uterus, whereas if the uterus is well contracted, genital trauma may be the cause of bleeding).
   - Her perineum, vagina and cervix should be examined carefully to detect tears.
   - The amount, colour and odour of Mrs. Alison's lochia should be checked.
   - Conjunctival and palmar pallor should be checked for signs of anaemia.

3. What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. Alison, and why?
   - A haemoglobin test should be done, as Mrs. A. has vaginal bleeding that is heavier than it should be, as well as signs that suggest anaemia (weak and light-headed).

Diagnosis (Identification of Problems/Needs)

You have completed your assessment of Mrs. Alison and your main findings include the following:

Mrs. Alison's pulse rate is 90 beats/minute, her blood pressure is 120/80 mm Hg, her respiration rate is 20 breaths/minute and her temperature is 37º C.
Her uterus is soft and almost to the level of her umbilicus. She has no signs of cervical, vaginal or perineal trauma. However, vaginal bleeding has become progressively heavier and Mrs. Alison's lochia now has a slightly offensive odour. She also has mild conjunctival and palmar pallor, and her haemoglobin is 9 g/dL.
Mrs. Alison's hospital record does not indicate blood loss after childbirth or whether the placenta was complete.

4. Based on these findings, what is Mrs. Alison's diagnosis, and why?

- Mrs. A.'s signs and symptoms (e.g., a uterus that is not well contracted, vaginal bleeding that is heavier than it should be at 6 days postpartum and anaemia) are consistent with delayed /secondary postpartum haemorrhage.

Care provision (Planning and Intervention)

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

- Mrs. Alison's uterus should be massaged, after she has emptied her bladder, to cause it to contract and expel retained blood clots.
- Oxytocin 20 units IV should be given.
- Antibiotics (Injection ampicillin, metronidazole and gentamycin should be started.
- If Mrs. Alison's cervix is dilated, manual exploration of the uterus should be carried out to remove large clots and placental fragments.
- If the cervix is not dilated, Mrs. Alison arrangements should be made for Mrs. Alison's referral.
- Mrs. Alison should be informed about the referral and should be encouraged to ask questions.
- The family should be informed about the referral and the reason for the same.
- If a blood donor has not been identified under the complication readiness plan, a donor should be identified and send to the referral hospital with Mra. Alison.
- Mrs. Alison's vital signs should be monitored, and her uterus should be checked to make sure that it remains firm and well contracted.
- Anaemia should be treated with ferrous sulfate or ferrous fumarate 60 mg by mouth plus folic acid 400 µg by mouth once daily for 6 months.

Evaluation

Two hours later Mrs. Alison is resting after having had placental remnants removed from her uterus. Her uterus is now well contracted and she has light vaginal bleeding. Her pulse is 82 beats/minute, her blood pressure is 120/80 mm Hg, her respiration rate is 20 breaths/minute and her temperature 37.2º C.

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

- Mrs. Alison should remain at the hospital for 24 hours to have her vital signs and vaginal bleeding monitored. Her uterus should be checked to make sure that it remains firm and well contracted. In addition, she should be encouraged to breastfeed her newborn.
- Before leaving the hospital, counselling should be provided about danger signs in the postpartum period (bleeding, abdominal pain, fever, headache, and blurred vision), compliance with iron/folic acid treatment and the inclusion in her diet of locally available foods rich in iron, and breastfeeding and newborn care. In addition, Mrs. Alison should be provided emotional support and reassurance.
- Arrangements should be made for her to have postpartum follow up care in 1 week.

Role Play: Communicating about postpartum complications

Discussion questions

1. How did the midwife explain the situation to Mrs. Arizona and the TBA and the need to transfer Mrs. Arizona to the referral hospital?
2. How did the midwife demonstrate emotional support and reassurance during her interaction with Mrs. Arizona and the TBA?
3. What verbal/nonverbal behaviours did Mrs. Arizona and the TBA use that would indicate they felt supported and reassured?

Answers

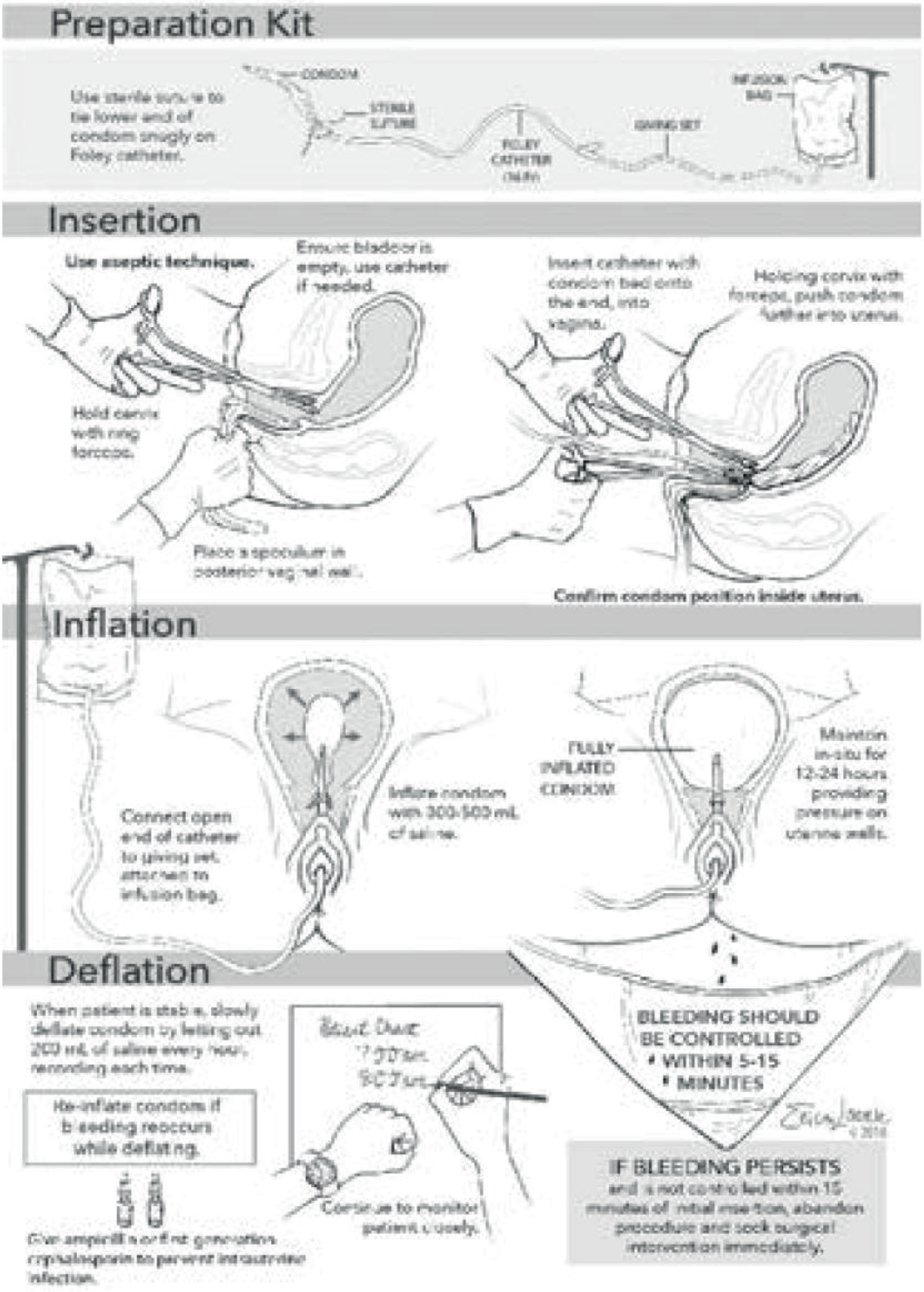
The following answers should be used by the teacher to guide discussion after the role play:

1. The midwife should speak in a calm and reassuring manner, using terminology that Mrs. Arizona will easily understand. Sufficient information should be provided to enable Mrs. Arizona. and the TBA to understand the situation, the need for transfer to the district hospital and what to expect once there.

2. The midwife should listen and express understanding and acceptance of Mrs. Arizona's feelings about her situation. For example, nonverbal behaviours, such as a squeeze of the hand or a look of concern (depending on the culture), could be enormously helpful in providing emotional support and reassurance for Mrs. Arizona. The midwife should interact with the TBA in a similar manner to reassure her and help allay feelings of guilt.

3. If the midwife demonstrates the verbal and nonverbal behaviours mentioned above, Mrs. Arizona is less likely to be frightened and more likely to accept the need for transfer to the district hospital. The TBA should feel reassured and therefore be in a better position to provide support for Mrs. Arizona.

Handout (Source MCPC 2017)

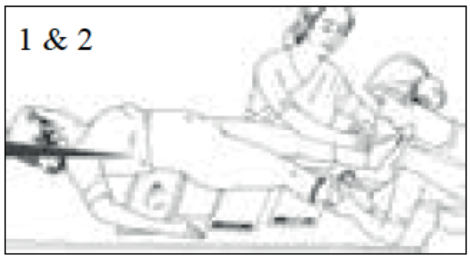


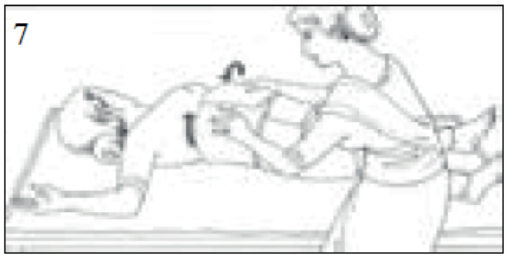
Handout (source MCPC 2017)

If available, apply a non-pneumatic anti-shock garment (NASG) as a temporizing measure until appropriate care is available. An NASG applies pressure to the lower body and abdomen, thereby stabilizing vital signs and resolving hypovolaemic shock. Follow the manufacturer's instructions below to apply and remove the NASG.

Application

1. Place the NASG under the woman, with the top edge at the level of her lowest rib.
2. Close segments 1 tightly around the ankles; check for snap sound.
3. Close segments 2 tightly around each calf; check for snap sound; leave the knee free so that the leg can bend.
4. Close segments 3 tightly around each thigh; check for snap sound; leave the knee free so that the leg can bend.
5. Close segment 4 around pelvis with lower edge at level of pubic bone.
6. Close segment 5 with pressure ball over the umbilicus.
7. Finish closing the NASG using segment 6.



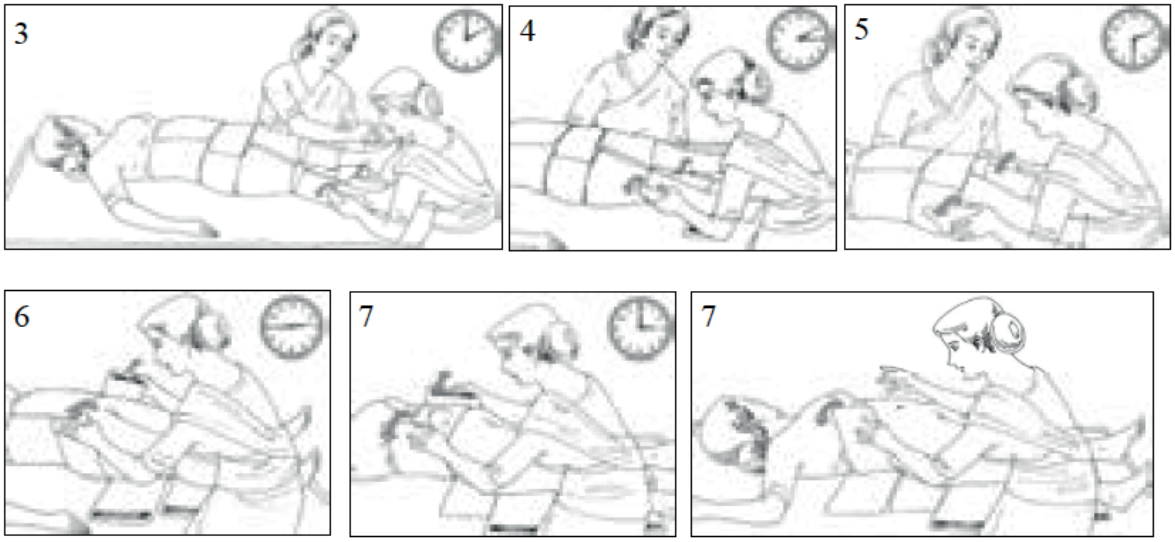


Note:

- Segments 1, 2 and 3 can be applied by two persons simultaneously.
- Segments 4, 5 and 6 should only be applied by one person.
- Make sure the woman can breathe normally with segment 6 in place.

Removal

1. Only remove the NASG when the woman has been stable for two hours (bleeding less than 50 mL per hour; pulse less than 100 beats per minute; blood pressure [BP] greater than 90/60 mmHg).
2. The NASG should only be removed by clinicians who have been trained to do so.
3. Take pulse and BP. Confirm that both are stable. Simultaneously remove segments 1 from around both ankles. Wait 15 minutes. Take pulse and BP. If no change:
4. Simultaneously remove segments 2 from around both calves. Wait 15 minutes. Take pulse and BP. If no change:
5. Simultaneously remove segments 3 from around both thighs. Wait 15 minutes. Take pulse and BP. If no change:
6. Remove segment 4 from around pelvis. Wait 15 minutes. Take pulse and BP. If no change:
7. Simultaneously remove segments 5 and 6 from around abdomen. Wait 15 minutes before allowing the woman to sit up.



Caution: If BP falls by 20 mm/HG or pulse increases by 20 bpm after any segment is removed, rapidly replace all segments in any order and consider the need for more saline or blood transfusion.

Adapted from *WHO Compendium of Innovative Health Technologies for Low-Resource Settings*, 2015.

Clinical simulation scenarios

Scenario (Information provided and questions asked by the teacher)	***Key Reactions/Responses (Expected from participants)***
1. Mrs. Melania is 26 years old and delivered a healthy baby girl in a health centre. The midwife performed active management of third stage of labour. The placenta did not deliver for 30 minutes. There was no bleeding. c. What is your diagnosis and why d. What will you do?	• ***Likely adherent placenta*** **(as no signs of separation)** • *Management* ➢ *Makes arrangements to shift the woman to a referral hospital as it will not be possible to manage the case in a CHC* ➢ *Gives 10 units of oxytocin* ➢ *Attempts controlled cord traction* ➢ *Ensures that the bladder is empty* ➢ *Puts the baby to breast* ➢ *Starts IV infusion with normal saline* ➢ *Monitors BP and pulse* ➢ *Informs Mrs. Melania and her family about the problem and referral.* ➢ *If not already identified in the complication readiness plan.*
2. Mrs. Elana is 30 years old, gravida 4, was delivered in a health centre by a midwife. A live baby was born. While trying to deliver the placenta, intense pain was felt and the woman was perspiring intensely. On examination, fundus could not be felt in the abdomen and was found at the vulva. The placenta was not delivered. • What is your diagnosis? • What are the immediate steps you will take? • What are the subsequent management steps you would follow?	• ***Inversion of the uterus*** • *Immediate steps:* ➢ *Does rapid assessment for ruling out shock* ➢ *Starts IV fluids* ➢ *Gives Tramadol 50-100 mg IM and diazepam 5m IV slowly (using separate syringes)* ➢ *Informs Mrs. Elana about the problem in a reassuring manner and what is going to be done.* ➢ *Informs the family about the problem and what is going to be done.* ➢ *Starts manual repositioning of the uterus* • *Next steps* ➢ *Manually removes the placenta* ➢ *Gives Oxytocin infusion (20 units in normal saline or ringer lactate) at 10 drops per minute and increases to 60 drops per minute.* ➢ *Give single dose of prophylactic antibiotic after correction (Ampicillin 2 gm IV and metronidazole 500 mg IV)* ➢ *Continue to watch for signs of shock* ➢ *Make arrangements to refer the case* ➢ *Inform Mrs. Elana and her family about the need for referral.*

Scenario (Information provided and questions asked by the teacher)	***Key Reactions/Responses (Expected from participants)***
***Discussion Question 1**: How do you know when a woman is in shock?*	• *Expected Responses: Pulse greater than 110 beats/minute; systolic blood pressure less than 90 mm Hg; cold, clammy skin; pallor; respiration rate greater than 30 breaths/ minute; anxious and confused or unconscious*
3. Mrs. Suzan, 32 years old, gravida 2, was in labour for about 12 hours and was being looked after by the local midwife. She was brought to the hospital with severe abdominal pain and was cold and clammy. She bled little and had feeling of fainting. Her blood pressure was 90/60 and her pulse was 120 per minute. • What is Mrs. Suzan's problem? • What are the immediate steps of management? • What is your diagnosis? • What are the subsequent management steps you would follow?	• *On rapid assessment, Mrs Suzan is in shock.* • *Starts an IV using a large bore needle for rapid infusion of fluids (1 L of normal saline or Ringer's lactate in 15–20 minutes)* • *Ensures that her airway is open* • *Gives her oxygen at 6–8 L/minute by mask or cannula.* • *Does a quick abdominal examination the following were the findings:* ➢ *Abdomen is distended* ➢ *Uterine contour appears abnormal* ➢ *Abdomen is very tender* ➢ *Foetal parts are easily palpable* ➢ *Foetal movements are absent and no foetal heart sound is heard* • *Mrs. Suzan has a ruptured uterus* • *Makes arrangements for referral* • *Gives Tramadol 100mg IM* • *Gives ampicillin 2 gm IV* • *Informs Mrs. Suzan about the condition and the need for referral* • *Informs the family members about the same and the need for referral* • *Monitors vital signs*
4. Mrs. Beth is 24 years old and has just given birth to a healthy baby girl after 7 hours of labour. Active management of the third stage was performed, and the placenta and membranes were complete. Approximately 30 minutes later, a nurse rushes to tell you that Mrs. B. is bleeding profusely. • What will you do?	• *Shouts for help to urgently mobilize all available personnel.* • *Makes a rapid evaluation of Mrs. B.'s general condition, including vital signs (temperature, pulse, blood pressure and respiration rate), level of consciousness, colour and temperature of skin* • *Explains to Mrs. B. what is going to be done, listens to her and responds attentively to her questions and concerns.* • *Informs her family about the situation.*

SCENARIO (Information provided and questions asked by the teacher)	KEY REACTIONS/RESPONSES (Expected from participants)
5. On examination, you find the Mrs. Beth's blood pressure is 86/60 mm Hg and pulse 120 beats/minute and weak. Her skin is not cold and clammy. • What is Mrs. Beth's problem? • What will you do now?	• *Mrs. Beth is in shock from postpartum bleeding (Pulse greater than 110 beats/minute; systolic blood pressure less than 90 mm Hg; cold, clammy skin; pallor; respiration rate greater than 30 breaths/ minute; anxious and confused or unconscious)* • *Manages shock* ➢ *Positions her on her side* ➢ *Starts an IV using a large bore needle for rapid infusion of fluids (1 L of normal saline or Ringer's lactate in 15–20 minutes) with **10 units of oxytocin in separate IV*** ➢ *Ensures that her airway is open* ➢ *Gives her oxygen at 6–8 L/minute by mask or cannula.* ➢ *Catheterises the bladder* ➢ *Keeps her warm* ➢ *Elevates her legs* ➢ *Monitors her pulse, blood pressure, respiration and temperature* ➢ *Monitors intake and output* ➢ *Informs Mrs. Betha and her family about the situation*
6. After 5 minutes, Mrs. Beth's uterus is contracted, and she continues to bleed heavily. • What will you do now?	• *Examines the cervix, vagina and perineum for tears* • *Asks one of staff assisting to locate placenta and examines for missing pieces*
7. On further examination of the placenta, you find that it is complete. On examination of Mrs. Beth's cervix, vagina and perineum, you find a cervical tear. She continues to bleed heavily. • What will you do now?	• *Tells Mrs. B. what is happening, listens to what she has to say and provides reassurance* • *Puts 1-2 stitches and packs the vagina* • *Makes arrangements for referral* • *Informs Mrs. Beth about the problem in a calm and reassuring manner and the need for referral* • *Informs the family members about the problem and the need for referral* • *If not already identified a donor in the complication readiness plan, arranges for a donor to accompany Mrs. Beth* • *Monitors vital signs while waiting for the referral*
Discussion Question: What would you have done if examination of the placenta had shown a missing piece (placenta incomplete)?	• *Massages the uterus* • *Informs Mrs. Beth about the situation and what is going to be done* • *Performs digital evacuation of uterus* • *Feels the uterus to see whether getting contracted* • *Monitors bleeding* • *Monitors vital signs*

Handout 2 **MCPC 9-12**

EMOTIONAL AND PSYCHOLOGICAL SUPPORT IN OBSTETRIC AND NEWBORN EMERGENCIES

In every country and community in the world, pregnancy and childbirth are momentous events in the lives of women and families, and represent a time of intense vulnerability (White Ribbon Alliance, Respectful maternity Care: The Universal Tights of Childbearing Women, 2012). The concept of safe motherhood is usually restricted to physical safety, but childbearing is also an important rite of passage, which may have deep personal and cultural significance for a woman and her family. The notion of safe motherhood must be expanded beyond the prevention of morbidity and mortality to encompass respect for women's basic human rights, including women's autonomy, dignity, feelings, and choices and preferences, including the choice of companionship, whenever possible.

GENERAL PRINCIPLES OF COMMUNICATION AND SUPORT

Module 7

Management of obstetric shock

Training resource package for intrapartum and immediate post-partum care

Standard: Every woman who develops complications during labour and delivery receive evidence-based appropriate care including appropriate referral.

Quality statement: Every woman in shock due to complications during pregnancy, delivery or postpartum period receive urgent and appropriate care, first aid and care during referral to protect her from death and other complications.

Clinical protocol: Shock

Module: Management of obstetric shock

Key tasks
- Recognition of shock
- Immediate management
- Specific management
- Managing cause

Training schedule
- Key tasks
- Learning objectives
- Sessions plans
- Knowledge assessment

Trainer's guide
Session plan describes objectives of each session, topics, methodology and key points
- Clinical simulation
- Learning guides

Key knowledge
- Diagnosis of shock
- Signs and symptoms of shock
- List of conditions when shock should be anticipated
- Amount of fluid to be given

Critical skills
- Recognition of shock
- Immediate management
- Specific management
- Cause specific management

Evaluation
- Post Test
- Skill assess: using learning guides
- Module evaluation

Module: Management of obstetric shock
Training schedule
Total time: 600 min (10 hours)

Time	Topic	Method	Resource materials
30 min	Welcome Objective of the module: Develop skills in recognition and management obstetric shock Discuss: Key tasks Learning objectives Tools for evaluation of the session	Discussion	Slides 2-3
30 min	Knowledge assessment	Test	
Session 1 1 hr	Definition of shock, conditions to anticipate shock and diagnosis	Discussion	Slide 4-6 MCPC 2017 (S1) Clinical protocol on shock
Session 2 2 hours	Management of shock	Discussion Skill practice	Slide 7 MCPC 2017 **(S2-6, C1)** Learning guide on management of shock Clinical protocol on shock
Session 3 2 hours	Clinical simulation of management of shock	Case scenarios	MCPC 2017 **(S2-6, C1)** Learning guide on management of shock Clinical protocol on shock
Session 4 2 hours	Supervised client practice		Learning guide
Session 5 2 hours	Evaluation	Post-test Skill check Module evaluation	Questionnaire Learning guide Module evaluation format

Session plan

Training process	Resources
Welcome Objective of the module: Develop skills in recognition and management of shock Discuss key tasks and ask the participants whether they would like to add any Learning objectives At the end of the session the participants should be able to: 1. List the conditions when shock should be anticipated 2. Recognize shock and underlying cause 3. Provide immediate management of shock 4. Provide specific management and referral 5. Provide cause specific management Explain the tools for evaluation of the session	Slides 2-3
Knowledge assessment	Questionnaire
Session 1: Definition of shock, conditions to anticipate shock and diagnosis *Objective of the session*: Update the knowledge about obstetric shock *Discussion* Ask the participants what is shock. Record the answers on the blackboard or chart. Ask whether any one has seen or managed a case of shock and ask the participant with experience to share the symptoms and signs. Ask the rest of the participants to add if any point is missing. Present the slides on definition and symptoms and signs of shock. Ask the participants about situations when shock should be suspected. Present the slide on situations when shock should be anticipated. The trainer should summarise the discussions.	Slides 4-6 MCPC 2017 **(S1)** Clinical protocol on shock
Session 2: Management of shock *Objective of the session*: To update skills in stabilising and referring woman in shock *Discussion* Ask the participants who has experience with shock what the steps are in immediate management of shock. The trainers should add if any points are missing. Ask what are the steps in specific management of shock. Discuss the steps. Discuss reassessment and appropriate decision making. Ask about arrangements for referral. After discussion, distribute the clinical protocol on shock. Ask the participants to review the same and ask about cause specific management of bleeding (PPH, bleeding in early pregnancy, bleeding later in pregnancy, infection). Discuss management. *Skill practice* –Immediate management of shock	Slide 7 MCPC 2017 **(S2-6, C1)** Learning guide on management of shock Clinical protocol on shock

(follow instructions on skill practice and arrange all the supplies needed for the practice). Distribute the learning guide on management of shock. Follow the instructions on skill practice. The trainer should observe each participant using the learning guide/performing the procedure and give feedback.	
Session 3: Simulated clinical practice Objective of the session: To provide a simulated experience to practice problem-solving and decision-making skills in management of shock The trainer should read through the instructions and plan the session in advance. Discuss the purpose and process of the simulated exercises. Select one group to play the role of a woman presenting with shock and provider and assistants. Provide case scenarios and the trainer should ask questions. Select another group to do the next case scenario.	MCPC 2017 **(S2-6, C1)** Learning guide on management of shock Clinical protocol on shock
Session 3: Supervised client practice Objective of the session is to practice skills with clients. This is the final stage of clinical skills developments and participants should be allowed to work with clients only after they have demonstrated skill competency in a simulated situation. Planning for the supervised practice is a critical component so that participants get adequate practice. It is important to respect the rights of clients – permission should be sought, privacy and confidentiality should be maintained and respectful dealings with the clients. Since one trainer may not be sufficient to supervise all the participants, it will be good to identify potential assistants to help the trainer (preceptors) to observe the skill practices. The preceptors could be a doctor or senior midwife who is very proficient in the skills. The preceptors will need to be trained in the use of checklists to familiarise them with the checklists.	Learning guides
Session 4: Evaluation	Post-test Skill check Course evaluation

Knowledge assessment

1. Shock is characterised:
   a) failure of the heart
   b) by failure of the respiratory system to provide adequate oxygen supply to the vital organs
   c) by the failure of the circulatory system to maintain adequate perfusion of the vital organs
   d) all of the above

2. Rapid initial assessment should be carried out
   a) only on women who present with abdominal pain and vaginal bleeding
   b) only on women who present with abdominal pain
   c) only on women who present with vaginal bleeding
   d) on all women of childbearing age who present with a problem.

3. A woman who suffers shock as a result of an obstetric emergency may have
   a) a fast, weak pulse
   b) low blood pressure
   c) rapid breathing
   d) all of the above

4. Suspect shock in the following conditions:
   a) bleeding in late pregnancy
   b) bleeding in early pregnancy
   c) bleeding after delivery
   d) all of the above

Clinical simulation: Management of shock (hypovolemic or septic shock

Purpose: The purpose of this activity is to provide a simulated experience for participants to practice problem-solving and decision-making skills in the management of hypovolemic or septic shock, with emphasis on thinking quickly and reacting (intervening) rapidly.

Instructions: The activity should be carried out in the most realistic setting possible, such as the labour and delivery area of a hospital, clinic or maternity centre, where equipment and supplies are available for emergency interventions.

- One participant should play the role of patient and a second participant the role of skilled provider. Other participants may be called on to assist the provider.

- The trainer will give the participant playing the role of provider information about the patient's condition and ask pertinent questions, as indicated in the left-hand column of the chart below.

- The participant will be expected to think quickly and react (intervene) rapidly when the trainer provides information and asks questions. Key reactions/responses expected from the participant are provided in the right-hand column of the chart below.

- Procedures such as starting an IV and giving oxygen should be role played, using the appropriate equipment.

- Initially, the trainer and participant will discuss what is happening during the simulation in order to develop problem-solving and decision-making skills. The italicized questions in the simulation are for this purpose. Further discussion may take place after the simulation is completed.

- As the participant's skills become stronger, the focus of the simulation should shift to providing appropriate care for the life-threatening emergency situation in a quick, efficient and effective manner. All discussion and questioning should take place after the simulation is over.

Resources: Learning Guide for management of shock, sphygmomanometer, stethoscope, equipment for starting an IV infusion, needles and syringes, oxygen cylinder, mask and tubing, bladder catheterization instruments and supplies, high-level disinfected surgical gloves.

Clinical simulation scenarios (Direct to clinical guidelines)

SCENARIO 1 (Information provided and questions asked by the trainer)	**KEY REACTIONS/RESPONSES (Expected from participant)**
1. Mrs. Betsy is a 30-year-old multigravida who has six children. She had given birth at home with the help of a traditional birth attendant. According to the traditional birth attendant, placenta was delivered and was complete. But Mrs. Betsy started bleeding profusely. She had to be rushed to the health centre as the traditional birth attendant could not control the bleeding. • What do you do?	
2. On examination, you find that Mrs Betsy's blood pressure is 84/50 mm Hg, pulse 120 beats/minute, respiratory rate 34 breaths/minute, temperature 37º C. Her skin is cold and clammy. • What do you think is wrong with Mrs. Betsy? • What will you do now?	
***Discussion Question 1**: How do you know when a woman is in shock?*	
3. On further examination, you find that Mrs. Betsy's uterus is soft and not contracted, but not tender. • What are Mrs. Betsy's main problems? • What are the causes of her shock and bleeding? • What will you do next?	
***Discussion Question 2**:* Mrs Betsy is still bleeding heavily after 15 minutes. • *What will you do to manage bleeding from atonic uterus?*	
***Discussion question 3:** Mrs. Betsy is still bleeding after 15 minutes.* • *What will you do*	

Scenario 2 (Information provided and questions asked by the trainer)	**Key Reactions/Responses (Expected from participant)**
1. Mrs. Merlin is 26 years old and has four children. Her last child was born 8 months ago and is on supplementary feeds. She missed her periods last two months and went to the local midwife for a check-up who informed her that she is pregnant. She went to visit a doctor who confirmed her pregnancy. She started bleeding and had gone to a local practitioner who evacuated her uterus. She went home in two hours. After two days of evacuation, she started getting fever. The family reported that she was very restless at night and has been drowsy since morning. Her husband brought her to the health centre. • What will you do?	
2. On examination, you find that Mrs. Merlin's blood pressure is 80/50 mm Hg, pulse 136 beats/minute; respiration rate 34 breaths/minute; temperature 39.4º C. She is confused and drowsy. • What do you think is wrong with Mrs. Merlin? • What will you do now?	
3. On further examination, you find that Mrs. Merlin's uterus is tender and that she has foul-smelling discharge. • What are Mrs. Merlin's main problems? • What are the causes of her shock and why? • What will you do next?	

Skills practice session: Managing a woman in shock

Purpose

The purpose of this activity is to provide opportunities to participants to practice management of shock related to obstetric emergencies and achieve competency in the skills required.
This activity should be conducted in a simulated setting with a fellow participant role-playing as a patient.

Instructions

This activity should be conducted in a simulated setting using the appropriate pelvic and foetal models.

Participants should review the appropriate learning guide before beginning the activity.

Under the guidance of the trainer, participants should work in groups of three to practice the steps/tasks and observe each other's performance; one plays the role of provider, the second one as woman who is bleeding after childbirth and the third as observer. The observer uses the learning guide related to management of shock. Participants reverse the roles until each has had an opportunity to practice and are competent. The trainer observes each participant when ready for observation and provides feedback. The participants who are not competent are made to repeat the exercise.

During supervised practice at a clinical site, the trainer assesses the skills competency of each participant using the learning guide.

The following equipment or representations thereof:

- Equipment for starting an IV line
- Needles and syringes
- Equipment for bladder catheterization
- Sphygmomanometer and stethoscope
- Oxygen mask or cannula
- Oxygen cylinder
- Bladder catheterisations instruments and supplies
- High level disinfected surgical gloves
- Learning guide for management of shock

Learning guide: Management of obstetric shock

Rating scale
2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards

Learning guide for management of obstetric shock (Some of the following steps/tasks should be performed simultaneously.)				
Step/Task	2	1	0	**Comments**
Task 1: General management				
1.1 Shouts for help to mobilize all available personnel				
1.2 Reviews delivery records for details of pregnancy/delivery, whether placenta is delivered and complete and amount of bleeding (in case of home deliveries)				
1.3 If the woman is conscious and responsive, tells the woman (and her support person) what is going to be done, listens to her and respond attentively to her questions and concerns				
1.4 Provides continual emotional support and reassurance, as feasible				
1.5 Puts on personal protective barriers				
1.6 Puts on gloves				
Task 2: Immediate management				
2.1 Monitors the woman's vital signs every 15 minutes: • Temperature • Pulse • Blood pressure • Respiration				
2.2 Turns the woman onto her side and ensures that her airway is open. If the woman is not breathing, begins resuscitation measures				
2.3 Gives oxygen 6-8 L/minute by mask or nasal cannula				
2.4 Covers the woman with a blanket to ensure warmth				
2.5 Elevates the woman's legs- if possible by raising the foot of the bed				
Task 3: Specific management- Fluid replacement				
3.1 Changes gloves				
3.2 Connects IV tubing to a 1 L container of normal saline or Ringer's lactate./COLLOIDS				
3.3 Runs fluid through tubing				
3.4 Selects a suitable site for infusion (eg. Back of hand or forearm)				
3.5 Places a tourniquet around the woman's upper arm				
3.6 Cleans skin at site selected for infusion				
3.7 Inserts 16 or 18 gauge needle in to the vein				
3.8 Draws blood for haemoglobin, and beside clotting test				
3.8 Detaches syringe from needle or cannula				
3.9 Connects IV tubing to needle or cannula				

3.10 Secures the needle or cannula with tape				
3.11 Adjusts IV tubing to run fluid at a rate sufficiently rapid to ***infuse 1 L in 15-20 minutes***				
3.12 Ensures at least ***2 L IV fluids are given in the first hour***				
3.13 Removes gloves and washes hands and wipes with clean cloth or air dries				
Task 4: Specific management- Bladder catheterisation				
4.1 Wears sterile gloves on both hands				
4.2 Cleans the external genitalia				
4.3 Inserts catheter into the urethral orifice and allows using to drain into a sterile receptacle, and measures and records amount				
4.4 Secures catheter and attaches it to urine drainage bag				
Task 5: Post-procedure tasks				
5.1 Before removing gloves, disposes of waste materials in a leak-proof container or plastic bag				
5.2 Immerses both gloves hands in 0.5% chlorine solution. Removes gloves by turning them inside out ▪ If disposing of gloves, places them in a leak-proof container or plastic bag ▪ If reusing gloves, submerges them in 0.5% chlorine solution for decontamination				
5.3 Washes hands thoroughly with soap and water and dries with a clean cloth or air dries				
Task 6: Determining and managing specific cause of shock				
6.1 Once the woman's conditions is stabilized, performs the necessary history, physical examination and tests to determine cause of shock if not already known				
6.2 a If heavy bleeding after childbirth is suspected as the cause of shock, depending on the SPECIFIC cause of the bleeding, manages as per specific clinical protocols on primary PPH, ruptured uterus, tears of genital tract, retained placental fragments, retained placenta and secondary PPH. 6.2 b If bleeding is before 22 weeks of pregnancy, manages as per clinical protocol on early bleeding in pregnancy 6.2 c If bleeding is after 22 weeks of pregnancy, manages as per clinical protocol on bleeding in later pregnancy				
6.3 If shock is suspected as a result of infection, if possible collects appropriate samples of blood urine and any pus per vagina to be sent to referral laboratory, gives a combination of ampicillin 2 g IV, gentamycin 5 mg/kg body weight IV and makes arrangements for referral				
Task 7: Reassessment and further management				
7.1 Reassesses the woman's response to IV fluids within 30 minutes for signs of improvement: ▪ Stabilizing pulse (90 beats/minute or less) ▪ Increasing systolic blood pressure (100 mm Hg or more) ▪ Improving mental status (less confusion or anxiety)				

▪ Increasing urine output (30 mL/hour or more)				
7.2 Makes arrangements for referral ▪ Informs the woman if she is conscious ▪ Informs the relatives about the need for referral ▪ Arranges for a blood donor or the person identified in the complication readiness plan ▪ Informs the referral facility ▪ Patient is kept warm during referral with head slightly down and the IV drip running (1L in 6 hours) ▪ Continues oxygen at 6-8L/min ▪ Continues to closely monitor the vital signs and urine output ▪ If possible arranges for a provider to accompany the woman.				

Module evaluation
Module: Shock

Please indicate your opinion of the course components using the following rating scale:

5 = Strongly Agree
4 = Agree
3 = No opinion
2 = Disagree
1 = Strongly disagree

Course component	Rating
1. The discussions helped me to clarify elements related to basic care.	
2. The exercises were useful for learning about shock	
3. The role plays on interpersonal communication skills were helpful.	
4. The case studies were useful for practising clinical decision making.	
5. The time for skill practice in a simulated setting was sufficient.	
6. The supervised client practice within the limitations of time was sufficient.	
7. I am confident about managing shock.	

SHOCK

Shock is a life-threatening condition that requires immediate and intensive treatment
Suspect or anticipate shock in any of the following conditions

- Bleeding in early pregnancy (e.g. abortion, ectopic or molar pregnancy)
- Bleeding in late pregnancy or labour
- Bleeding after childbirth (postpartum haemorrhage, inversion of uterus)
- infection (example: unsafe or septic abortion, puerperal sepsis)
- Trauma (injury to uterus or bowel during abortion)

Symptoms and Signs
Diagnose shock if the following symptoms and signs are present

- Fast, weak pulse (110 per minute or more)
- Low blood pressure (systolic less than 90 mmHg)
- Pallor
- Sweatiness or cold clammy skin
- Rapid breathing rate (rate of 30 breaths or more)
- Anxiousness, confusion or unconsciousness
- Scanty urine output < 30 ml / hour despite hydration

SHOCK

Suspect or anticipate shock in complicated pregnancies

Review ANC and delivery records as appropriate

History

- History of complications

Examination

- Systolic blood pressure <90 mm Hg
- Pulse ≥110/minute

↓

- ☐ Rapid initial assessment
- ☐ **Shout for help.** Urgently mobilize all available personnel
- ☐ Keep the patient warm
- ☐ Give ***Oxygen 6-8 L / min***
- ☐ Start IV infusion using a large -bore needle
- ☐ Collect blood for estimation of Hb and cross matching of blood
- ☐ Rapidly infuse IV fluids (normal saline or Ringer lactate or colloids if available) initially at the rate of 1L in 15-20 minutes. Give at least 2L of these fluids in the first hour
- ☐ Continuous catheterisation
- ☐ Monitor vital signs (pulse, temperature, blood pressure, respiration) every 15min

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- ☐ Reassess in 30 minutes, if transfer to referral facility has not taken place
- ☐ Monitor every 15 minutes - pulse, blood pressure and respiration
- ☐ Continue oxygen 6-8 litres /minute
- ☐ Elevate the foot
- ☐ Measure the urinary output
- ☐ Initiate treatment as per relevant protocol if the cause of shock is known
- ☐ **Refer to specialist**

- ☐ **Make arrangements to shift the patient URGENTLY to a specialist and initiate treatment while waiting to transfer**

- ☐ NEVER GIVE FLUIDS BY MOUTH
- ☐ IF THE WOMAN IS UNCONSCIOUS, PUT HER ON HER SIDE TO MINIMISE RISK OF ASPIRATION

ANSWER Key
Module: Shock

1. Shock is characterised
    a. By failure of the heart
    b. by failure of the respiratory system to provide adequate oxygen supply to the vital organs
    c. by the failure of the circulatory system to maintain adequate perfusion of the vital organs
    d. all of the above

2. Rapid initial assessment should be carried out
    a. only on women who present with abdominal pain and vaginal bleeding
    b. only on women who present with abdominal pain
    c. only on women who present with vaginal bleeding
    d. on all women of childbearing age who present with a problem.

3. A woman who suffers shock as a result of an obstetric emergency may have
    a. a fast, weak pulse
    b. low blood pressure
    c. rapid breathing
    d. all of the above

4. Suspect shock in the following conditions:
    a. bleeding in late pregnancy
    b. bleeding in early pregnancy
    c. bleeding after delivery
    d. all of the above

Clinical simulation: Management of shock (hypovolemic or septic shock

Purpose: The purpose of this activity is to provide a simulated experience for participants to practice problem-solving and decision-making skills in the management of hypovolemic or septic shock, with emphasis on thinking quickly and reacting (intervening) rapidly.

Instructions: The activity should be carried out in the most realistic setting possible, such as the labour and delivery area of a hospital, clinic or maternity center, where equipment and supplies are available for emergency interventions.

- One participant should play the role of patient and a second participant the role of skilled provider. Other participants may be called on to assist the provider.

- The trainer will give the participant playing the role of provider information about the patient's condition and ask pertinent questions, as indicated in the left-hand column of the chart below.

- The participant will be expected to think quickly and react (intervene) rapidly when the trainer provides information and asks questions. Key reactions/responses expected from the participant are provided in the right-hand column of the chart below.

- Procedures such as starting an IV and giving oxygen should be role played, using the appropriate equipment.

- Initially, the trainer and participant will discuss what is happening during the simulation in order to develop problem-solving and decision-making skills. The italicized questions in the simulation are for this purpose. Further discussion may take place after the simulation is completed.

- As the participant's skills become stronger, the focus of the simulation should shift to providing appropriate care for the life-threatening emergency situation in a quick, efficient and effective manner. All discussion and questioning should take place after the simulation is over.

Resources: Learning Guide for management of shock, sphygmomanometer, stethoscope, equipment for starting an IV infusion, needles and syringes, oxygen cylinder, mask and tubing, bladder catheterization instruments and supplies, high-level disinfected surgical gloves.

Clinical simulation scenarios (Direct to clinical guidelines)

SCENARIO 1 (Information provided and questions asked by the trainer)	KEY REACTIONS/RESPONSES (Expected from participant)
3. Mrs. Betsy is a 30-year-old multigravida who has six children. She had given birth at home with the help of a traditional birth attendant. According to the traditional birth attendant, placenta was delivered and was complete. But Mrs. Betsy started bleeding profusely. She had to be rushed to the health centre as the traditional birth attendant could not control the bleeding. • What do you do?	• **Shouts** for help to urgently mobilize all available personnel • Evaluates Mrs. Betsy immediately for shock, including vital signs (temperature, pulse, blood pressure and respiration rate), level of consciousness, colour and skin temperature • Tells Mrs. Betsy (and her husband) what is going to be done, listens to her and responds attentively to their questions and concerns. • Turns Mrs. Betsy on her side, if unconscious or semi-conscious, and keeps the airway open
4. On examination, you find that Mrs Betsy's blood pressure is 84/50 mm Hg, pulse 120 beats/ minute, respiration rate 34 breaths/minute, temperature 37º C. Her skin is cold and clammy. • What do you think is wrong with Mrs. Betsy? • What will you do now?	• Q 1States that Mrs. Betsy is in shock • Q 2Asks one of the staff that responded to her shout for help to start an IV infusion, using a large-bore cannula and normal saline or Ringer's lactate at a rate of 1 L in 15–20 minutes • While starting the IV, collects blood for appropriate tests (haemoglobin, blood typing and cross matching) • Starts oxygen at 6–8 L/minute • Catheterizes bladder • Looks for the cause of shock (hypovolemic or septic) by palpating the uterus for firmness and tenderness, assessing the amount of blood loss • Covers Mrs. Betsy to keep her warm • Elevates legs
Discussion Question 1*: How do you know when a woman is in shock?*	***Expected Responses****: Pulse greater than 110 beats/ minute; systolic blood pressure less than 90 mm Hg; cold, clammy skin; pallor; respiration rate greater than 30 breaths/minute; anxious and confused or unconscious*

3. On further examination, you find that Mrs. Betsy's uterus is soft and not contracted, but not tender. • What are Mrs. Betsy's main problems? • What are the causes of her shock and bleeding? • What will you do next?	• States that Mrs. Betsy has lost too much of blood after childbirth as evident from her blood-soaked clothes. • States that Mrs. Betsy's uterus is soft and not contracted, but not tender; she has no fever • Determines that Mrs. Betsy's shock is due to postpartum haemorrhage, atonic uterus • Massages Mrs. Betsy's uterus to stimulate a contraction • ***Starts a second IV infusion and gives 20 units oxytocin in 1 L of fluid at 60 drops/minute***
Discussion Question 2: Mrs Betsy is still bleeding heavily after 15 minutes. • *What will you do to manage bleeding from atonic uterus?*	***Expected Responses***: • *Follows the clinical protocol* • ***Continue IV fluids (at least 2 L in first hour) (OXYTOCIN IN 1 L)*** • *Continues oxytocin at 40 drops per minute* • *Continues massaging the uterus* • *Monitors bleeding* • *If the bleeding does not stop, gives sublingual misoprostol 800 mcg*

Discussion question 3: *Mrs. Betsy is still bleeding after 15 minutes.* • *What will you do*	***Expected responses:*** • *If bleeding continues, makes arrangements for referral.* ➢ *Informs the woman about the need for referral in a compassionate manner and encourages her to ask questions* ➢ *Informs her family members about the need for referral* ➢ *If a blood donor is not identified in the complication readiness plan, identifies a donor to accompany the woman* • *While waiting for referral, performs bimanual compression or aortic compression or intrauterine balloon tamponade (see specific learning guides)* • *Applies NASG if available (see learning guide for application of NASG)* • *Monitors blood pressure and pulse* • *Checks urine output (should be 30 ML/hour or more)* • *While referring:* ➢ *Continues IV line* ➢ *Keeps the head of the woman at lower level* ➢ *Keeps the woman warm* ➢ *Continues oxygen*

Scenario 2 (Information provided and questions asked by the trainer)	**Key Reactions/Responses (Expected from participant)**
2. Mrs. Merlin is 26 years old and has four children. Her last child was born 8 months ago and is on supplementary feeds. She missed her periods last two months and went to the local midwife for a check-up who informed her that she is pregnant. She went to visit a doctor who confirmed her pregnancy. She started bleeding and had gone to a local practitioner who evacuated her uterus. She went home in two hours. After two days of evacuation, she started getting fever. The family reported that she was very restless at night and has been drowsy since morning. Her husband brought her to the health centre. • What will you do?	• **Shouts** for help • Evaluates Mrs. Merlin immediately for shock, including vital signs (temperature, blood pressure, pulse and respiration rate), level of consciousness, colour and skin temperature • Tells Mrs. Merlin (and her husband) what is going to be done, listens to them and responds attentively to their questions and concerns • Turns Mrs. Merlin on her side, as she is drowsy, and keeps the airway open
2. On examination, you find that Mrs. Merlin's blood pressure is 80/50 mm Hg, pulse 136 beats/minute; respiration rate 34 breaths/minute; temperature 39.4º C. She is confused and drowsy. • What do you think is wrong with Mrs. Merlin? • What will you do now?	• *States that Mrs. Merlin is in shock* • Asks one of the staff that responded to her shout for help to start an IV infusion, using a large-bore cannula and normal saline or Ringer's lactate at a rate of 1 L in 15–20 minutes • Collects blood for appropriate tests (haemoglobin, blood typing and cross match, and tests for coagulopathy), while starting the IV • Starts oxygen at 6–8 L/minute • Catheterizes bladder • Looks for the cause of the shock (hypovolemic or septic) by palpating the uterus for firmness and tenderness • Covers Mrs. Merlin to keep her warm • Elevates legs

3. On further examination, you find that Mrs. Merlin's uterus is tender and that she has foul-smelling discharge. • What are Mrs. Merlin's main problems? • What are the causes of her shock and why? • What will you do next?	• States that Mrs. Merlin has a fever, a tender uterus and foul-smelling lochia • Determines that Mrs. Merlin's shock is due to infection resulting from unclean evacuation of the uterus • Arranges for referral • *Informs the woman (if she is conscious) and her family about the need for referral in a compassionate manner and encourages her to ask questions* • *If a blood donor is not identified in the complication readiness plan, identifies a donor to accompany the woman* • Gives penicillin G 2 million units OR ampicillin 2 g IV (and repeats every 6 hours) PLUS gentamicin 5 mg/kg body weight IV (and repeats every 24 hours) PLUS metronidazole 500 mg IV (and repeats every 8 hours) • Monitors blood pressure and pulse • Checks urine output (should be 30 ML/hour or more) • *While referring:* ➢ ***Continues IV line (at least 2 L in first hour)*** ➢ *Keeps the head of the woman at lower level* ➢ *Keeps the woman warm* • *Continues oxygen*

Module 8

Management of abnormal presentations during childbirth

Training resource package for intrapartum and immediate post-partum care

Standard: Every woman who develops complications during labour and delivery receive evidence-based appropriate care including appropriate referral.
Quality statement: Every woman with difficulty during delivery receives appropriate interventions including safe application of appropriate procedures that ensures safe outcome for her and her new born including prevention of injury.
Clinical protocols: Cord prolapse, Breech presentation, Shoulder dystocia, Multiple pregnancy

Module: Management of abnormal presentations during childbirth

Key tasks
- Early diagnosis of abnormal presentation during first or second stage of labour
- Management of abnormal presentations to save life /prevent injury to newborn and mother
- Provision of preliminary management before referral
- Performing procedures to facilitate relieving impact of abnormal presentations
- Managing multiple births in labour

Training schedule
- Key tasks
- Learning objectives
- Sessions plans
- Knowledge assessment

Trainer's guide
Session plan describes objectives of each session, topics, methodology and key points
- Exercise
- Case studies
- Learning guides

Key knowledge
- Diagnosis of abnormal presentations and underlying causes
- Diagnosis of multiple pregnancy
- Complications of abnormal presentations
- Indications for managing various abnormal presentations and multiple pregnancy in the health centre
- Indications for caesarean section

Critical skills
Prolapsed cord
- Keeping the presenting part above the pelvic brim

Breech
- Assisted vaginal breech delivery

Shoulder dystocia
- McRobert's manoeuvre
- Rotational manoeuvre
- Releasing posterior arm

Multiple pregnancy
- Confirmation of multiple pregnancy, presentation of first and second baby
- Performing episiotomy and repair
- Applying ventouse

Evaluation
- Post Test
- Skill assess: using learning guides
- Module evaluation

Module: Abnormal presentations during childbirth

Training schedule

Total time: 2370 min (39 hours 30 min)

Time	Topic	Method	Resource materials
30 min	Welcome Objective of the module: To enable participants update their knowledge and skills in management of malpresentations Discuss: Key tasks Learning objectives Tools for evaluation of the session	Discussion	Slides 2-3
30 min	Knowledge assessment	Test	
Session 1 30 min	Mal-presentations during first and second stage of labour	Discussion Exercise	Slides 4-7 MCPC 2017 **(S85)** Exercise
Session 2 2 hours	Management of prolapsed cord	Discussion Case study Skill practice	Slide 8 MCPC 2017 **(S111)** Learning guide on management of prolapsed cord Clinical protocol on management of prolapsed cord
Session 3 8 hours	Management of breech presentation	Case study Discussion Skill practice	Slides 9-14 MCPC 2017 **(S95)** Learning guide on management of breech Clinical protocol on management of breech in labour
Session 4 4 hours	Performing episiotomy and repair	Discussion Skills practice	Slides 22-24 MCPC 2017 **(P85)** Learning guide on episiotomy and repair
Session 5 8 hours	Management of shoulder dystocia	Case study Discussion Skill practice	Slides 15-18 MCPC 2017 **(S99)** Learning guide on shoulder dystocia Clinical protocol on management of shoulder dystocia

Session 6 2 hours	Management of multiple pregnancy	Discussion Skill practice	Slides 19-21 MCPC 2017 **(S102)** Learning guide on managing delivery in multiple pregnancy Clinical protocol on management of multiple pregnancy Power point
Session 7 4 hours	Application of ventouse	Discussion Skill practice	Slides 26-40 MCPC 2017 **(P33)** Learning guide on applying ventouse Power point
Session 8 6 hours	Supervised client practice		Learning guides
Session 9 4 hours	Evaluation	Post-test Skill check Module evaluation	Questionnaire Learning guides Module evaluation form

Session plans

Training process	Resources
Welcome **(30 min)** *Objective of the module*: To enable participants to review and update their knowledge and skills in management of mal-presentations *Key tasks* Present key tasks and discuss whether the participants would like to add any *Learning objectives* At the end of the session, the participants will be able to: 1. Identify malpresentations during labour and delivery based on history and examination 2. Manage the problem to save the mother and baby and minimise injury including timely and appropriate referral using the clinical protocol 3. Perform episiotomy and repair 4. Apply ventouse correctly Explain the tools for evaluation of the session	Key tasks Learning objectives Slides 2-3
Knowledge assessment **(30 min)**	
Session 1: Malpresentations during labour and delivery **(30 min)** *Objective of the session*: To improve the knowledge about malpresentations and malpositions during labour and delivery and to identify women who are at risk *Discussion* Ask the participants to define malpresentations and malpositions and record their responses. Present the slide showing definitions. *Exercise 1* Distribute exercise listing various mal presentations and mal-positions and ask the participants to indicate in the left column whether malpresentation or malposition and rationale for the same and after all have completed, distribute the filled table and discuss the right answers. Ask which mothers are most at risk of malpresentation or malposition?	Slides 4-7 MCPC 2017 **(S-85)** Table on malpositions and presentations
Session 2: Management of prolapsed cord **(2 hours)** Objective of the session: To improve knowledge and skills in identification of prolapsed cord and management of the situation *Discussion* Ask the participants whether they consider prolapsed cord an emergency and the reason for considering the same as an emergency. Ask the participants whether any of them have managed a case of cord prolapse. If any of the participants have the experience, request to describe the case to the rest of the participants. Discuss • the likely causes and situations in which a cord prolapse should be anticipated • stage of labour when it can happen • likely complications *Case study* Divide the participants into groups of 2-3. Project the case study up to diagnosis and ask the participants to respond to questions 1-3. After each	Slide 8 MCPC 2017 **(S-111)** Learning guide on management of cord prolapse Clinical protocol on cord prolapse Power point

participant has finished answering, ask one of the groups to present response to one question. Project the section on findings and ask the groups to respond to question 4 and 5. After all have finished discuss the responses. After all questions have been discussed the trainer should sum up the findings. Project the rest of the case study and ask the participants to respond to question 6. Discuss the responses. Highlight the importance of referral if in first stage of labour and the importance of monitoring foetal heart. Distribute the clinical protocol and ask the participants to review the same. Discuss management of cord prolapse in first stage and second stage of labour. *Skill practice*-Management of cord prolapse (follow the instructions on skill practice and arrange all the supplies needed for the practice) Distribute the learning guide on management of cord prolapse and follow instructions on skill practice. Ask if any of the participants have done the procedure. If so ask the participant to demonstrate. The trainer should provide feedback and demonstrates manual removal of the placenta. *Every participant should be provided a chance to practice releasing pressure on the cord in cases of cord prolapse.*	
Session 3: Management of breech presentation **(8 hours)** Objective of the session: To improve the skills in recognition and management of breech *Discussion* Ask the participants to list the types of breech and findings on examination List the answers on the board and discuss various types of breech and their management in brief. Ask what is the most complication to watch for. Ask what are the criteria for a breech delivery in a health centre where there is no facility for caesarean section. EMPHASISE THAT AT HEALTH CENTRES ONLY BREECH IN THE PERINEUM (COMPLETE AND FRANK) can be managed. Discuss indications for referral for Caesarean section. *Case study* Continue with the same groups as in Session 2. Project the case study on breech till management and ask the participants to review the questions and answer them. After all the participants have completed the questionnaire, ask one of the groups to discuss the answers. Project the rest of the case study. Ask the participants to respond to questions 3 and 4. Ask another group to discuss the diagnosis and rationale for the same and another group to discuss care. The trainer should summarise the key points from the discussions. *Skills practice* Management of breech delivery (follow the instructions on skill practice and arrange all the supplies needed for the practice) Distribute the learning guide on management on assisted breech delivery of cord prolapse and follow instructions on skill practice. Ask if any of the participants have done assisted breech delivery. If so ask the participant to demonstrate. The trainer should provide feedback and demonstrates the correct procedure.	Slides 9-14 MCPC 2017 **(P-45)** Learning guide on assisted breech delivery Clinical protocol on breech Power point

The practice should be divided into three practice sessions as discussed below. After practising each manoeuvre feedback should be provided. 1. Delivery of the buttocks and legs 2. Delivery of arms 3. Delivery of head *Every participant should be provided a chance to do assisted breech delivery in simulated situation.* **<u>Highlight the importance of newborn examination by specialist.</u>**	
Session 4: Performing episiotomy and repair **(4 hours)** *Objective of the session*: To upgrade the skills in doing episiotomy *Discussion* Ask how many know how to do an episiotomy and repair. Ask for what was the indication for the episiotomy. Discuss the indications for episiotomy. Ask what are the likely complications of episiotomy. *Skills practice*- Episiotomy and repair (follow the instructions on skill practice and arrange all the supplies needed for the practice) Distribute the learning guide on episiotomy. Ask one of the experienced participants to demonstrate episiotomy explaining each step. The other participants and the trainer should observe and give feedback. Ask another experienced participant to demonstrate repair of the episiotomy step by step while the other participants observe using the learning guide. Ask a third participant to demonstrate post-procedure tasks and advice while the other participants and trainer observe. The trainer should ask for feedback on each of the demonstrations and discuss the gaps. Demonstrate as needed. Follow the instructions for skill practice. *Each participant should get a chance to practice episiotomy and repair.* Discuss precautions to be taken while doing and repairing episiotomy.	Slides 22-24 MCPC 2017 **(P-85)** Learning guide on episiotomy
Session 5: Management of shoulder dystocia **(8 hours)** *Objective of the session*: To develop skills in managing shoulder dystocia *Discussion* Start the discussion by asking participants how to diagnose shoulder dystocia *Case study on shoulder dystocia* Project the case study up to diagnosis. Continuing with the same groups, ask the groups to answer the questions. Ask the participants to answer the questions. Ask one of the groups to discuss the first question. Project the rest of the case study and ask the participants to respond to the questions. Ask different groups to discuss the questions. The trainer should summarise the points. *Skills practice*- Management of shoulder dystocia (follow the instructions on skill practice and arrange all the supplies needed for the practice). Distribute learning guide on shoulder dystocia and follow the instructions for skill practice. The practice should be divided into three practice sessions as discussed below. After practising each manoeuvre feedback should be provided. 4. Mc Robert's manoeuvre 5. Rotational manoeuvres 6. Releasing posterior arm 7. Rolling the woman to hands and knees *Each participant should get a chance to practice all the manoeuvres.*	Slides 15-18 MCPC 2017 **(S-99)** Learning guide on management o shoulder dystocia Clinical protocol on shoulder dystocia Power point

Session 6: Management of multiple pregnancy **(2 hours)** *Objective of the session*: To upgrade skills in managing multiple pregnancy in labour *Discussion* Ask the participants to list the diagnostic criteria for multiple pregnancy. List the findings on the board. Next ask about management of multiple pregnancy during antenatal period. Discuss management in labour and conditions when delivery will be considered in the health centre. Discuss indications for referral for caesarean section. Discuss advice to the woman and family. *Skills practice – management of delivery in multiple pregnancy*(follow the instructions on skill practice and arrange all the supplies needed for the practice). For this session, the trainer should arrange additional child birth simulators and additional anatomical model of foetus and arrange two foetal models inside the childbirth simulators (if possible). Distribute learning guide on managing delivery in multiple pregnancy and follow the instructions for skill practice. Focus on preparations especially for referral, delivery of first baby and second baby and management of third stage of labour.	Slides 19-21 MCPC 2017 **(S102)** Learning guide on managing delivery in multiple pregnancy Clinical protocol on multiple pregnancy Power point
Session 7: Application of ventouse (Vacuum extraction) **(4 hours)** *Objective of the session*: To develop skills in application of ventouse *Discussion* Ask participants whether any of them have applied ventouse , indications for the same and share their experience. Ask about indications and contraindications for applying ventouse. Ask the participants who have experience in ventouse about precautions to be taken during the procedure. *Skill practice*- Application of ventouse follow the instructions on skill practice and arrange all the supplies needed for the practice). Distribute learning guide on application of ventouse and follow the instructions for skill practice. The practice should be divided into three practice sessions as discussed below. After practising each manoeuvre feedback should be provided. 1. Getting the equipment ready focusing on creation of vacuum 2. Application of the cup 3. Creation of vacuum and traction *Each participant should get a chance to practice all the manoeuvres.* After the practice session, based on their experience, ask the following questions: Precautions to be taken Indications for discontinuing Likely complications in foetus and action to be taken. Likely complications in woman.	Slides 26-40 MCPC 2017 **(P-33)** Learning guide on application of ventouse Power point
Session 8: Supervised client practice **(6 hours)** Objective of the session is to practice skills with clients under supervision. This is the final stage of clinical skills developments and participants should be allowed to work with clients only after they have demonstrated skill competency in a simulated situation. Planning for the supervised practice is a critical component so that participants get adequate practice. It is important to respect the rights of clients – permission should be sought,	Learning guides

privacy and confidentiality should be maintained and respectful dealings with the clients. Since one trainer may not be sufficient to supervise all the participants, it will be good to identify potential assistants to help the trainer (preceptors) to observe the skill practices. The preceptors could be a doctor or senior midwife who is very proficient in the skills. The preceptors will need to be trained in the use of checklists to familiarise them with the checklists. Before and after each supervised client practice, there should be discussions. Feedback should be provided. Minimum 1 experience in management of cord prolapse and breech delivery should be planned for each of the participants (may vary depending on the baseline skill level). The participants should be divided into groups	
Session 9: Evaluation **(4 hours)**	Questionnaire Learning guides Module evaluation form

KNOWLEDGE ASSESSMENT QUESTIONNAIRE

Instructions: Write the letter of the single **best** answer to each question in the blank next to the corresponding number on the attached answer sheet.

1. If the cord prolapses
a) it may lie in the birth canal below the foetal presenting part but not be visible in the vagina
b) it may be visible in the vagina following rupture of the membranes
c) it may or may not be pulsating
d) all of the above

2. If the cord prolapses in the first stage of labour and is pulsating
a) a hand should be inserted into the vagina and the presenting part pushed up to decrease pressure on the cord
b) a hand should be inserted into the vagina and the presenting part pushed up to decrease pressure on the cord and dislodge the presenting part from the pelvis
c) a hand should be placed on the abdomen to push the presenting part up
d) the woman should be positioned on her back

3. If the cord prolapses in the second stage of labour and is pulsating
a) delivery should be expedited with episiotomy
b) delivery should be expedited with episiotomy and vacuum extraction
c) delivery should be expedited with episiotomy and vacuum extraction or forceps
d) delivery should be by caesarean section

4. When assessing foetal presentation in labour
a) the examination should be done during a contraction
b) vaginal examinations should not be performed
c) examination should be performed every 30 minutes during the active phase
d) the woman should be resting in a supine position and the examination should be done between contractions

5. In a breech presentation, the foetal heart
a) can usually be heard at a location higher than expected for a vertex presentation
b) can usually be heard at a location lower than expected for a vertex presentation
c) can usually be heard in the same location as for a vertex presentation
d) is not able to be heard

6. In performing a breech delivery
a) when the buttocks are seen, traction should be applied
b) meconium is a sign of foetal distress
c) suprapubic pressure should be avoided during delivery of the head
d) the new born should be held by the hips, not by the flank or abdomen

7. Which of the following signs are consistent with shoulder dystocia
a) the foetal head is delivered but remains tightly applied to the vulva
b) the chin retracts and depresses the perineum
c) traction on the head fails to deliver the shoulder
d) all of the above

8. To deliver stuck shoulders
a) firm, continuous downward pressure should be applied on the foetal head
b) firm, intermittent downward pressure should be applied on the foetal head
c) suprapubic pressure should be avoided
d) downward firm pressure on the fundus should be applied

9. If normal manoeuvers do not result in delivery of the shoulders in a case of shoulder dystocia, the next step is to
a) apply traction with a hook in the axilla
b) fracture the clavicle of the anterior shoulder
c) insert a hand into the vagina and grasp the anterior hand to deliver the arm across the chest
d) insert a hand into the vagina to apply pressure to the anterior shoulder to rotate it

10. If multiple foetal poles and parts are felt on abdominal palpation
a) breech presentation should be suspected
b) a transverse lie should be suspected
c) multiple pregnancy should be suspected
d) none of the above

11. If the first baby in a multiple pregnancy is a transverse lie
a) labour should be allowed to progress as for a single foetus
b) labour should be augmented
c) delivery should be by caesarean section
d) delivery should be by vacuum extraction

Exercise 1
Identify the following conditions as malpresentation or malposition

Condition	Mal-presentation/Mal-position	Rationale for the diagnosis
Occipito-posterior		
Face presentation		
Brow		
Breech presentation		
Cord presentation		
Oblique lie		

Case study: Prolapsed cord

Directions

Read and analyse 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 case study. When all groups have finished, the case studies and the answers each group has developed will be discussed.

Case study

Mrs. Betsy. is a 35-year-old gravida five, para four. You have provided antenatal care during which Mrs. Betsy's pregnancy was found to be progressing well. She is now 39 weeks pregnant and has come to the community health centre to report that labour pains started 2 hours ago.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

1. What will you include in your initial assessment of Mrs. Betsy, and why?

2. What particular aspects of Mrs. Betsy'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 Mrs. Betsy, and why?

Diagnosis (Identification of Problems/Needs)

You have completed your assessment of Mrs. Betsy and your main findings include the following:
Mrs. Betsy. is having two contractions in 10 minutes, each lasting 20–40 seconds. Membranes are intact. Her cervix is 4 cm dilated. The presentation is vertex and the head is not engaged. The foetal heart rate is 140 beats/minute.
Mrs. Betsy's vital signs are normal.

4. Based on these findings, what is Mrs. Betsy's diagnosis, and why?

Care provision (Planning and Intervention)

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

Evaluation

Two hours after admission, Mrs. Betsy's membranes ruptured. On vaginal examination, the cord is felt below the head, which is at 0 station. The cervix is 6 cm dilated. The foetal heart rate is 160 beats/minute.

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

Case study: Breech

Directions

Read and analyse 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 case study. When all groups have finished, the case studies and the answers each group has developed will be discussed.

Case study

Mrs. Amos is a 26-year-old gravida three, para two was admitted to the health centre at 2 PM. She has been having regular contractions for almost 4 hours. She was admitted to the health center. Her membranes had ruptured 30 minutes before her arrival.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

1. What will you include in your initial assessment of Mrs. Amos, and why?

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

Diagnosis (Identification of Problems/Needs)

You have completed your assessment of Mrs. Amos. The main findings are as follows: On abdominal examination: contractions are 3 per 10 minutes lasting 20-40 seconds; foetal lie is longitudinal and foetal head is palpable in the upper abdomen; foetal heart is heard at a level higher than usual and is 148/minute. Breech is palpable at the pelvic brim. On vaginal examination: cervix is 4-5 cm dilated. Amniotic fluid is clear. NO evidence of cord prolapse. All vital signs are normal.

4. Based on these findings, what is Mrs. Amos's diagnosis, and why?

Care provision (Planning and Intervention)

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

Case study: Shoulder dystocia

Directions

Read and analyse 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 case study. When all groups have finished, the case studies and the answers each group has developed will be discussed.

Case study

Mrs. Camelia is a 35-year-old gravida seven, para six. She was admitted to the district hospital in active labour at 10:00 pm. Labour has progressed well, as indicated on her partograph. It is now 4:00 am and the foetal head has just delivered and remains tightly applied to the vulva.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

1. What will you include in your immediate assessment of Mrs. Camelia, and why?

Diagnosis (Identification of Problems/Needs)

Immediate assessment of the situation reveals the following:

The chin retracts and depresses the perineum.
Traction on the head fails to deliver the shoulder, which is caught behind the symphysis pubis.

2. Based on these findings, what is Mrs. Camelia's diagnosis, and why?

Care provision (Planning and Intervention)

3. Based on your diagnosis, what is your plan of care for Mrs. Camelia, and why?

Evaluation

Five minutes have elapsed since the delivery of the head. No further progress has been made.

4. Based on these findings, what is your continuing plan of care for Mrs. Camelia, and why?

Skills practice session: Abnormal presentations during childbirth

Purpose

The purpose of this activity is to provide opportunities to observe and practice clinical skills, either in a simulated setting or at a clinical site.

Instructions

This activity should be conducted in a simulated setting using the appropriate pelvic and foetal models.

Participants should review the appropriate learning guide before beginning the activity. Under the guidance of the trainer, participants should work in groups of three to practice the steps/tasks and observe each other's performance; one plays the role of provider, the second one as woman who is bleeding after childbirth and the third as observer. The observer uses the relevant learning guide related to management of abnormal presentations during childbirth. Participants reverse the roles until each has had an opportunity to practice and is competent. The trainer observes each participant when ready for observation and provides feedback. The participants who are not competent are made to repeat the exercise.

In case of cord prolapse and breech presentation, performing episiotomy and application of ventouse, the trainer should ask one of the experienced participants to first demonstrate and point out gaps if any or compliments the participant. The trainer should demonstrate the procedure.

During supervised practice at a clinical site, the trainer assesses the skills competency of each participant using learning guides.
The above process should be repeated for each of the skills practice session.

Resources

- Childbirth simulator
- Placenta model
- Sphygmomanometer and stethoscope
- Delivery kit
- Newborn resuscitation kit
- Supplies and equipment needed for delivery
- Speculum
- Thermometer
- Catheter
- Soap and water and betadine
- Sterile gloves
- Personal protective barriers
- IV set
- 0.5% chlorine solution and receptacle for decontamination
- Leak proof container or plastic bag
- Episiotomy repair set
- Examination light
- Local anaesthetic
- Needle and syringe
- Suture materials
- For episiotomy- bony pelvis with pieces of sponge inserted inside and foetal heads inserted inside the pelvis
- Ventouse
- Learning guides on management of prolapsed cord, breech in the perineum, shoulder dystocia and multiple pregnancy, episiotomy and application of ventouse

Learning guide: Managing prolapsed cord

Rating scale
2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards

Learning guide for managing prolapsed cord (Many of the following steps/tasks should be performed simultaneously.)				
STEP/TASK	**2**	**1**	**0**	**Comments**
Task 1: Getting ready				
1.1 Assembles all equipment and supplies for delivery				
1.2 Reviews antenatal and labour records				
1.4 Wears protective barriers				
1.2 Washes hands with soap and water and air dries hands or with a clean towel and wears gloves				
Task 2: Rapid assessment				
2.1 Assesses general condition of the woman, including vital signs (pulse, blood pressure, respiration), assess contractions to determine the stage of labour, foetal heart rate immediately after a contraction (count full one minute), assess lie and presentation				
2.2 Does vaginal examination – whether membranes have ruptured, colour of the draining amniotic fluid, whether cord is visible and pulsating, its position in relation to the presenting part				
Task 3: General management				
3.1 Shares the findings with the woman (and her family) and tells what is going to be done, listen to her and respond attentively to her questions and concerns				
3.2 Provides continual emotional support and reassurance, as feasible				
3.3 Gives oxygen 4–6 L/minute by face mask or nasal cannula				
Task 4: Specific management (as per clinical protocol on prolapsed cord)				
Management depends on the stage of labour and whether the cord is pulsating				
4.1 First stage of labour and cord is pulsating a. Makes arrangements for referral ▪ Informs the woman about the need for referral due to the risk to the baby and also informs about the preliminary procedures to save the baby and encourages her to ask questions and responds with compassion ▪ Informs the family also about the need for referral and responds to their queries				

b. While waiting for referral: ▪ Washes hands thoroughly with soap and water and dry with a clean, dry cloth or air dry ▪ Puts high-level disinfected or sterile surgical gloves on both hands ▪ Places one hand into the vagina ▪ Pushes the presenting part upward to: o Decreases pressure on the cord o Dislodges the presenting part from the pelvis ▪ Places the other hand on the abdomen in the suprapubic region: o Holds the presenting part firmly out of the pelvic brim with this hand ▪ Removes the hand from the vagina ▪ Continues to hold the presenting part firmly out of the pelvic brim with the hand on the abdomen till the woman reaches the referral facility				
4.2 First stage of labour and cord is not pulsating a. Reconfirms the stage of labour b. Listens to foetal heart to reconfirm (not heard) *c.* Informs the woman and family about the situation ▪ Informs mother about the death of the foetus due to pressure on the cord with sympathy and provides emotional support. Encourages her to ask questions ▪ Informs the family about the situation and encourages them to ask questions to clarify their doubts. ▪ After giving time to the woman and her family to grieve over the death of the foetus, provides information on possible plan of action to deliver the dead foetus. ▪ Choses the mode of delivery that is safest and acceptable to the woman and the family				
4.3 Second stage of labour and cord is pulsating and presentation is vertex/breech *a.* Informs the woman about the urgency to deliver the baby urgently due to the potential danger. Informs about the need for episiotomy and need for instrumental delivery of the head. b. Does an episiotomy (following the steps in the learning guide on episiotomy) c. If vertex presentation, applies ventouse to facilitate quick delivery of the head (following the steps in the learning guide) d. If breech does assisted breech delivery (following the learning guide) e. Examines the newborn and resuscitates the baby immediately f. Refers the newborn to a specialist				

4.4 Second stage of labour and cord is not pulsating d. Listens to foetal heart to reconfirm (not heard) *e.* Informs the woman and family about the situation ▪ Informs mother about the death of the foetus due to pressure on the cord with sympathy and provides emotional support. Encourages her to ask questions ▪ Informs the family about the situation and encourages them to ask questions to clarify their doubts. ▪ After giving time to the woman and her family to grieve over the death of the foetus, provides information on possible plan of action to deliver the dead foetus. ▪ Choses the mode of delivery that is safest and acceptable to the woman and the family				
Task 5: Post procedure tasks				
5.1 Immerses both gloved hands in 0.5% chlorine solution. Remove gloves by turning them inside out • If disposing of gloves, place them in a leakproof container or plastic bag • If reusing surgical gloves, submerge them in 0.5% chlorine solution for 10 minutes for decontamination				
5.2 Washes hands thoroughly with soap and water and dry with a clean, dry cloth or air dry				

Learning guide: Assisted breech delivery

Delivery done in health centre ONLY if:

- Second stage of labour
- Complete or frank breech
- Fetus is not too large
- No previous cesarean section for cephalopelvic disproportion
- Flexed head

Rating scale
2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards

Learning guide for assisted breech delivery (Many of the following steps/tasks should be performed simultaneously.)				
STEP/TASK	**2**	**1**	**0**	**Comments**
Task 1: Getting ready				
1.1 Assembles all equipment and supplies for delivery				
1.2 Reviews antenatal and labour records- focus whether any previous C-section, large babies				
1.3 Wears protective barriers				
1.4 Washes hands with soap and water and air dries hands or with a clean towel and wears gloves				
1.5 Gets help to assist with the delivery				
Task 2: Rapid assessment				
2.1 Assesses general condition of the woman, including vital signs (pulse, blood pressure, respiration), assess contractions to determine the stage of labour, foetal heart rate immediately after a contraction (count full one minute), assess lie and presentation				
2.2 Does vaginal examination – whether membranes have ruptured, colour of the draining amniotic fluid, whether cord is visible and pulsating, whether presenting part is visible in the perineum				
2.3Confirms that the following conditions for breech delivery at the CHC are met: ▪ ***Second stage of labour*** • ***Complete or frank breech*** • ***Fetus is not too large*** • ***No previous cesarean section for cephalopelvic disproportion*** • ***Flexed head***				
2.4 Shares the findings of rapid assessment with the woman and tells her (and her family) what is going to be done, listen to her and respond attentively to her questions and concerns.				
2.5 Provides continual emotional support and reassurance, as feasible.				
Task 3: Pre-procedure tasks				
3.1Cleans the vulva with antiseptic solution.				

3.2 Catheterizes the bladder, if necessary.				
3.3 Starts IV fluids				
Task 4: Conducting assisted breech delivery				
Delivery of the Buttocks and Legs				
4.1When the buttocks have entered the vagina and the cervix is fully dilated, tells the woman she can bear down with contractions				
4,2 If the perineum is very tight, performs an episiotomy (see **Learning Guide: Episiotomy and Repair**)				
4.3 Lets the buttocks deliver until the lower back and then the shoulder blades are seen				
4.4 Gently holds the buttocks in one hand, but does not pull				
4.5 If the legs do not deliver spontaneously, delivers one leg at a time: • Pushes behind the knee to bend the leg • Grasp the ankle and deliver the foot and leg • Repeats the same for the other leg				
4.6 Holds the baby by the hips, but does not pull				
Delivery of the Arms				
4.7 *If the arms are felt on the chest*, allows them to disengage spontaneously: • After spontaneous delivery of the first arm, lifts the buttocks toward the mother's abdomen to enable the second arm to deliver spontaneously • If the arm does not deliver spontaneously, place one or two fingers in the elbow and bend the arm, bringing the hand down over the baby's face				
4.8 *If the arms are stretched* above the head or folded around the neck, use Lovset's manoeuver: • Holds the baby by the hips and turn half a circle, keeping the back uppermost • Applies downward traction at the same time so that the posterior arm becomes anterior, and deliver the arm under the pubic arch by placing two fingers on the upper part of the arm • Draws the arm down over the chest as the elbow is flexed, with the hand sweeping over the face • To deliver the second arm, turns the baby back half a circle while keeping the back uppermost and applying downward traction to deliver the second arm in the same way under the pubic arch				
4.9 *If the baby's body cannot be turned to deliver the arm* that is anterior first, delivers the arm that is posterior: • Holds and lift the baby up by the ankles. • Moves the baby's chest toward the woman's inner leg to deliver the posterior shoulder • Delivers the arm and hand • Lays the baby down by the ankles to deliver the anterior shoulder • Delivers the arm and hand				

Delivery of the Head				
4.10 Delivers the head by the Mauriceau Smellie Veit manoeuver: • Lays baby face down with the length of its body over your hand and arm • Places first and third fingers of this hand on the baby's cheekbones • Places second finger in the baby's mouth to pull the jaw down and flex the head • Uses the other hand to grasp the baby's shoulders • With two fingers of this hand, gently flexes the baby's head toward the chest • At the same time applies downward pressure on the jaw to brings the baby's head down until the hairline is visible. • Pulls gently to deliver the head • Asks an assistant to push gently above the mother's pubic bone as the head delivers • Raises the baby, still astride the arm, until the mouth and nose are free				
4.11 Does active management of 3rd stage of labour				
4.11 Provides newborn care at birth ▪ Gets the assistant to immediately examine the newborn for any injuries to the neck, abdomen or limbs				
4.11Checks the birth canal for tears following delivery, and repair if necessary				
4.12Repairs the episiotomy, if one was performed (see **Learning Guide Episiotomy and Repair**).				
4.13Provides immediate postpartum and new born care, as required.				
Task 5: Post-procedure tasks				
5.1 Before removing gloves, dispose of waste materials in a leak-proof container or plastic bag.				
5.2 Place all instruments in 0.5% chlorine solution for 10 minutes for decontamination.				
5.3 Immerse both gloved hands in 0.5% chlorine solution. Remove gloves by turning them inside out. • If disposing of gloves, place them in a leakproof container or plastic bag. • If reusing surgical gloves, submerge them in 0.5% chlorine solution for 10 minutes for decontamination.				
5.4 Wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.				

Episiotomy should not be performed routinely.
Indications
Foetal and maternal distress in second stage
Mal-presentations: Breech in the perineum, shoulder dystocia
Instrumental deliveries

Learning guide: Episiotomy and repair

Rating scale: 2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards even after prompting

	2	1	0	Comments
Task 1: Getting ready				
1.1 Assembles all necessary equipment and supplies ▪ Episiotomy scissors ▪ Dissecting forceps plain ▪ Dissecting forces toothed ▪ Needle holder (medium) ▪ Suture cutting scissors ▪ Vicryl 0 or 2-0 (with big needle, Cutting) ▪ Betadine solution ▪ Xylocaine 1%				
1.2 Ensures proper light				
1.3 Informs the mother about the procedure and also informs the family				
1.4 Asks about known allergies to anaesthetics				
1.3 Washes the gloved hand with betadine or changes the gloves				
1.4 Swabs the vulva and perineum with betadine				
Task 2: Administering local anaesthetic				
1.1 Draws 10 ml of 1% lignocaine into a syringe				
1.2 Informs the mother about the injection				
1.3Inserts two fingers into the vagina along the proposed incision line				
1.4Inserts the needle 4-5 cm beneath the skin for 4-5 cm following the same line and aspirate the needle to ensure that the needle is not in a vessel				
1.5Injects the lignocaine into the vaginal mucosa, beneath the skin of the perineum and deeply into the perineal muscle				
1.6Waits for two minutes and then pinches the incision site (waits for another two minutes if she feels the pinch)				
Task 3: Making the episiotomy				
3.1 Wait to perform the episiotomy: ▪ When the perineum is thinned out ▪ 3-4 cm of the presenting part is seen (vertex or breech)				
3.2 Places two fingers (palmar side downwards) between the baby's head and the perineum				
3.3 Inserts the open blade between the two fingers and the perineum				
3.4 Makes a medio-lateral incision (at 45 ^{0}angle to the midline toward a point midway between the ischial spine and anus, approximately 4 cm long)				
3.5 Cuts 2-3 cm up the middle of the posterior vagina				
3.6 Controls the baby's head and shoulders as they are born, ensuring the shoulder is rotated to the midline to prevent an extension of the episiotomy				
3.7 Carefully examines for extensions and other tears, and repair				
3.8 If the bleeding is heavy from the episiotomy after the baby is delivered, catches the bleeder with an artery forceps or put pressure with a sterile gauze piece to control bleeding till repair				

Task 4: Repairing the episiotomy				
4.1 After the placenta is delivered, ensures that the woman's buttocks are positioned to the edge of the table and the legs are on a stirrup (if available)				
4.2 Asks the assistant to direct the light to the perineum				
4.3 Carefully examines for extension and other tears				
4.4 Cleans the area around the episiotomy with antiseptic solution				
4.5 Checks whether effect of anaesthesia is still on. ▪ *Repeats lignocaine (1%) injection 10 ml as above and after ensuring that the needle is not in a blood vessel, injects on both sides of the vaginal incision and perineal incision*				
4.6 Sutures in three layers: ▪ Closes the vaginal mucosa using continuous suture with chromic catgut 2/0, by inserting the needle 1 cm above the apex of the episiotomy ▪ Continues the suture to the level of the vaginal opening ▪ At the vagina opening brings together the cut edges of the vaginal opening- brings the needle inside the vaginal opening and out through the incision and ties ▪ Closes the perineal muscle using chromic catgut 2-0 interrupted sutures working from top of the incision downward ▪ Closes the skin using interrupted (or subcuticular) 2-0 sutures				
4.7 Ensures that there is no bleeding and places a cloth or pad on the perineum				
Task 5: Post-procedure tasks				
5.1 Disposes of waste material in leak-proof container				
5.2 Places all instruments in 0.5% chlorine solution for 10 minutes for decontamination				
5.3 Immerses the gloved hand in 0.5% chlorine solution				
5.4 Washes hand with soap and water and dries with clean cloth or air dries				
Task 6: Educating the mother about care of the perineum				
6.1 Keep the area dry changing pads frequently				
6.2 Every time after passing urine, clean and dry the perineum				
6.3 After passing stool, clean by moving the and backwards away from the wound				
6.4 Clean the wound area with betadine swabs by starting from the vaginal end towards the anus				
6.5 Follow up visit after one week for removal of stiches in case of cotton or nylon stitches used for repair of skin				

Learning guide – Shoulder dystocia

Rating scale
2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards

Task 1: Immediate management				
	2	**1**	**0**	**Comments**
1.1 Shouts for help and mobilize as much help as possible				
1.2 Prepares for resuscitation mother and baby				
1.3 Prepares for prevention of haemorrhage				
1.4 Informs mother about the problem and tell her what is going to be done and likely problems to the newborn and herself. Provides reassurance and emotional support as possible.				
1.5 Asks an assistant to inform the family				
1.6 Cuts the cord if around the neck				
Task 2: Pre-procedure tasks				
2.1 Performs an episiotomy (see **Learning Guide: Episiotomy and Repair**) to reduce soft tissue obstruction and to allow space for manipulation				
2.2 Changes gloves or wash hands in antiseptic solution				
Task 3: Delivery of stuck shoulder				
McRobert's manoeuver 3.1 With the woman on her back, asks her to flex both thighs, bringing her knees as far up as possible towards her chest. Asks two assistants to push the flexed knees firmly up onto her chest				
3.2 Applies firm, continuous traction downwards on the foetal head to move the shoulder that is anterior under the symphysis pubis ▪ (AVOID excessive traction on the foetal head as this may result in brachial plexus injury)				
3.3 At the same time, makes an assistant simultaneously apply supra pubic pressure downwards to assist delivery of the shoulder. ▪ (DO NOT apply fundal pressure as this will further impact the shoulder and can result in uterine rupture)				
Application of rotational manoeuver for shoulder still not delivered 3.4 Inserts a hand into the vagina along the baby's				

back				
3.5 Applies pressure to the shoulder that is anterior in the direction of the baby's sternum to rotate the shoulder and decrease the diameter of the shoulders.				
3.6 If needed, applies pressure to the shoulder that is posterior in the direction of the sternum				
Releasing the posterior arm if shoulder is still not delivered 3.7 Inserts a hand into the vagina; Grasps the humerus of the arm that is posterior and keeping the arm flexed at the elbow, sweep the arm across the chest. This will provide room for the shoulder that is anterior to move under the symphysis pubis.				
If not successful and surgical help is not available immediately **3.8 R**olls the woman to her hands and knees (on all-fours), try delivering the shoulder				
3.9 Assists the woman to adopt a kneeling on "all fours" position and ask her companion to hold her steady - this simple change of position is sometimes sufficient to dislodge the impacted shoulder and achieve delivery				
3.10 Introduces the right hand into the vagina along the posterior curve of the sacrum				
3.11 Attempts to deliver the posterior shoulder or arm using pressure from the finger of the right hand to hook the posterior shoulder and arm downwards and forwards through the vagina				
3.12 Completes the rest of delivery as normal				
3.13 Do rapid initial assessment of the woman (breathing, pulse, BP), bleeding				
3.14 Gets the assistant to do an assessment of the newborn for breathing and injuries.				
3.15 If not successful, refers urgently to hospital				

▪ Makes arrangements for referral ▪ Informs the woman and her family about the need for referral and likely complications. Responds to questions with sympathy ▪ Provides emotional support to the mother.				
Task 4: Post-procedure care				
7.1 Repairs the episiotomy (see **Learning Guide: Episiotomy and Repair**)				
7.2 Continues to provide emotional support to the other				
Task 5: Post-procedure tasks				
5.1 Disposes off the waste in a leak-proof container				
5.2 Immerse both gloved hands in 0.5% chlorine solution. Remove gloves by turning them inside out • If disposing of gloves, place them in a leakproof container or plastic bag • If reusing surgical gloves, submerge them in 0.5% chlorine solution for 10 minutes for decontamination				
5.3 Wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.				

Delivery done in health centre only if:

- Second stage of labour
- Twins
- First baby vertex or breech
- Foetal hearts heard and within normal range
- NO CPD
- NO placenta praevia

Learning guide: Managing delivery in multiple pregnancy

Rating scale
2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards

	2	1	0	Comments
Task 1: Getting ready				
1.1 Reviews ANC record and labour record				
1.2 Assembles all equipment and supplies for normal delivery as well as for assisted delivery (ventouse) and supplies and equipment for at least two newborns				
1.3 Wears protective barriers				
1.4 Washes hands thoroughly with soap and water and air dries or dries with a clean cloth. Wears sterile gloves				
1.5 Does rapid assessment to determine the stage of labour, the lie of the foetuses and foetal heart and rule out placenta praevia				
1.6 Makes arrangements to refer the woman and emergency transport				
1.7 Shares with the woman findings and about the likely risk to the babies and mother. ▪ Also explains the reason for doing the delivery in the health centre as she is in advanced stage of labour and also mention that the possibility of referral if one of the babies is not in normal position. ▪ Encourages the woman to ask questions ▪ Provides continuous emotional support				
1.8 Informs the family about the findings and likely risks				
2.6 Reviews and ensures that the following conditions for delivering in the health centre are present: ▪ Second stage of labour ▪ Twins ▪ First baby vertex or breech				

▪ Foetal hearts heard and within normal range ▪ NO CPD ▪ NO placenta praevia				
Task 2: Delivery of the first baby				
2.1 Asks for an assistant to help with the delivery				
2.2 Starts IV fluids				
2.3 Cleans the vulva with antiseptic solution				
2.4 Delivers the first baby if vertex or breech				
2.5 Requests the assistant to provide care of the newborn (clean airway, warmth)				
2.6 Leaves a clamp on the maternal end of the cord *and do not attempt to deliver the placenta until the last baby is delivered*				
Task 3: Delivery of the second baby or additional babies				
3.1 Immediately after the first baby is born, gets the assistant to palpate: ▪ to determine the lie of the additional baby/babies ▪ foetal heart/s				
3.2 Does vaginal examination to determine the following: ▪ whether the cord has prolapsed ▪ whether membranes ruptured ▪ presentation of the other baby				
3.3a. If the presentation is vertex or breech (complete, size not larger than the first), contractions are good and the foetal heart is normal: ▪ prepares to deliver the baby ▪ If the membranes are intact, ruptures the membranes when the presenting part is at the ischial spine				
3.3 b *If the lies is not longitudinal or if there are signs of foetal distress and poor contractions, arranges for urgent referral* ▪ Informs the woman and the family about the situation and the need for urgent referral				

▪ Arranges to send a donor either identified in the complication readiness plan or a new one				
3.4 Requests the assistant to provide care to the newborn				
Task 4: Management of 3rd stage of labour				
4.1 After confirming that there are no more babies, ▪ gives oxytocin 10units IM within one minute after delivery of the last baby ▪ continues active management of third stage to reduce postpartum blood loss				
4.2 Examines the placenta and membranes for completeness				
4.3 Watches for haemorrhage ▪ Monitors whether uterus is contracted, BP				
4.4 Provides immediate postpartum care to mother and newborn				
4.5 Assist the woman with skin to skin contact with her newborn babies and breastfeeding				
4.6 Advises the family to support the mother to take care of the newborns				
Task 5: Post-procedure tasks				
5.1 Disposes off the waste in a leak-proof container				
5.2 Immerse both gloved hands in 0.5% chlorine solution. Remove gloves by turning them inside out • If disposing of gloves, place them in a leakproof container or plastic bag If reusing surgical gloves, submerge them in 0.5% chlorine solution for 10 minutes for decontamination				
5.3 Wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.				

Learning guide – Applying ventouse (vacuum extractor)

Performed in case of foetal distress
Criteria to be met for applying vacuum extractor:

- Vertex presentation
- Term foetus
- Cervix fully dilated
- Head at 0 station or no more than 2/5 palpable above the symphysis pubis
- Membranes ruptured

Rating scale: 2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards even after prompting

	2	1	0	Comments
Task 1: Getting ready				
1.1 Decides if the woman can be helped by using a vacuum extractor. Check that conditions (indications) are right to do a vacuum extraction.				
1.2 Makes arrangements for referral including transport ▪ Tells the woman that she needs assistance to deliver her baby and there may be possible problems. Explains if the vacuum extractor does not help the baby deliver, a caesarean section may be needed and will need referral. Encourages her to ask questions and responds in a compassionate manner. Provides continuous emotional support. ▪ Tells the family about the situation and arranges for a donor (already identified in the complication readiness plan or a new one to accompany the woman)				
1.4 Before the procedure, calls for helpers ▪ one person to help with the vacuum extraction who is trained in how to use the equipment ▪ another person to take care of the baby immediately after birth including resuscitation				
1.5 Prepares the vacuum extractor ▪ Identifies a large cup ▪ Connects the pump, tubing and cup ▪ Tests the vacuum on the palm of the hand by asking the helper to increase the pressure to 100 mm HG. Then releases the vacuum.				
1.6 Wears personal protective barriers				
Task 2: Pre-procedure tasks				
2.1 Positions the woman on her back with her legs bent with her buttocks at the edge of the bed. Supports her feet (by helpers) if not already in lithotomy position held by stirrups.				
2.2 If wearing gloves, change gloves or wash gloved hand in antiseptic solution				
2.3 Cleans the vulva with antiseptic solution				
2.3 Catheterises the bladder if needed				

Task 3: Vacuum extraction				
3.1 Does vaginal examination to assess the position of the foetal head by feeling the sagittal suture line and the fontanelles, descent and flexion point				
3.2 Identifies the posterior fontanelle				
3.3 Identifies the flexion point, 3 cm anterior to the posterior fontanelle				
3.4 Informs the woman each time what is going to be done during the procedure				
3.4 Applies the largest cup that will fit, with the centre of the cup over the flexion point and the edge of the cup placed about 1 cm anterior to the posterior fontanelle. ▪ Holds the vacuum extractor cup (compressed if soft cup, sideways if hard cup) in one hand ▪ Separates the labia with the fingers of the other hand and pulls down the perineum to make a place for the cup ▪ Inserts the cup in the vagina ▪ Moves the cup into place over the flexion point (centres on the sagittal suture, just in front of the posterior fontanelle)				
3.5 Performs an episiotomy if needed to facilitate the proper placement of the cup **(See learning guide for episiotomy)**				
3.5 Checks the application to ensure that no maternal soft tissue is caught in the cup (releases pressure and reapplies if any tissue is caught)				
3.6 Holds the cup in position with one hand with thumb on the cup and index finger on the baby's scalp				
3.7 With the pump, asks the assistant to create a vacuum of 0.2 kg/cm^2 negative pressure ▪ Checks the application to ensure that no maternal tissue is caught below the cup				
3.8 Increases the vacuum to 0.8kg/cm^2 ▪ Checks the application to ensure that no maternal tissue is caught below the cup				
3.9 After maximum negative pressure, starts traction in the line of the pelvic axis and perpendicular to the cup. ▪ If the **foetal head is tilted to one side or not flexed well**, traction is directed in a line that will try to correct the tilt or deflexion of the head (i.e. to one side or the other, not necessarily in the midline).				
3.10 At the onset of each contraction, applies traction perpendicular to the plane of the cup rim and maintains through the contraction (changing the axis of the traction according to pelvic curve) ▪ Place a finger on the scalp next to the cup during traction to assess potential slippage and descent of the vertex.				
3.11 Between each contractions, makes the assistant check ▪ Foetal heart ▪ Application of the cup				
3.12 Asks the woman to push long and steadily with a contraction				
3.13 a. Continues with guided pulls for a maximum of 20-30				

minutes if: ▪ Progress in descent of the head ▪ No foetal distress ▪ If there is no slip of the cup b.If not successful, refers to the facility where already arrangements have been made				
3.14.a When the head crowns, pull upward at 45 degree angle and pull the head out 3.14.b Delivers the head slowly, protecting the perineum				
3.15 Once the head is delivered, releases the vacuum and removes the cup and completes the delivery				
3.16 Informs the mother about the completion of the procedure. Informs the family.				
3.17 Asks the assistant to provide immediate newborn care especially breathing as per **learning guide on assisting in delivery** ▪ Dries and keeps the baby warm, cuts the cord and ties and puts the baby on mother's breasts as soon as possible				
Task 4: Post-procedure care				
4.1 Performs active management of third stage of labour				
4.2 Ensures that the uterus is well contracted and that the blood loss is not excessive				
4.3 Checks for genital trauma and repairs lacerations or refers				
4.4 Repairs episiotomy				
4.5 Examines the newborn's scalp and notes injuries. Explains t the mother about the large swelling on the head				
4.6 Explains to the parents about the reason for the large swelling on the head and assures that it will disappear within few hours				
4.7 Encourages the mother and baby to rest and monitor them closely				
4.8 Monitors the woman's uterine tone, vaginal bleeding, pulse, temperature and blood pressure every 15 minutes for the first two hours, every 30 minutes for the third hour after birth, and then hourly for three hours.				
Task 5: Post-procedure tasks				
5.1 Disposes of waste material in leak-proof container				
5.2 Places all instruments in 0.5% chlorine solution for 10 minutes for decontamination				
5.3 Immerses the gloved hand in 0.5% chlorine solution				
5.4 Washes hand with soap and water and dries with clean cloth or air dries				
5.5 Documents the following information: ▪ indication for vacuum birth ▪ date and time of the procedure ▪ name of the clinician performing the procedure and the names of personnel who assisted ▪ length of the procedure and the number of pulls ▪ position of the foetal head prior to application of the cup (occipito-anterior, occipito-lateral, occipito-posterior) ▪ birth position (occipito-anterior or occipito-posterior) ▪ condition of the baby at birth, colour, whether breathing and any resuscitation needed as well as position of "chignon" and any bruising				

▪ details of the third stage of labour ▪ details of any medications used ▪ maternal condition following the procedure ▪ any complications affecting the mother or baby				
PRECAUTIONS- TO AVOID COMPLICATIONS • Place cup on flexion point. • Pull in the direction of the birth canal. • Pull only when the woman is pushing with contraction. • Each pull should show progress. • Two pulls without descent – stop. • Three pop-offs – stop. • Foetal scalp trauma seen – stop. • Failure of efforts in 20 minutes – stop. • Prevent cup detachment (pop-off). TIPS • Never use the cup to actively rotate the baby's head. Rotation of the baby's head will occur with traction. • The first pulls help to find the proper direction for pulling. • Do not continue to pull between contractions and expulsive efforts. • With progress, and in the absence of fetal distress, continue the "guiding" pulls for a maximum of 30 minutes. Vacuum-assisted birth •				

MODULE EVALUATION

Module: Malpresentations

Please indicate your opinion of the course components using the following rating scale:

5. Strongly Agree
4. Agree
3. No opinion
2. Disagree
1. Strongly disagree

Course component	Rating
1.The discussions helped me to clarify elements related to basic care.	
2.The exercises were useful for learning about basic management of prolapsed cord, breech, shoulder dystocia and multiple pregnancy.	
3.The role plays on interpersonal communication skills were helpful.	
4.The case studies were useful for practising clinical decision making.	
5.The time for skill practice in a simulated setting was sufficient.	
6.The supervised client practice within the limitations of time was sufficient.	
7.I am confident about managing abnormal presentations during childbirth.	

CORD PROLAPSE

Diagnosis

- The umbilical cord lies in the birth canal below the foetal presenting part
- The umbilical cord is visible at the vagina following rupture of membranes

Causes

- Common in mal-presentations, transverse lie or in a breech
- Polyhydraminos
- Multiple pregnancy
- Pre-labour rupture of membranes
- Pelvic contraction resulting in presenting part remaining above the pelvis

FIND OUT IF CORD IS PULSATING.

- **If the cord is not pulsating,** check foetal heart with a Doppler
- **If the cord is pulsating,** depending on the stage of labour, manage accordingly

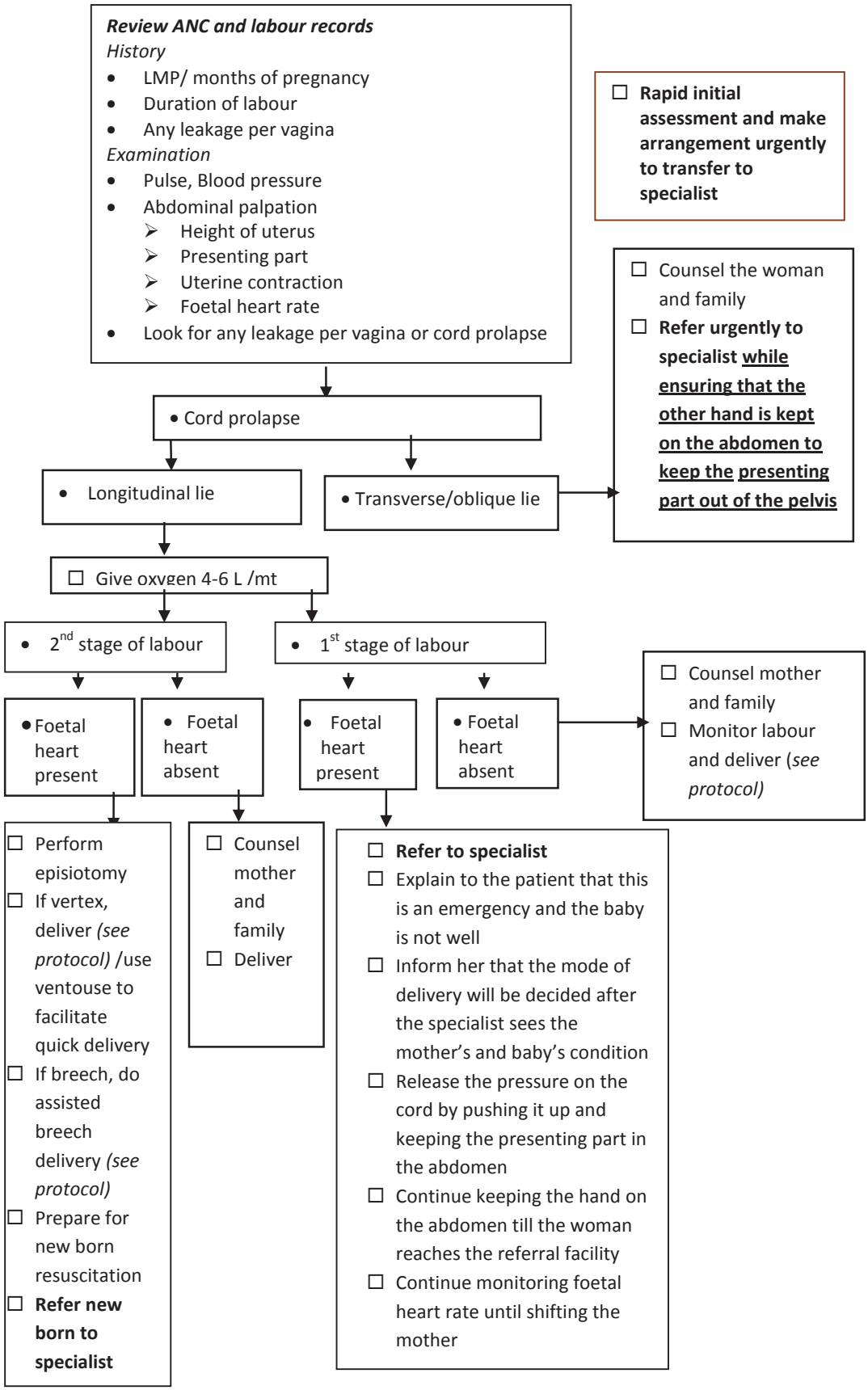
If the woman is in first stage of labour:

- Wearing sterile gloves, insert a hand into the vagina and push the presenting part up to decrease pressure on the cord and dislodge the presenting part from the pelvis
- Place the other hand on the abdomen in the supra pubic region to keep the presenting part out of the pelvis
- Once the presenting part is firmly held above the pelvic brim, remove the other hand from the vagina.
- Refer to a specialist **while ensuring that the other hand is kept on the abdomen to keep the presenting part out of the pelvis**.

If the woman is in second stage of labour:

- Expedite delivery with episiotomy
- Care of the new born especially breathing
- Refer to specialist (for new born)

CORD PROLAPSE



BREECH PRESENTATION IN LABOUR

Diagnosis

Abdominal palpation

- The head is felt in the upper abdomen
- The breech is felt in the pelvic brim
- Auscultation locates the foetal heart higher than that expected with a vertex presentation

Vaginal examination

- The buttocks and /or feet are felt down

Types of Breech presentation

Complete (flexed) breech
Both legs are flexed at hips and knees

Frank breech
Both legs are flexed at the hips and extended at the knees

Footling breech
Leg is extended at hip and knee

Conducting Breech delivery:

- Once the buttocks have entered the vagina and the cervix is fully dilated, tell the woman she can bear with the contractions

Delivery of the buttocks and legs

- When the breech distends the perineum, perform an episiotomy if the perineum is very tight
- Let the buttocks deliver until the lower back and then the shoulder blades are seen
- Gently hold the buttocks in one hand, but do not pull
- If the legs do not deliver spontaneously, deliver one leg at a time:
  - ➢ Push behind the knee to bend the leg
  - ➢ Grasp the ankle and deliver the foot and leg
  - ➢ Repeat for the other leg
- Hold the baby by the hips (not by abdomen as it may injure internal organs)

Delivery of the arms (felt on the chest)

- Allow the arms to disengage spontaneously one by one. Only assist if necessary.
- After spontaneous delivery of the first arm, lift the buttocks towards the mother's abdomen to enable the second arm to deliver spontaneously.
- If the **arm does not deliver spontaneously deliver,** place one or two fingers in the elbow and bend the arm, bringing the hand down over the baby's face.

Arms are stretched above the head or folded around the by the Lovset's manoeuvre

- Hold the baby by the hips and turn half a circle, keeping the back uppermost and applying downward traction at the same time, so that the arm that was posterior becomes anterior and can be delivered under the pubic arch.
- Assist delivery of the arm by placing one or two fingers on the upper part of the arm. Draw the arm down over the chest as the elbow is flexed, with the hand sweeping over the face.
- To deliver the second arm, turn the baby back half a circle, keeping the back uppermost and applying downward traction, and deliver the second arm in the same way under the pubic arch.

Baby's body cannot be turned to deliver the arm that is anterior first:

- Deliver the arm that is anterior first, deliver the shoulder that is posterior
- Hold and lift the baby up by the ankles.
- Move the baby's chest towards the woman's inner leg. The shoulder that is posterior should deliver.
- Deliver the arm and hand.
- Lay the baby back down by the ankles. The shoulder that is anterior should now deliver.
- Deliver the arm and hand.

Delivery of the head by Mauriceau-Smellie-Veit manoeuvre

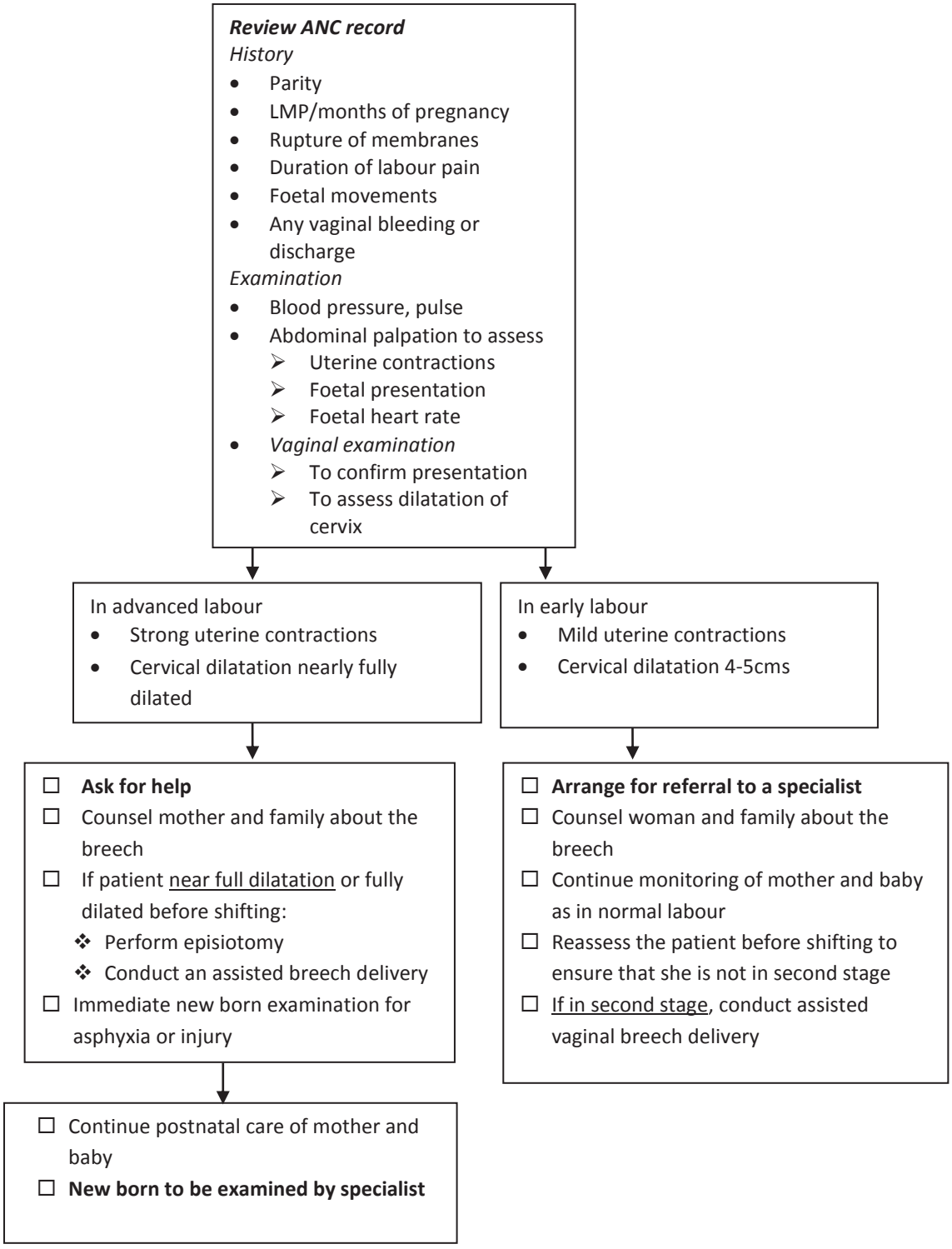
- Lay the baby face down with the length of its body over your hand and arm
- Place the first and third fingers of this hand on the baby's cheekbones and place the second finger in the baby's mouth to pull the jaw and flex the head
- Use the other hand to grasp the baby's shoulders.
- With two fingers of this hand gently flex the baby's head towards the chest while pulling the jaw to bring the baby's head down until the hairline is visible. Pull gently to deliver the head.

- Any breech presentation diagnosed after 34 weeks of pregnancy should be referred to a specialist.
- Any breech recognised during early labour should be referred to a specialist
- DELIVER ONLY BREECH IN THE PERINEUM AT HEALTH CENTRE IF:
  - Only complete and frank breech
  - No previous C-section for CPD
  - Foetus not big
  - Foetal head flexed

Indications for elective C-section

- Very large foetus
- Previous caesarean section for CPD
- Hyperextended or deflexed head
- Footling breech presentation
- Breech with any medical or obstetric complication

BREECH PRESENTATION IN LABOUR



SHOULDER DYSTOCIA

The foetal head has been delivered but the shoulders are stuck and cannot be delivered.

Points to remember

- Shoulder dystocia can occur at all deliveries and cannot be predicted
- It is more common when the baby is large.
- Need assistance of several people during delivery.

Diagnosis

- The foetal head is delivered but remains tightly applied to the vulva
- The chin retracts and depresses the perineum
- Traction on the head fails to deliver the shoulder, which is caught behind the symphysis pubis

Mc Roberts Manoeuvre

- Perform episiotomy to reduce the soft tissue obstruction and to allow space for manipulation
- With the woman on her back, ask her to flex both thighs, bringing her knees as far up as possible towards her chest. Ask two assistants to push the flexed knees firmly up onto her chest
- Wearing sterile gloves, apply firm, continuous traction downwards on the foetal head to move the shoulder that is anterior under the symphysis pubis (avoid excessive traction on the foetal head as this may result in brachial plexus injury)
- Have an assistant simultaneously apply supra pubic pressure downwards to assist delivery of the shoulder.(DO NOT apply fundal pressure as this will further impact the shoulder and can result in uterine rupture)

If shoulder still not delivered, apply rotational manoeuvres

- Insert a hand into the vagina along the baby's back
- Apply pressure to the shoulder that is anterior in the direction of the baby's sternum to rotate the shoulder and decrease the diameter of the shoulders.
- If needed, apply pressure to the shoulder that is posterior in the direction of the sternum

If the shoulder is still not delivered despite the above (releasing the posterior arm),

- Insert a hand into the vagina

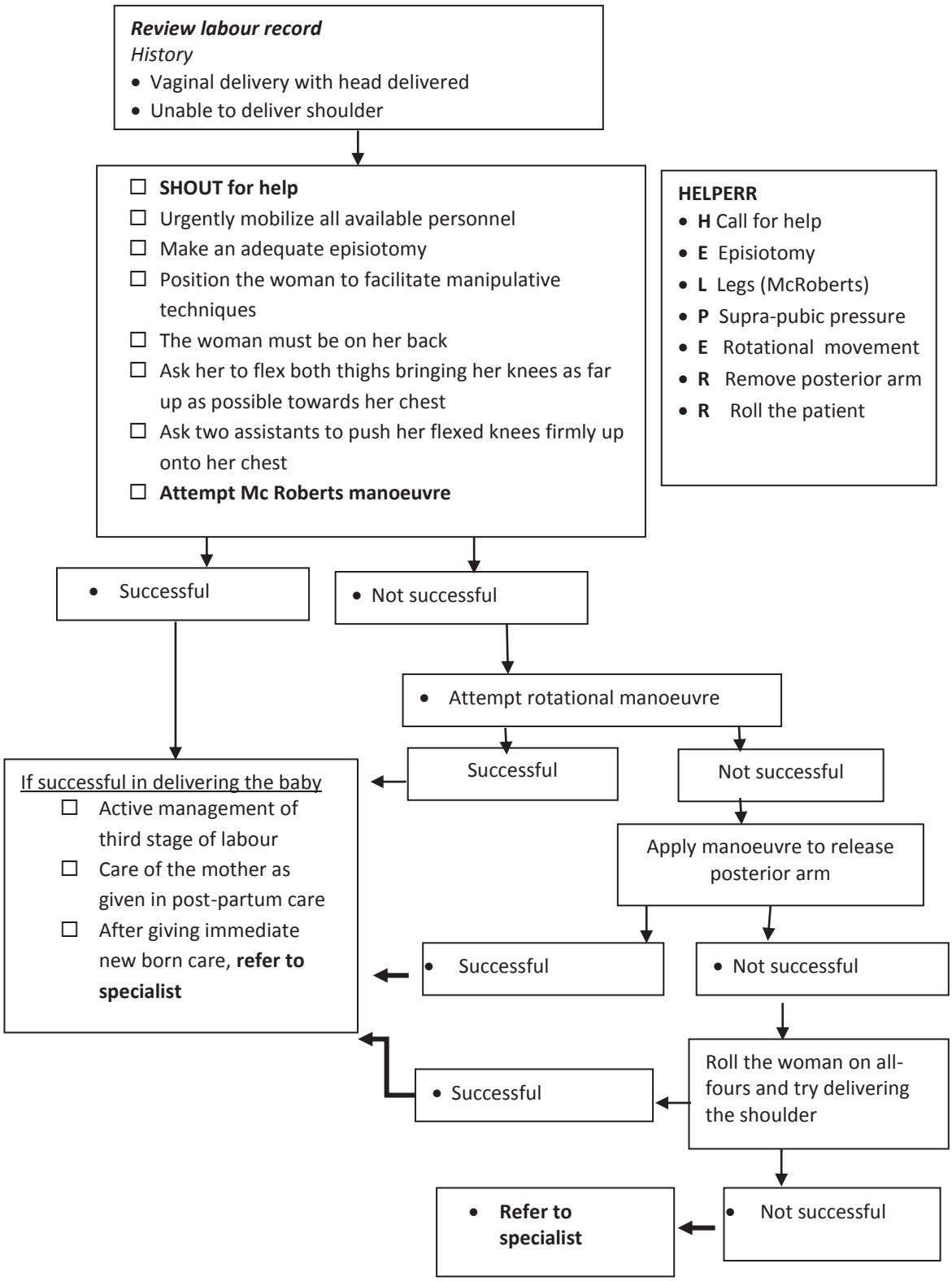
  Grasp the humerus of the arm that is posterior and keeping the arm flexed at the elbow, sweep the arm across the chest. This will provide room for the shoulder that is anterior to move under the symphysis pubis.

If not successful and surgical help is not immediately available, roll the woman to her hands and knees (on all-fours), try delivering the shoulder.

- Assist her to adopt a kneeling on "all fours" position and ask her companion to hold her steady -

  this simple change of position is sometimes sufficient to dislodge the impacted shoulder and achieve delivery.
- Introduce the right hand into the vagina along the posterior curve of the sacrum.
- Attempt to deliver the posterior shoulder or arm using pressure from the finger of the right hand to hook the posterior shoulder and arm downwards and forwards through the vagina.
- Complete the rest of delivery as normal.
- If not successful, **refer urgently to hospital**

SHOULDER DYSTOCIA



MULTIPLE PREGNANCY IN LABOUR

A pregnant woman may carry 2 or more foetuses and this is known as multiple pregnancy. Twin pregnancy is the commonest.

Diagnosis

- Fundal height more than period of gestation
- Multiple foetal poles and parts
- Foetal head small in relation to the uterus
- More than one foetal heart heard with Doppler foetal stethoscope
- Diagnosis is **confirmed by ultra-sonography (USG) (chorionicity to be determined)**

Management during pregnancy

In addition to regular antenatal care

- Extra supplement of iron and folic acid (2 tablets, each containing 60 mg elemental iron and 400 mcg of folic acid)
- Encourage additional bed rest (to prevent prematurity) especially between 30-34 weeks
- Evaluate for pre- eclampsia and counsel on warning signs at every visit
- Revise birth plan
    - Delivery is planned in a hospital with specialist with all facilities including blood transfusion
    - The woman should stay as near the facility as possible so that she could reach the hospital early if she goes into labour

Conducting delivery in multiple pregnancy

ALL EFFORTS MUST BE MADE TO REFER TO SPECIALIST IF MULTIPLE PREGNANCY IS DIAGNOSED DURING PREGNANCY OR DURING EARLYLABOUR

- Start IV infusion
- Deliver first baby if vertex or breech
- Leave a clamp on the maternal end of the cord and do not attempt to deliver the placenta until the last baby is delivered.
- Check lie of the second baby and the foetal heart rate
- Perform a vaginal examination to determine if
    - If the cord has prolapsed
    - If membranes are intact and check presentation

4 If the lie is longitudinal and the presenting part has descended, rupture the membranes

5 After delivery of the second baby, give oxytocin 10units IM within one minute after delivery of the last baby and **continue active management of third stage to reduce postpartum blood loss**

6 Watch for haemorrhage

Care of the new born babies

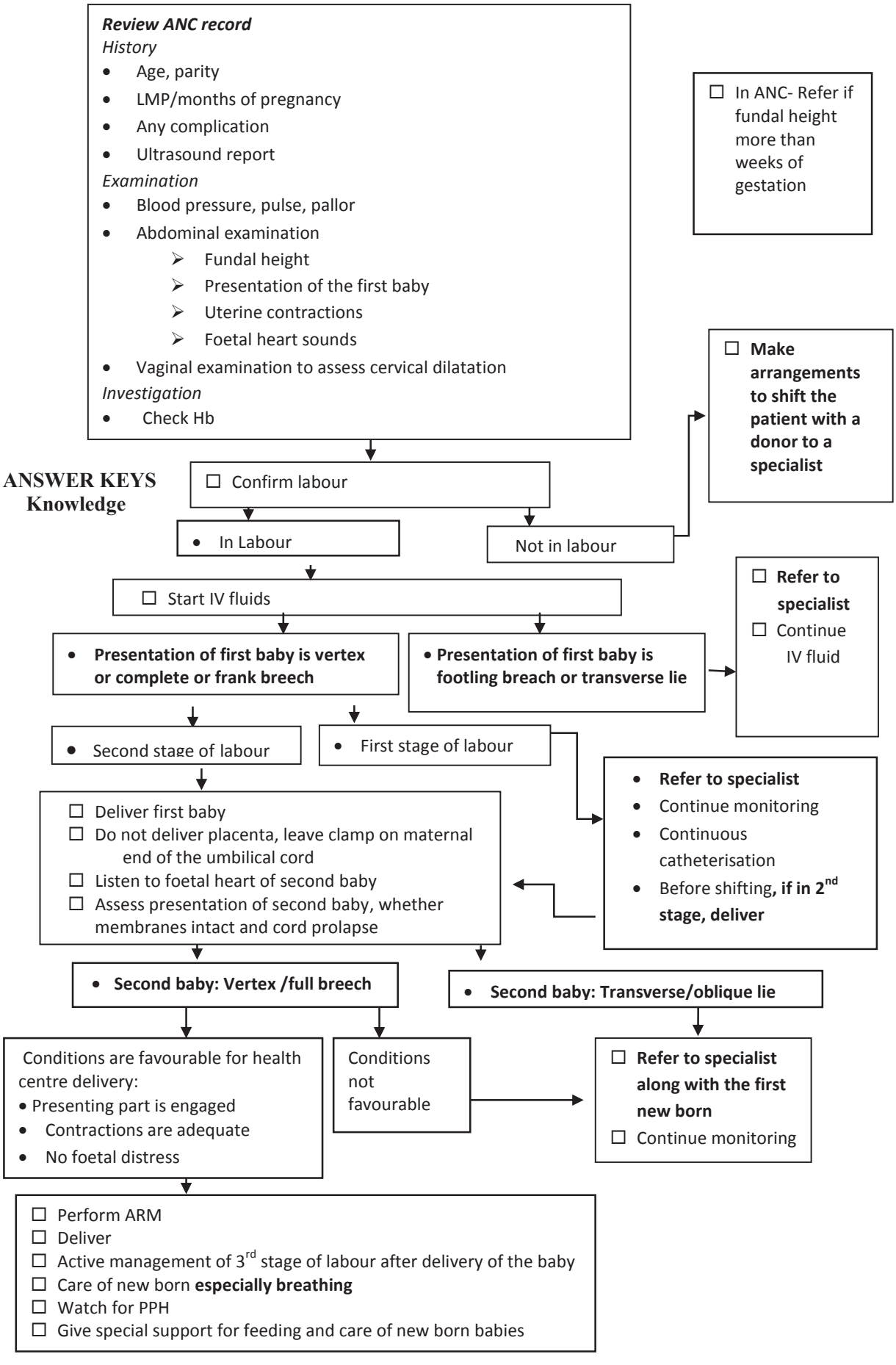
- The new born babies must be referred to a specialist for examination

Indication for caesarean Section

•First twin transverse/oblique
•Mono-amniotic twin pregnancy (diagnosed by USG)
•Any obstetrical contra-indication for vaginal delivery (CPD, placenta praevia, PET)
•Conjoint twin (diagnosed by USG)

Leave a clamp on the maternal end of the umbilical cord and do not attempt to deliver the placenta until the last baby is delivered. Give special support for care and feeding of babies.

ANSWER KEYS
Knowledge



Assessment questionnaire

Instructions: Write the letter of the single **best** answer to each question in the blank next to the corresponding number on the attached answer sheet.

1. If the cord prolapses
a) it may lie in the birth canal below the foetal presenting part but not be visible in the vagina
b) it may be visible in the vagina following rupture of the membranes
c) it may or may not be pulsating
d) all of the above

2. If the cord prolapses in the first stage of labour and is pulsating
a) a hand should be inserted into the vagina and the presenting part pushed up to decrease pressure on the cord
b) a hand should be inserted into the vagina and the presenting part pushed up to decrease pressure on the cord and dislodge the presenting part from the pelvis
c) a hand should be placed on the abdomen to push the presenting part up
d) the woman should be positioned on her back

3. If the cord prolapses in the second stage of labour and is pulsating
a) delivery should be expedited with episiotomy
b) delivery should be expedited with episiotomy and vacuum extraction
c) delivery should be expedited with episiotomy and vacuum extraction or forceps
d) delivery should be by caesarean section

4. When assessing foetal presentation in labour
a) the examination should be done during a contraction
b) vaginal examinations should not be performed
c) examination should be performed every 30 minutes during the active phase
d) **the woman should be resting in a supine position and the examination should be done between contractions**

5. In a breech presentation, the foetal heart
a) **can usually be heard at a location higher than expected for a vertex presentation**
b) can usually be heard at a location lower than expected for a vertex presentation
c) can usually be heard in the same location as for a vertex presentation
d) is not able to be heard

6. In performing a breech delivery
a) when the buttocks are seen, traction should be applied
b) meconium is a sign of foetal distress
c) suprapubic pressure should be avoided during delivery of the head
d) **the baby should be held by the hips, not by the flank or abdomen**

7. Which of the following signs are consistent with shoulder dystocia
a) the foetal head is delivered but remains tightly applied to the vulva
b) the chin retracts and depresses the perineum
c) traction on the head fails to deliver the shoulder
d) **all of the above**

8. To deliver stuck shoulders
a) **firm, continuous downward pressure should be applied on the foetal head**
b) firm, intermittent downward pressure should be applied on the foetal head
c) suprapubic pressure should be avoided
d) downward firm pressure on the fundus should be applied

9. If normal manoeuvers do not result in delivery of the shoulders in a case of shoulder dystocia, the next step is to
a) apply traction with a hook in the axilla
b) fracture the clavicle of the anterior shoulder
c) insert a hand into the vagina and grasp the anterior hand to deliver the arm across the chest
d) **insert a hand into the vagina to apply pressure to the anterior shoulder to rotate it**

10. If multiple foetal poles and parts are felt on abdominal palpation
a) breech presentation should be suspected
b) a transverse lie should be suspected
c) **multiple pregnancy should be suspected**
d) none of the above

11. If the first baby in a multiple pregnancy is a transverse lie
a) labour should be allowed to progress as for a single foetus
b) labour should be augmented
c) **delivery should be by caesarean section**
d) delivery should be by vacuum extraction

Exercise 1
Identify the following conditions as malpresentation or malposition

Condition	Mal-presentation/Mal-position	Rationale for the diagnosis
Occipito-posterior	Malpostion	Occiput is posterior in relation to maternal pelvis On abdominal examination ▪ Lower part of the abdomen is flattened ▪ Foetal limbs palpable anteriorly ▪ Foetal heart heard in the flank On vaginal examination ▪ Occiput posterior felt near the sacrum
Face presentation	Malposition	Face is the presenting part On abdominal examination ▪ A groove may be felt between the occiput and the back. On vaginal examination ▪ The face is palpated, the examiner's finger enters the mouth easily and the bony jaws are felt
Brow	Malposition	Occiput is higher than the sinciput On abdominal examination**:** ▪ More than half the fetal head is above the symphysis pubis and the occiput is palpable at a higher level than the sinciput. On vaginal examination ▪ The anterior fontanelle and the orbits are felt.
Breech presentation	Malpresentation	Breech presentation occurs when the buttocks and/or the feet are the presenting parts. On abdominal examination ▪ The head is felt in the upper abdomen and the breech in the pelvic brim ▪ Auscultation locates the fetal heart higher than expected with a vertex presentation ▪ On vaginal examination during labour, the buttocks and/or feet are felt

		▪ Thick, dark meconium is normal.
Cord presentation	Malpresentation	Cord felt below the presenting part If membranes ruptured, may be visible
Oblique lie	Malpresentation	Foetus lies obliquely or transversely (perpendicular to) across the long axis of the uterus and the presentation could be any part of the foetus other than the cephalic or breech On abdominal examination ▪ Transverse enlargement ▪ Fundal and pelvic grips empty ▪ Foetal limbs palpable on either side of the midline ▪ Foetal head in one flank and buttocks in the opposite On vaginal examination ▪ Neither the foetal head or buttocks are felt ▪ Shoulder may be felt

Case study: Prolapsed cord

Directions

Read and analyse 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.

Case study

Mrs. Betsy. is a 35-year-old gravida five, para four. You have provided antenatal care during which Mrs. Betsy's pregnancy was found to be progressing well. She is now 39 weeks pregnant and has come to the community health centre to report that labour pains started 2 hours ago.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

7. What will you include in your initial assessment of Mrs. Betsy, and why?
    - Mrs. Betsy should be greeted respectfully and with kindness.
    - She should be told what is going to be done and listened to carefully. In addition, her questions should be answered in a calm and reassuring manner.
    - An immediate assessment (e.g., observation of pushing, grunting, bulging thin perineum, or vagina gaping and head visible) should be done to determine whether childbirth is imminent.
    - If childbirth is imminent, preparations should be made for this.
    - If childbirth is not imminent, a targeted history should be taken; Mrs. Betsy should first be asked how she is feeling and whether she has any of the following signs or symptoms: severe headache, blurred vision, epigastric pain, breathlessness, fever, vaginal bleeding, leakage of fluid from the vagina. Determine the colour of amniotic fluid if membranes are ruptured. She should also be asked about foetal movement, the time labour began and the strength and duration of contractions, as well as about complications during previous pregnancies.
    - In addition to noting the time labour began and the strength and duration of contractions, information should be obtained about membranes (ruptured or not), the colour of amniotic fluid, presence of vaginal bleeding, and presence of foetal movement.
    - Mrs. Betsy's blood pressure, temperature and pulse should be taken, and her emotional response to labour should be observed.

8. What particular aspects of Mrs. Betsy's physical examination will help you make a diagnosis or identify her problems/needs, and why?
    - An abdominal examination should be done to check whether uterine size is consistent with gestation estimated by dates; to assess the frequency and duration of contractions; to assess the lie and presentation of the foetus; to assess the descent of the presenting part; and to listen to the foetal heart.
    - The vulva should be examined to note the presence of blood, mucus, amniotic fluid, discharge or other symptoms of sexually transmitted infections, and warts or keloid tissue that may interfere with childbirth.
    - A vaginal examination should follow to determine dilation of the cervix, identify presentation and measure the level of the presenting part.

9. What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. Betsy, and why?
    - A urine specimen should be tested for protein and ketones.

Diagnosis (Identification of Problems/Needs)

You have completed your assessment of Mrs. Betsy and your main findings include the following:

Mrs. Betsy. is having two contractions in 10 minutes, each lasting 20–40 seconds. Membranes are intact. Her cervix is 4 cm dilated. The presentation is vertex and the head is not engaged. The foetal heart rate is 140 beats/minute.

Mrs. Betsy's vital signs are normal.

10. Based on these findings, what is Mrs. Betsy's diagnosis, and why?
    - Mrs. Betsy is in the active phase of the first stage of labour. Foetal descent should begin and cervical dilation should continue at a rate of 1 cm/hour.

Care provision (Planning and Intervention)

11. Based on your diagnosis, what is your plan of care for Mrs. Betsy, and why?
    - A supportive, encouraging atmosphere, respectful of Mrs. Betsy's wishes, should be provided.
    - All procedures should be explained to Mrs. Betsy and findings discussed with her.
    - She should be made comfortable and encouraged to move around freely.
    - A partograph should be started, using the information obtained during the initial examination.
    - Ongoing observations should include: maternal pulse, foetal heart rate, and contractions half hourly, blood pressure and temperature every 4 hours, urine for protein and acetone every 2–4 hours, vaginal examination every 4 hours (cervical dilation, descent of presenting part, amniotic fluid and moulding), preceded by abdominal examination (descent of presenting part).
    - It will be important to keep in mind that Mrs. Betsy's multiparity, and the fact that the presenting part is high, increases the possibility for the cord to slip down in front of the presenting part.

Evaluation

Two hours after admission, Mrs. Betsy's membranes ruptured. On vaginal examination, the cord is felt below the head, which is at 0 station. The cervix is 6 cm dilated. The foetal heart rate is 160 beats/minute.

12. Based on these findings, what is your continuing plan of care for Mrs. Betsy, and why?
    - All available personnel should be mobilized to assist with emergency care.

8.
    - Oxygen should be given at 4–6 L/minute by mask or nasal cannula.

9.
    - Because Mrs. Betsy is in the first stage of labor, the following steps should be taken, while at the same time someone makes arrangements for immediate transfer to the district hospital:

10.
    - Wearing high-level disinfected surgical gloves, one hand should be inserted into the vagina to push the presenting part upward to decrease pressure on the cord.
    - The other hand should be placed on the abdomen in the suprapubic region to keep the presenting part out of the pelvis.
    - Once the presenting part is firmly held above the pelvic brim, the hand should be removed from the vagina.
    - The hand on the abdomen should be kept there during transfer of Mrs. Betsy to the referral facility.

11.
    - The steps taken to manage the complication should be explained to Mrs. Betsy, she should be encouraged to express her concerns, listened to carefully, and provided emotional support and reassurance.

12.

Case study: Breech

Directions

Read and analyse 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.

Case study

Mrs. Amos is a 26-year-old gravida three, para two was admitted to the health centre at 2 PM. She has been having regular contractions for almost 4 hours. She was admitted to the health center. Her membranes had ruptured 30 minutes before her arrival.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

1. What will you include in your initial assessment of Mrs. Amos, and why?
    - Mrs. Amos should be greeted respectfully and with kindness.
    - She should be told what is going to be done and listened to carefully. In addition, her questions should be answered in a calm and reassuring manner.
    - An immediate assessment (e.g., observation of pushing, grunting, bulging thin perineum, or vagina gaping and head visible) should be done to determine whether childbirth is imminent.
    - If childbirth is imminent, preparations should be made for this.
    - If childbirth is not imminent, a targeted history should be taken; Mrs. Amos should first be asked how she is feeling and whether she has any of the following signs or symptoms: severe headache, blurred vision, epigastric pain, breathlessness, fever, vaginal bleeding, leakage of fluid from the vagina. Determine the colour of amniotic fluid if membranes are ruptured. She should also be asked about foetal movement, the time labour began and the strength and duration of contractions, as well as about complications during previous pregnancies.
    - In addition to noting the time labour began and the strength and duration of contractions, information should be obtained about membranes (ruptured or not), the colour of amniotic fluid, presence of vaginal bleeding, and presence of foetal movement.
    - Mrs.Amos's blood pressure, temperature and pulse should be taken, and her emotional response to labour should be observed.

2. What particular aspects of Mrs. Amos's physical examination will help you make a diagnosis or identify her problems/needs, and why?
    - An abdominal examination should be done to check whether uterine size is consistent with gestation estimated by dates; to assess the frequency and duration of contractions; to assess the lie and presentation of the foetus; to assess the descent of the presenting part; and to listen to the foetal heart.
    - A vaginal examination should follow to determine dilation of the cervix, identify presentation and measure the level of the presenting part.

Diagnosis (Identification of Problems/Needs)

You have completed your assessment of Mrs. Amos. The main findings are as follows: On abdominal examination: contractions are 3 per 10 minutes lasting 20-40 seconds; foetal lie is longitudinal and foetal head is palpable in the upper abdomen; foetal heart is heard at a level higher than usual and is 148/minute. Breech is palpable at the pelvic brim. On vaginal examination: cervix is 4-5 cm dilated. Amniotic fluid is clear. NO evidence of cord prolapse. All vital signs are normal.

3. Based on these findings, what is Mrs. Amos's diagnosis, and why?
First stage of labour with breech presentation

Care provision (Planning and Intervention)

4.Based on your diagnosis, what is your plan of care for Mrs. Amos, and why?

- Arrange for referral to a facility with C-section capability.
- Inform mother about the findings compassionately and give her emotional support. Tell her about likely problems with delivery and with the baby. Encourage her to ask questions.
- Inform the family about the findings and what is going to be done.

Case study: Shoulder dystocia

Directions

Read and analyse 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.

Case study

Mrs. Camelia is a 35-year-old gravida seven, para six. She was admitted to the district hospital in active labour at 10:00 pm. Labour has progressed well, as indicated on her partograph. It is now 4:00 am and the foetal head has just delivered and remains tightly applied to the vulva.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

1.What will you include in your immediate assessment of Mrs. Camelia, and why?

- Rapidly determine whether the chin retracts and depresses the perineum. Apply traction to the baby's head to deliver the shoulder (if shoulder dystocia is present, the shoulder will be caught behind the symphysis pubis and cannot be delivered by traction on the baby's head).

- While managing this problem, quickly tell Mrs. Camelia what is happening and what is going to be done (shoulder dystocia is a frightening experience for the woman and for the provider, so it is important to remain calm and explain as much as possible to the woman as you proceed with care).

Diagnosis (Identification of Problems/Needs)

Immediate assessment of the situation reveals the following:
The chin retracts and depresses the perineum.
Traction on the head fails to deliver the shoulder, which is caught behind the symphysis pubis.

2. Based on these findings, what is Mrs. Camelia's diagnosis, and why?

- The findings are consistent with shoulder dystocia.

Care provision (Planning and Intervention)

3.Based on your diagnosis, what is your plan of care for Mrs. Camelia, and why?

- An adequate episiotomy should be made immediately to reduce soft tissue obstruction and to allow space for manipulation.
- With Mrs. Camelia lying on her back, help her to flex both knees. Two assistants should be asked to push her flexed knees firmly up onto her chest (this should help to rotate the angle of the symphysis pubis superiorly).
- Firm, continuous downward traction should be applied to the foetal head to move the shoulder that is anterior under the symphysis pubis. At the same time, an assistant should be asked to apply suprapubic pressure downward to assist delivery of the shoulders.
- Continuing encouragement and reassurance should be provided for Mrs. Camelia.

Evaluation

Five minutes have elapsed since the delivery of the head. No further progress has been made.
4.Based on these findings, what is your continuing plan of care for Mrs. Camelia, and why?

Mrs. Camelia should remain in the same position (i.e., on her back with her knees well flexed).

- A gloved hand should be inserted into the vagina and pressure should be applied to the shoulder that is anterior in the direction of the baby's sternum (this should rotate the shoulder and decrease the shoulder diameter). If necessary, pressure can also be applied to the shoulder that is posterior in the direction of the sternum.
- If the shoulder is still not delivered, insert a hand into the vagina and grasp the humerus of the arm that is posterior. The arm should be well flexed at the elbow and should be swept across the chest (this should provide room for the shoulder that is anterior to move under the symphysis pubis).
- Throughout these manoeuvers, Mrs. Camelia should be provided continuing encouragement and reassurance.
- Active management of the third stage should follow (blood loss may be excessive due to injury associated with the childbirth).
- Immediate postpartum care should be provided for Mrs. Camelia, including continuing emotional support and reassurance.
- If her newborn requires special care, this should be provided (newborn asphyxia may occur following shoulder dystocia, and brachial plexus injury may result in an Erb's palsy). Otherwise, routine newborn care should be provided, including leaving the newborn in skin-to-skin contact with Mrs. Camelia and encouraging her to breastfeed her newborn as soon as she feels able to, when the newborn shows interest.

Module 9

Management of hypertensive disorders in pregnancy

Training resource package for intrapartum and immediate post-partum care

Every pregnant woman who develops complications during antenatal period that leads to life threatening conditions receives evidence-based, immediate and appropriate care that prevents death and disability, both of her and new born (including appropriate referral)

Clinical protocol: Hypertension in pregnancy

Module: Management of hypertensive disorders in pregnancy

Key tasks
- Recognition of type of hypertension
- Danger signs
- Care when diastolic BP is 90 or higher
- Magnesium Sulfate dose and administering the same
- Management of convulsions
- Educate and counsel about future pregnancies

Training schedule
- Key tasks
- Learning objectives
- Knowledge assessment
- Sessions plans

Trainer's guide

Session plan describes objectives of each session, topics, methodology and key points
- Exercise
- Case studies
- Clinical simulation
- Learning guides

Key knowledge
- Diagnosis of type of hypertensive disorders in pregnancy
- Danger signs
- Dose of initial dose of Magnesium sulfate initial dose
- Care during convulsions

Critical skills
- Constituting the initial dose of Magnesium Sulfate and giving the same
- Immediate management in severe pre-eclampsia and eclampsia
- Management of hypertensive disorders in pregnancy
- Educate and counsel about future pregnancies

Evaluation
- Post Test
- Skill assess: using learning
- Module evaluation

Module: Hypertension in pregnancy

Training schedule

Total time: 750 min **(12.5 hours)**

Time	Topic	Method	Resource materials
30 min	Welcome Objective of the module: To update the knowledge and skills in management of hypertensive disorders in in pregnancy Discuss: Key tasks Learning objectives Tools for evaluation of the session	Discussion	Slides 2-3
30 min	Knowledge assessment	Test	
Session 1 30 min	Diagnosis of hypertension in pregnancy	Exercise Discussion	Slides 4-10 MCPC 2017 **(S50-51)** Clinical protocol on Hypertension in pregnancy Handout
Session 2 2 hours	Management of hypertensive disorders in pregnancy	Discussion Case studies 1,2 Skill practice	Slides 11-14 MCPC 2017 **(S55-58)** Learning guide on management of severe pre-eclampsia and eclampsia Learning guide on management of hypertensive disorders of pregnancy Clinical protocol on management of hypertensive disorders in pregnancy JHPIEGO pre-eclampsia/eclampsia (under helping mothers save)
Section 3 2 hours	Education and counselling about future pregnancies	Discussion Skill practice	MCPC 2017 **(S71-72)** Learning guide on education and counselling about future pregnancies
Session 4	Clinical simulation of management of hypertensive	Case scenarios	MCPC 2017 **(S55-68)**

2 hours	disorders of pregnancy		Learning guide on management of severe pre-eclampsia and eclampsia Learning guide on management of hypertensive disorders of pregnancy Clinical protocol on management of hypertensive disorders in pregnancy JHPIEGO pre-eclampsia/eclampsia (under helping mothers save)
Session 5 4 hours	Supervised client practice	Learning guides	
Session 6 1 hour	Evaluation	Post-test Skill check Module evaluation	Questionnaire Learning guide Module evaluation form

Session plans

Training process	Resources
Welcome Objective of the module: To review and update the knowledge and skills in management of hypertension in pregnancy Key tasks Present key tasks and discuss whether the participants would like to add any Learning objectives At the end of the session, the participants will be able to: 1. Identify the presenting symptoms and signs of different types of hypertensive disorders in pregnancy 2. Recognize and provide immediate management of pre-eclampsia and eclampsia 3. Provide management of hypertensive disorders in pregnancy 4. Educate and counsel about future pregnancies Explain the tools for evaluation of the session Distribute pre-session test	Slides 2-3
Pre-session test	
Session 1: Diagnosis of hypertension in pregnancy *Objective of the session*: Update the knowledge on hypertension in pregnancy and develop skills to recognise different types of disorders associated with high blood pressure *Discussion* Ask the participants whether any of them have managed a pregnant woman with high blood pressure and request one of them to share the case. Building on the case, ask questions about different types of hypertensive disorders in pregnancy Ask what are the criteria for elevated blood pressure in pregnancy are. Discuss checking blood pressure and what special care to be taken to obtain correct reading. Discuss diagnostic criteria for proteinuria Distribute *exercise 1* and ask the participants to fill in the blank columns. Discuss the responses and focus on the symptoms and signs of each condition. Distribute the hand out on differential diagnosis of elevated blood pressure.	Slides 4-10 MCPC 2017 **(S-50)** Clinical protocol on Hypertension in pregnancy Handout
Session 2: Management of hypertensive disorders in pregnancy *Objective of the session*: Develop skills in management hypertensive disorders in pregnancy and prevent complications *Case study* Divide the participants into groups of 2-3 and follow the instructions of the case study. Project case study 1 up to diagnosis. Ask the participants to respond to questions 1-3. After all participants have completed, ask one of the groups to respond to question 1 and another group to question 2 and so on. Discuss the responses. The trainer should summarise the key discussion points in examination. Project the rest of the case study and ask the participants to respond to questions 4-6. Ask one the groups whether the group agrees with the diagnosis and management (questions 4,5). Discuss the key points. Ask another group to discuss question 6 and the key points in change of diagnosis and the rationale for referral. The trainer should summarise the key points on diagnosis by referring to handout and management of gestational hypertension and mild pre-eclampsia.	Slides 11-14 MCPC 2017 **(55-58)** Learning guide on immediate management of severe pre-eclampsia and eclampsia and management of hypertensive disorders Clinical protocol on management of hypertensive disorders in pregnancy JHPIEGO pre-

Emphasise that there is no need for any anti-hypertensives or anticonvulsants in mild pre-eclampsia. Project case study 2 up to diagnosis and follow the steps as in case study 1. Focus the discussions on symptoms and signs. Project the rest of the case study and after the groups have responded to question 5 on care provision, the trainer should highlight key points in care and precautions. *Discussion* The trainer asks the trainees what is the drug of choice for management of pre-eclampsia. Ask whether the participants whether magnesium sulfate is available in the health facilities where they work. If so what is the concentration (%) of the drug. Discuss recommended concentration (%) percentage of Mag. Sulf, initial dose and how to constitute. Refer to the discussions on signal functions in the beginning of the training and point to the fact that giving anticonvulsant treatment is one of the signal functions of emergency obstetric care. Discuss the purpose of anti hypertensives in management of pre-eclampsia and recommended drug and its dose. ***The trainer should refer to the pre-session and knowledge assessment questions and discuss the answers.*** *Skill practice:* Immediate management of severe pre-eclampsia and eclampsia (follow the instructions on skill practice and arrange all the supplies needed for the practice) Continue with the same group as in session 3 or make new groups. Distribute the learning guide on immediate management of severe pre-eclampsia and eclampsia. Follow the instructions on skill practice. The trainer should observe each participant using the learning guide and give feedback. Infection prevention should be emphasised. *Every participant should be provided a chance to practice immediate management.* *Skill practice:* Management of hypertensive disorders in pregnancy (follow the instructions on skill practice and arrange all the supplies needed for the practice) Continue with the same group as in session 3 or make new groups. Distribute the learning guide on management of hypertensive disorders in pregnancy. Follow the instructions on skill practice. The trainer should observe each participant using the learning guide and give feedback. Infection prevention should be emphasised.	eclampsia/eclampsia (under helping mothers save) Power point
Session 3: Education and counselling future pregnancies *Objective of the session:* To develop skills in educating and counselling women who had suffered hypertensive disorders in pregnancy *Discussion* Ask why do women who have suffered from hypertensive disorders of pregnancy need advice regarding future pregnancies. Discuss the risk of pre-eclampsia in future pregnancies and cardiovascular problems. Emphasise the importance of avoiding immediate pregnancies and unwanted pregnancies. *Skill practice*: Education and counselling (follow the instructions on skill practice and arrange all the supplies needed for the practice) Distribute the learning guide on education and counselling on future pregnancies and follow instructions. *Each participant should be provided a chance to do the task.*	MCPC 2017 **(S71-72)** Learning guide on education and counselling about future pregnancies

Session 4: Clinical simulation of management of hypertensive disorders of pregnancy *Objective of the session*: To provide simulated experiences to practice problem solving and decision making skills in managing hypertensive disorders in pregnancy The trainer should read through the instructions and plan the session in advance. Discuss the purpose and process of the simulated exercises. Select one group to play the role of a woman with elevated blood pressure in pregnancy and provider and assistants. Provide case scenarios and the trainer should ask questions.	MCPC 2017 **(S55-68)** Learning guide on immediate management of severe pre-eclampsia and eclampsia and management of hypertensive disorders Clinical protocol on management of hypertensive disorders in pregnancy JHPIEGO pre-eclampsia/eclampsia (under helping mothers save)
Session 5: Supervised client practice Objective of the session is to practice skills with clients. This is the final stage of clinical skills developments and participants should be allowed to work with clients only after they have demonstrated skill competency in a simulated situation. Planning for the supervised practice is a critical component so that participants get adequate practice. It is important to respect the rights of clients – permission should be sought, privacy and confidentiality should be maintained and respectful dealings with the clients. Since one trainer may not be sufficient to supervise all the participants, it will be good to identify potential assistants to help the trainer (preceptors) to observe the skill practices. The preceptors could be a doctor or senior midwife who is very proficient in the skills. The preceptors will need to be trained in the use of checklists to familiarise them with the checklists. Opportunities to manage at least 2 cases of hypertension and manage or observe a case of severe pre-eclampsia/eclampsia should be provided.	Learning guides
Session 4: Evaluation	Questionnaire Learning guide Course evaluation form

Knowledge assessment questionnaire

Instructions: Write the letter of the single **best** answer to each question in the blank next to the corresponding number on the attached answer sheet.

1. Hypertension in pregnancy can be associated with
   a) headaches and blurred vision
   b) convulsions and loss of consciousness
   c) protein in the urine
   d) all of the above

2. Diastolic blood pressure 90 mm Hg or more before 20 weeks of gestation is symptomatic of
   a) mild pre-eclampsia
   b) chronic hypertension
   c) superimposed mild pre-eclampsia
   d) pregnancy-induced hypertension

3. Elevated blood pressure and proteinuria in pregnancy define
   a) pre-eclampsia
   b) chronic hypertension
   c) pyelonephritis
   d) none of the above

4. In a patient with hypertension and proteinuria, severe headache is a symptom of
   a) mild pre-eclampsia
   b) moderate pre-eclampsia
   c) severe pre-eclampsia
   d) impending eclampsia

5. The presenting signs and symptoms of eclampsia include
   a) convulsions, diastolic blood pressure of 90 mm Hg or more after 20 weeks gestation and proteinuria of 2+ or more
   b) headache, stiff neck, blurred vision and diastolic blood pressure of 90 mm Hg or more
   c) headache, stiff neck, photophobia and diastolic blood pressure of 90 mm Hg or more
   d) none of the above

6. A pregnant woman who is convulsing should be
   a) restrained to protect her from injury
   b) placed on her back
   c) left alone in a quiet room
   d) protected from injury by moving objects away from her

7. A woman who has pregnancy-induced hypertension should have her blood pressure, urine for protein, and fetal condition monitored
   b) weekly
   c) every 2 weeks
   d) every 3 weeks
   e) once a month

8. The management of mild pre-eclampsia should include
   a) anticonvulsive and antihypertensive therapy
   b) sedatives and tranquilizers
   c) sedatives only
   d) no medications
9. The drug of choice for preventing and treating convulsions in severe pre-eclampsia and eclampsia is
   a) diazepam
   b) hydralazine
   c) magnesium sulfate
   d) labetolol

10. The loading dose of magnesium sulfate is given via

    a) IV over 5 minutes, followed by deep IM injection into each buttock
    b) IV over 5 minutes, followed by deep IM injection into one buttock
    c) simultaneous IV and IM injections
    d) IV bolus, followed by deep IM injection into each buttock

11. An antihypertensive drug should be given for hypertension in severe pre-eclampsia or eclampsia if diastolic blood pressure is
    a) between 100 and 110 mm Hg
    b) 110 mm Hg or more
    c) 115 mm Hg or more
    d) 120 mm Hg or more

12. The goal of antihypertensive therapy for severe pre-eclampsia or eclampsia is to keep the diastolic blood pressure
    a) below 70 mm Hg
    b) below 80 mm Hg
    c) between 80 mm Hg and 90 mm Hg
    d) between 90 mm Hg and 100 mm Hg

Exercise 1: Diagnosis of elevated blood pressure

Possible diagnosis	Typically Presenting symptoms and signs	Symptoms and signs sometimes present
Gestational hypertension		
Mild pre-eclampsia		
Severe pre-eclampsia		
Eclampsia		
Chronic hypertension		
Chronic hypertension with superimposed pre-eclampsia		

Case study 1: Pregnancy-Induced hypertension

Directions

Read and analyse 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 case study. When all groups have finished, the case studies and the answers each group has developed will be discussed.

Case study

Mrs. Bertha is 16 years old. She is 28 weeks pregnant and has attended the antenatal clinic three times. Her findings have been normal. She came for her regular antenatal check-up.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

1. What will you include in your initial assessment of Mrs. Bertha and why?
2. What particular aspects of Mrs. Bertha's physical examination will help you make a diagnosis, and why?
3. What screening procedures/laboratory tests will you include in your assessment of Mrs. B.ertha and why?

DIAGNOSIS (Identification of Problems/Needs)

You have completed your assessment of Mrs. Bertha and your main findings include the following:

Mrs. Bertha's blood pressure is 140/90 mm Hg, and her urine was negative for protein. She has no headache and visual disturbance. The foetus is active and foetal heart is normal. Uterine size corresponds to dates.

4. Based on these findings, what is Mrs. Bertha's diagnosis, and why?

CARE PROVISION (Planning and Intervention)

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

Evaluation

Mrs. Bertha attends antenatal clinic on a twice-weekly basis, as requested. Her blood pressure remains the same; she has developed proteinuria 2+. She has no adverse symptoms (headache, visual disturbance, upper abdominal pain, convulsions or loss of consciousness). The foetus is active and foetal heart is normal. Uterine size corresponds with the dates.

6. Based on these findings, what is your continuing plan of care for Mrs. B., and why

Case study 2: Pregnancy induced hypertension

Directions

Read and analyse 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 case study. When all groups have finished, the case studies and the answers each group has developed will be discussed.

Case study

Mrs. Celin. is 23 years old. She is 37 weeks pregnant and has attended the antenatal clinic four times. No abnormal findings were detected during antenatal visits, the last of which was 1 week ago. Mrs. Celin has been counseled about danger signs in pregnancy and what to do about them. Her husband has brought her to the health centre because she developed a severe headache and blurred vision this morning.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

- What will you include in your initial assessment of Mrs. Celin, and why?
- What particular aspects of Mrs. Celin's physical examination will help you make a diagnosis or identify her problems/needs, and why?
- What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. Celin and why?

DIAGNOSIS (Identification of Problems/Needs)

You have completed your assessment of Mrs. Celin and your main findings include the following:

Mrs. Celin's blood pressure is 160/110 mm Hg, and she has proteinuria 3+.
She has a severe headache that started 3 hours ago. Her vision became blurred 2 hours after the onset of headache. She has no upper abdominal pain and has not suffered convulsions or loss of consciousness. Her reflexes are normal.
The foetus is active and foetal heart sounds are normal. Uterine size is consistent with dates.

- Based on these findings, what is Mrs. Celin's diagnosis, and why?

Care provision (Planning and Intervention)

- Based on your diagnosis, what is your plan of care for Mrs. Celin, and why?

Clinical simulation: Management of high blood pressure, blurred vision or convulsions in pregnancy

Purpose: The purpose of this activity is to provide a simulated experience for participants to practice problem-solving and decision-making skills in the management of high blood pressure, blurred vision, or convulsions, with emphasis on thinking quickly and reacting (intervening) rapidly.

Instructions: The activity should be carried out in the most realistic setting possible, such as the labour and delivery area of a hospital, clinic or maternity center, where equipment and supplies are available for emergency interventions.

- One participant should play the role of patient and a second participant the role of skilled provider. Other participants may be called on to assist the provider.
- The teacher will give the participant playing the role of provider information about the patient's condition and ask pertinent questions, as indicated in the left-hand column of the chart below.
- The participant will be expected to think quickly and react (intervene) rapidly when the teacher provides information and asks questions. Key reactions/responses expected from the participant are provided in the right-hand column of the chart below.
- Procedures such as starting an IV and giving oxygen should be role-played, using the appropriate equipment.
- Initially, the teacher and participant will discuss what is happening during the simulation in order to develop problem-solving and decision-making skills. The italicized questions in the simulation are for this purpose. Further discussion may take place after the simulation is completed.
- As the participant's skills become stronger, the focus of the simulation should shift to providing appropriate care for the life-threatening emergency situation in a quick, efficient and effective manner. All discussion and questioning should take place after the simulation is over.

*Resources**: Sphygmomanometer, stethoscope, equipment for starting an IV infusion, syringes and vials, oxygen cylinder, mask and tubing, equipment for bladder catheterization**, reflex hammer***
Learning guide on immediate management of pre-eclampsia and eclampsia, learning guide management of hypertensive disorders in pregnancy

Scenario 1 **(Information provided and questions asked by the teacher)**	KEY REACTIONS/RESPONSES **(Expected from participant)**
1. Mrs. Helen is 20 years old. She is 38 weeks pregnant. This is her second pregnancy. Her mother-in-law has brought Mrs. Helen to the health center this morning because she has had a severe headache and blurred vision for the past 6 hours. Mrs. Helen says she feels very ill. • What will you do?	
2. Mrs. Helen's diastolic blood pressure is 96 mm Hg, her pulse 100 beats/minute and respiration rate 20 breaths/minute. Her mother-in-law tells you that Mrs. H. has had no symptoms or signs of the onset of labour. • What is Mrs. Helen's problem? • What will you do now? • What is your main concern at the moment?	
What else will you do while waiting	

Scenario 2 **(Information provided and questions asked by the teacher)**	KEY REACTIONS/RESPONSES **(Expected from participant)**
1. Mrs. Gabriele is 16 years old and is 37 weeks pregnant. This is her first pregnancy. She has presented to the labour unit with contractions and says that she has had a bad headache all day. She also says that she cannot see properly. While she is getting up from the examination table she falls back onto the pillow and begins to have a convulsion. • What will you do?	
2. After 5 minutes, Mrs. Gabriel is	

no longer convulsing. Her diastolic blood pressure is 104 mm Hg and her respiration rate is 20 breaths/ minute. • What is Mrs. Gabriel's problem? • What will you do next? • What should the aim be with respect to controlling Mrs. Gabriel's blood pressure? • What other care does Mrs. Gabriel require now?	

Skills practice session: Hypertension in pregnancy

The purpose of this activity is to provide opportunities to observe and practice clinical skills, either in a simulated setting or at a clinical site.

Instructions

This activity should be conducted in a simulated setting using the appropriate pelvic and foetal models.

Participants should review the appropriate learning guide before beginning the activity.

Under the guidance of the trainer, participants should work in groups of three to practice the steps/tasks and observe each other's performance; one plays the role of provider, the second one as woman who is bleeding after childbirth and the third as observer. The observer uses the relevant learning guide related to management of bleeding after childbirth. Participants reverse the roles until each has had an opportunity to practice and are competent. The trainer observes each participant when ready for observation and provides feedback. The participants who are not competent are made to repeat the exercise.

During supervised practice at a clinical site, the trainer assesses the skills competency of each participant using learning guides.

The above process should be repeated for each of the skills practice session.

Resources

- Childbirth simulator
- Sphygmomanometer and stethoscope
- Thermometer
- Catheter
- Syringe and needle
- Mag sulf, lignocaine
- Soap and water and betadine
- Sterile gloves
- Personal protective barriers
- IV set
- 0.5% chlorine solution and receptacle for decontamination
- Leak proof container or plastic bag
- Reflex hammer
- Learning guide on immediate management of severe pre-eclampsia and eclampsia, Learning guide on management of hypertensive disorders in pregnancy and learning guide on education and counselling for future pregnancies

Learning guide for immediate management of severe pre-eclampsia and eclampsia

Rating scale
2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards

Learning guide on management of severe pre-eclampsia and eclampsia (several steps may have to be carried out simultaneously)				
Step/Task	2	1	0	**Comments**
Task 1: Immediate management				
1.1 Shouts for help and urgently mobilizes all available personnel				
1.2 Quickly reviews ANC records if available				
1.2 Performs rapid evaluation of the woman's general condition while asking the woman or her relatives for history of present problem ▪ Temperature ▪ Pulse ▪ BP ▪ Respiration				
1.3 Checks airway and breathing				
1.4 Turns the woman on her side				
1.5 Gives oxygen 4-6 L per minute by mask or nasal cannulae				
1.6 Starts IV fluids (Ringers lactate or normal saline)				
1.7 Gives initial dose of Magnesium Sulfate (MgSO4) a. Constitutes MgSO4 ▪ Arranges two 20 ml syringes, 50% MgSO4 and 2% lignocaine ▪ Draws 5 gm of MgSO4 (1gm/2mlx5) plus lignocaine 1ml in each of the syringes b. Injects MgSO4 deep intramuscular into alternate buttocks c. Warns the woman that she may feel warm.				
1.8 If the diastolic BP is 100 mm Hg or above, gives Nifedipine 10 mg orally				
1.8 Examines the abdomen to assess: ▪ Whether abdominal tenderness ▪ Foetal heart is heard				
1.9 Catheterises the bladder				
1.9 Makes arrangements for referral (simultaneously) o Informs the referral hospital o At the same informs Mrs. Helen about the findings and the implications for her and foetus and the need for referral. Responds sympathetically to their questions and concerns. o Informs the mother-in-law and other family members about the situation and the need for referral.				
1.9 While waiting, monitors vital signs and foetal heart ▪ Never leaves the woman alone ▪ watches for respiratory rate, patellar reflexes, urine output				
I1.10 in case of convulsions: ▪ Give initial dose of Mag Sulf ▪ Oxygen 4-6 L per minute ▪ Protect from injury ▪ Place on left lateral side to prevent aspiration ▪ Suck the throat after convulsions ▪ Catheterise the bladder ▪ Check the foetal heart				

Learning guide for management of hypertensive disorders in pregnancy

Rating scale
2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards

Learning guide for management of hypertension in pregnancy				
Step/Task	2	1	0	**Comments**
Task 1: Preparations for history and examination				
1.1 Gets the equipment ready for examination - Sphygmanometer - Stethescope - Urine dipsticks - Reflex hammer - HDL gloves				
1.2 Greets the client and asks her about her well-being.				
1.3 Reviews the ANC records if available for history of hypertension and whether on treatment, pre-eclampsia or eclampsia during the past pregnancies 1.4 Washes hands with soap and water, air dries or wipes with clean towel and wears sterile gloves 1.5 Tells the client about what is going to be done				
Task 2: Taking history and physical examination				
2.1 Reviews ANC records and if not available, takes history: ▪ Asks about history of hypertension and whether on treatment ▪ Asks whether in this pregnancy -head ache, blurred vision, abdominal pain, vomiting or other problems such as swelling in the feet or convulsion ▪ Asks about foetal movements				
2.2 Does physical examination ▪ Checks pallor and jaundice ▪ Checks for oedema (swelling of eyes and feet) ▪ Checks blood pressure (both systolic and diastolic) ▪ Examines the abdomen for tenderness especially in the epigastric area ▪ Checks fundal height, foetal lie, foetal heart ▪ Checks patellar reflex				
2.3 Investigations: Checks urine for albumin, checks Hb if possible				
TASK 3: Management of hypertensive disorder (as per clinical protocol)				
3.1 If gestation is between 20-37 weeks: ▪ Systolic BP is 140 mm Hg or higher but less than 160mm Hg ▪ Diastolic BP 90 mm Hg or higher but less than 110 mmHg ▪ No proteinuria ▪ No history of headache, blurred vision, abdominal pain, decreased foetal movements ▪ Advises the woman and her family on the following:				

○ Reduce work load and more rest if possible ○ Biweekly check of BP and urine for proteinuria and foetal growth and heart ○ Informs about danger signs and to report if any danger signs ○ Continue as above and deliver at term (induce) ▪ Refer if any of the following conditions appear: ○ Diastolic BP increases ○ Proteinuria ○ Foetal growth retardation				
3.2 Refer to specialist if gestation is more than 37 weeks and if evidence of pre-eclampsia				

Learning guide: Education and counselling about future pregnancies

Rating scale
2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards

Learning guide on education and counselling on care and future pregnancies				
Step/Task	2	1	0	**Comments**
Task 1: Makes initial positive contact with the woman				
1.1 Greets the woman and asks her how she is feeling and how is the baby				
1.2 Reviews delivery records to obtain information about parity, previous obstetric history, and current obstetric history.				
1.3 Asks whether she would like her spouse to join in the discussion				
1.4 Assures privacy and confidentiality				
Task 2: Educates about reducing risk of pre-eclampsia in future pregnancies				
2.1 Informs the woman about the risk of recurrence of pre-eclampsia in future pregnancies and the risk of dying if not manged in time and properly				
2.2 Educates about the importance of avoiding unwanted pregnancies and delaying the next pregnancy to reduce the risk of pregnancy related hypertension				
2.3 Impresses the importance of initiating antenatal care early in all future pregnancies				
Task 3: Education about reducing life time risk of cardiovascular complications				
3.1 Educates women about the risk of future cardiovascular disease (hypertension, stroke, etc.)				
3.2 Assesses and addresses the woman's risk factors for cardiovascular diseases (smoking, obesity, lack of exercise, etc.)				
3.3 Emphasizes the importance of regular medical follow-up and tries to link with appropriate services				
Task 4: Counsels for family planning				
4.1 Discusses the importance of avoiding a pregnancy or delaying and limiting the number of pregnancies due to the high risk of recurrence of pre-eclampsia and other cardiovascular complications.				
4.2 Tells her about the chances of fertility returning in 6 weeks even if menses has not returned or she is breast feeding and the need for contraception.				
4.3 Asks about plans for future pregnancies				
4.4 Asks whether she has used any of the contraceptives and which one and what was				

her experience.				
4.5 Tells her about a range of options to delay pregnancies or permanently stop having children including lactation amenorrhea ▪ What the method is ▪ Effectiveness ▪ Benefits ▪ Side effects ▪ Eligibility for use ▪ How to use				
4.6 Encourages her to ask questions about the methods				
4.7 Tells her that she will need a long acting or permanent method of contraception depending on the couple's future plans				
4.8 (If the woman had a live birth) asks whether she intends to breast feed and if so encourages here to do so. ▪ Emphasises that for breast feeding to be effective in preventing pregnancy, exclusive breast feeding, on demand, at least 6 times during the day and at least 4 times at night should be practised				
4.9 Helps her to choose a method ▪ Explains the method in detail and asks her to return in six weeks' time for the same				
4.10 Records the information in the postpartum record as well as in the FP client card.				
4.11 Thanks the woman and advises her about return visit.				

Module evaluation
Module: Hypertensive disorders during pregnancy

Please indicate your opinion of the course components using the following rating scale:

5 Strongly Agree
4 Agree
3 No opinion
2 Disagree
1 Strongly disagree

Course component	Rating
1 The discussions helped me to clarify elements related to basic care.	
2 The exercises were useful for learning about basic management of hypertensive disorders in pregnancy.	
3 The role plays on interpersonal communication skills were helpful.	
4 The case studies were useful for practising clinical decision making.	
5 The time for skill practice in a simulated setting was sufficient.	
6 The supervised client practice within the limitations of time was sufficient.	
7 I am confident about managing hypertensive disorders in pregnancy.	

Hypertensive Disorders in Pregnancy

Gestational Hypertension (Pregnancy Induced Hypertension (PIH):
After 20 weeks of gestation, two readings of diastolic blood pressure(DBP) ≥ 90mmHg and /or systolic blood pressure (SBP) ≥ 140 four hours apart. No proteinuria. No features of pre-eclampsia.

- Mild PIH- DBP 90-109 mmHg and SBP 140-159 mmHg
- Severe PIH- DBP ≥110 mmHg and SBP ≥160 mmHg

Mild Pre-eclampsia:
After 20 weeks of gestation, two readings of DBP 90-109 mmHg and /or SBP ≥ 140 mmHg four hours apart. Proteinuria (>0.3 gm/24 hrs) (1+ dipstick = 0.3 g/L

Severe Pre-eclampsia:
After 20 weeks of gestation, DBP ≥ 110mmHg and/or SBP ≥ 160 mmHg at least two occasion 4 hrs apart at rest. Proteinuria of ≥ 5 g in 24 hrs on quantitative assay; (2+ with dipstick) or 30 % or more solid on boiled urine; and/or with severe headache increasing in frequency, blurred vision, oliguria (<30 ml/hour), epigastric pain, difficulty in breathing, nausea and vomiting, hyperreflexia/clonus

Eclampsia:
After 20 weeks of gestation, SBP ≥160 mmHg. Proteinuria (2+) on dipstick. Coma and other features of severe pre-eclampsia.

Chronic hypertension*:*
Before 20 weeks of gestation, DBP ≥90 mmHg and SBP≥140 mmHg

Chronic hypertension with superimposed pre-eclampsia*:*
Before 20 weeks of gestation, DBP 90-110 mmHg, SBP≥140 mmHg. Proteinuria up to 2+. Features of mild pre-eclampsia.
Note: A trace or 1+ dipstick should be regarded as equivocal evidence of proteinuria.

Measurement of blood pressure and clinical criteria for diagnosis of hypertensive disorders in pregnancy

- Inform the woman about what you are going to do
- Measure blood pressure in lying supine position and ask the woman to relax
- Take two readings of SBP and DBP 4 hours apart
- Diagnosis of hypertensive disorder: DBP is still ≥90mmHg or SBP ≥ 140 mmHg (two consecutive readings four hours apart).

Management during a convulsion

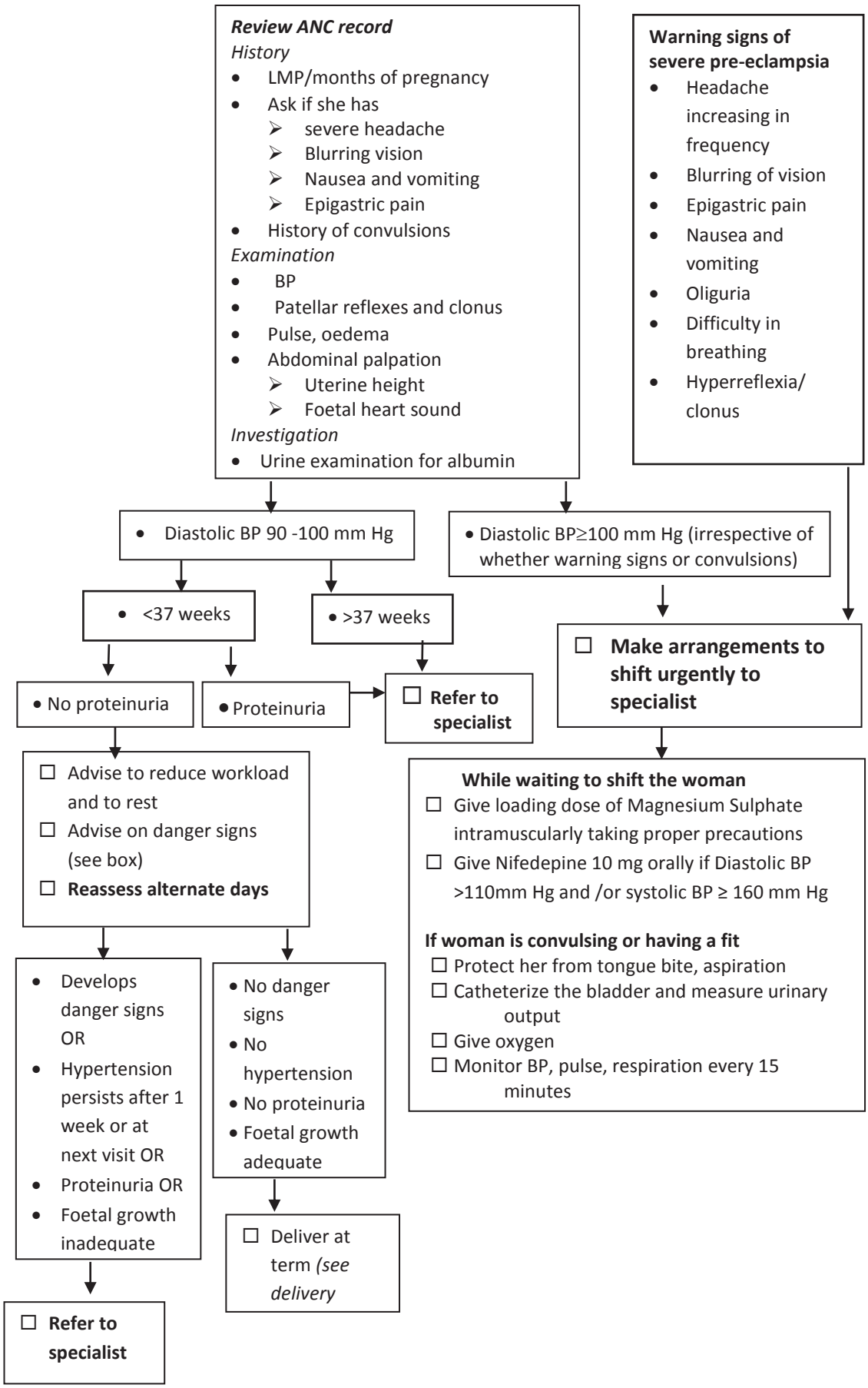
- Give Magnesium Sulphate
- Gather equipment (airway, suction, masks and bag, oxygen)
- Give oxygen at 4-6 L per minute
- Protect the woman from injury
- Position the woman on her left side to prevent aspiration
- After convulsion, aspirate the mouth and throat as necessary

Initial dose of Magnesium sulphate to be given before referral to a specialist
5 g (10 ml of 50% of solution magnesium sulfate(MgSO4) solution IM , 5 g in each buttock as deep IM injection with 1 mL of 2% lignocaine in the same syringe. Give slowly.
Never leave the patient alone and watch respiratory rate while waiting for referral.

Post-fit care

- Place oral airway
- Insert an IV large bore cannula and start IV fluids
- Catheterize the bladder
- Never leave the patient alone and watch for convulsions
- Refer to a specialist

HYPERTENSIVE DISORDERS IN PREGNANCY



HYPERTENSIVE DISORDERS IN PREGNANCY

ANSWER KEYS

Instructions: **Mark the** single **best** answer to each question in the blank next to the corresponding number on the attached answer sheet.

1. Hypertension in pregnancy can be associated with
   e) headaches and blurred vision
   f) convulsions and loss of consciousness
   g) protein in the urine
   h) **all of the above**

2. Diastolic blood pressure 90 mm Hg or more before 20 weeks of gestation is symptomatic of
   e) mild pre-eclampsia
   f) **chronic hypertension**
   g) superimposed mild pre-eclampsia
   h) pregnancy-induced hypertension

3. Elevated blood pressure and proteinuria in pregnancy define
   a) **pre-eclampsia**
   b) chronic hypertension
   c) pyelonephritis
   d) none of the above

4. In a patient with hypertension and proteinuria, severe headache is a symptom of
   a) mild pre-eclampsia
   b) moderate pre-eclampsia
   c) **severe pre-eclampsia**
   d) impending eclampsia

5. The presenting signs and symptoms of eclampsia include
   e) **convulsions, diastolic blood pressure of 90 mm Hg or more after 20 weeks gestation and proteinuria of 2+ or more**
   f) headache, stiff neck, blurred vision and diastolic blood pressure of 90 mm Hg or more
   g) headache, stiff neck, photophobia and diastolic blood pressure of 90 mm Hg or more
   h) none of the above

6. A pregnant woman who is convulsing should be
   e) restrained to protect her from injury
   f) placed on her back
   g) left alone in a quiet room
   h) **protected from injury by moving objects away from her**

7. A woman who has pregnancy-induced hypertension should have her blood pressure, urine for protein, and fetal condition monitored
   f) **weekly**
   g) every 2 weeks
   h) every 3 weeks
   i) once a month

8. The management of mild pre-eclampsia should include
   e) anticonvulsive and antihypertensive therapy
   f) sedatives and tranquilizers
   g) sedatives only
   h) **no medications**

9. The drug of choice for preventing and treating convulsions in severe pre-eclampsia and eclampsia is
   e) diazepam
   f) hydralazine
   g) **magnesium sulfate**
   h) labetolol

10. The loading dose of magnesium sulfate is given via
   e) **IV over 5 minutes, followed by deep IM injection into each buttock**
   f) IV over 5 minutes, followed by deep IM injection into one buttock
   g) simultaneous IV and IM injections
   h) IV bolus, followed by deep IM injection into each buttock

11.An antihypertensive drug should be given for hypertension in severe pre-eclampsia or eclampsia if diastolic blood pressure is
   e) between 100 and 110 mm Hg
   f) **110 mm Hg or more**
   g) 115 mm Hg or more
   h) 120 mm Hg or more

12.The goal of antihypertensive therapy for severe pre-eclampsia or eclampsia is to keep the diastolic blood pressure
   e) below 70 mm Hg
   f) below 80 mm Hg
   g) between 80 mm Hg and 90 mm Hg
   h) **between 90 mm Hg and 100 mm Hg**

Handout: Differential diagnosis of elevated blood pressure, headache and convulsions

Presenting symptom and other symptoms and signs typically present	Symptoms, signs and laboratory findings sometimes present	Probable diagnosis
• Two readings of SBP 140 mmHg or higher but lower than 160 mmHg and/or DBP 90 mmHg or higher but lower than 110 mmHg four hours apart after 20 weeks of gestation • No proteinuria • No features of pre-eclampsia		Gestational hypertension
• Two readings of SBP 140 mmHg or higher but lower than 160 mmHg and/or DBP 90 mmHg or higher but lower than 110 mmHg four hours apart after 20 weeks of gestation • Proteinuria 2+ on dipstick		Mild pre-eclmapsia
• SBP 160 mmHg or higher and/or DBP 110 mmHg or higher after 20 weeks of gestation • Proteinuria 2+ on dipstick	• Headache (increasing frequency, unrelieved by regular analgesics) • Vision changes (e.g. blurred vision) • Oliguria (passing less than 400 mL urine in 24 hours) • Upper abdominal pain (epigastric pain or pain in right upper quadrant) • Difficulty breathing (rales on auscultation of lungs due to fluid in lungs) • Nausea and vomiting • Hyperreflexia or clonus	Severe pre-eclampsia
• Convulsions • SBP 140 mmHg or higher or DBP 90 mmHg or higher after 20 weeks of gestation	• Coma • Other symptoms and signs of severe pre-eclampsia	Eclampsia
• Systolic blood pressure (SBP) 140 mmHg or higher and/or diastolic blood pressure (DBP) 90 mmHg or higher before the first 20 weeks of gestation		Chronic hypertension
• SBP 140 mmHg or higher and/or DBP 90 mmHg or		Chronic hypertension with

higher before 20 weeks of gestation • After 20 weeks: – Proteinuria 2+ on dipstick – Presence of any pre-eclampsia features		super imposed pre-eclampsia

Source: MCPC 2017

Case Study 1: Pregnancy induced hypertension

Directions

Read and analyse 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 case study. When all groups have finished, the case studies and the answers each group has developed will be discussed.

Case study

Mrs. Bertha is 16 years old. She is 28 weeks pregnant and has attended the antenatal clinic three times. Her findings have been normal. She came for her regular antenatal check-up.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

1. What will you include in your initial assessment of Mrs. Bertha and why?
   - Mrs. Bertha should be greeted respectfully and with kindness.
   - She should be told what is going to be done and listened to carefully. In addition, her questions should be answered in a calm and reassuring manner.
   - Mrs. Bertha should be asked how she is feeling and whether she has had headache, blurred vision or upper abdominal pain since her last clinic visit.
   - She should be asked whether foetal activity has changed since her last visit.
   - Her blood pressure should be checked and her urine tested for protein (the presence of proteinuria, together with a diastolic blood pressure greater than 90 mm Hg, is indicative of pre-eclampsia).
2. What particular aspects of Mrs. Bertha's physical examination will help you make a diagnosis, and why?
   - Blood pressure should be measured.
   - An abdominal examination should be done to check foetal growth and to listen for foetal heart sounds (in cases of pre-eclampsia/eclampsia reduced placental function may lead to low birth weight; there is an increased risk of hypoxia in both the antenatal and intranatal periods, and an increased risk of abruptio placentae).
3. What screening procedures/laboratory tests will you include in your assessment of Mrs. Bertha and why?
   - Urine should be checked for protein.

Diagnosis (Identification of Problems/Needs)

You have completed your assessment of Mrs. Bertha and your main findings include the following:

Mrs. Bertha's blood pressure is 140/90 mm Hg, and her urine was negative for protein. She has no headache and visual disturbance. The foetus is active and foetal heart is normal. Uterine size corresponds to dates.

4. Based on these findings, what is Mrs. Bertha's diagnosis, and why?
    - Mrs. Bertha's signs and symptoms (e.g., Systolic blood pressure 140 mm Hg and diastoolic diastolic blood pressure 90 mm Hg at 28 weeks of pregnancy are consistent with the diagnosis of gestational hypertension.

Care provision (Planning and Intervention)

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

    - Mrs. Bertha should be provided reassurance and counselled about the danger signs related to severe pre-eclampsia and eclampsia (severe headache, blurred vision, upper abdominal pain, and convulsions or loss of consciousness) and the need to seek help immediately if any of these occur. She should be advised of the possible consequences of pregnancy-induced hypertension.

    - She should be encouraged to take additional periods of rest and to eat a normal diet (salt restriction should be discouraged as this does not prevent pregnancy-induced hypertension).

    - Mrs. Bertha should be asked to return to the clinic twice weekly to have her blood pressure, urine and foetal condition monitored.

    - Mrs. Bertha should not be given any medicine for her high blood pressure.
    - Basic antenatal care (early detection and treatment of problems, prophylactic interventions, birth plan development/revision, and plan for newborn feeding) should be provided, as needed.

Evaluation

Mrs. Bertha attends antenatal clinic on a twice-weekly basis, as requested. Her blood pressure remains the same; she has developed proteinuria 2+. She has no adverse symptoms (headache, visual disturbance, upper abdominal pain, convulsions or loss of consciousness). The foetus is active and foetal heart is normal. Uterine size corresponds with the dates.

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

The findings are suggestive of mild pre-eclampsia and as per clinical protocol she should be referred to the specialist.

- Mrs. Bertha should be informed of the findings and the need for referral to a specialist. She should be encouraged to ask questions and should be provided emotional support. She should be advised of the possible consequences of pre-eclampsia.

- Her family should be informed about the situation, consequences of pre-eclampsia and the importance of meeting the specialist as early as possible.
- She should be given a detailed referral slip and advised to report back (if not admitted) or send message about the decision by the specialist.
- Repeat the danger signs related to severe pre-eclampsia and eclampsia (severe headache, blurred vision, upper abdominal pain, and convulsions or loss of consciousness) and the need to seek help immediately if any of these occur.

Case study 2: Pregnancy induced hypertension

Directions

Read and analyse 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 case study. When all groups have finished, the case studies and the answers each group has developed will be discussed.

Case study

Mrs. Celin. is 23 years old. She is 37 weeks pregnant and has attended the antenatal clinic four times. No abnormal findings were detected during antenatal visits, the last of which was 1 week ago. Mrs. Celin has been counseled about danger signs in pregnancy and what to do about them. Her husband has brought her to the health centre because she developed a severe headache and blurred vision this morning.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

1. What will you include in your initial assessment of Mrs. Celin, and why?
    - Mrs. Celin and her husband should be greeted respectfully and with kindness.
    - They should be told what is going to be done and listened to carefully. In addition, their questions should be answered in a calm and reassuring manner.
    - A rapid assessment should be done to check level of consciousness and blood pressure. Temperature and respiration rate should also be checked. Mrs. Celin should be asked how she is feeling, when headache and blurred vision began, whether she has had upper abdominal pain and whether there has been a decrease in urinary output during the past 24 hours.
    - Mrs. Celin's urine should be tested for protein.
2. What particular aspects of Mrs. Celin's physical examination will help you make a diagnosis or identify her problems/needs, and why?
    - Mrs. Celin should be checked for elevated blood pressure and protein in her urine (the presence of proteinuria, together with a diastolic blood pressure greater than 90 mm Hg, is indicative of pre-eclampsia).
    - An abdominal examination should be done to check foetal condition and to listen for foetal heart sounds (in cases of pre-eclampsia/eclampsia reduced placental function may lead to low birth weight; there is an increased risk of hypoxia in both the antenatal and intranatal periods, and an increased risk of abruptio placentae).
    - *Note that a diagnosis should be made rapidly, within a few minutes.*
3. What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. Celin and why?
    - Mrs. Celin's urine should be checked for protein.

DIAGNOSIS (Identification of Problems/Needs)

You have completed your assessment of Mrs. Celin and your main findings include the following:

Mrs. Celin's blood pressure is 160/110 mm Hg, and she has proteinuria 3+.
She has a severe headache that started 3 hours ago. Her vision became blurred 2 hours after the onset of headache. She has no upper abdominal pain and has not suffered convulsions or loss of consciousness. Her reflexes are normal.
The foetus is active and foetal heart sounds are normal. Uterine size is consistent with dates.

4. Based on these findings, what is Mrs. Celin's diagnosis, and why?
    - Mrs. C.'s symptoms and signs (e.g., diastolic blood pressure 110 mm Hg or more after 20 weeks gestation and proteinuria up to 3+) are consistent with severe pre-eclampsia.

CARE PROVISION (Planning and Intervention)

5. Based on your diagnosis, what is your plan of care for Mrs. Celin, and why?
    - Mrs.Celin cannot be managed in the health centre and needs to be referred.
    - Arrangements for referral should be made:
        - The referral hospital should be informed
        - The woman should be informed about the situation sympathetically and encouraged to express her concerns and should be emotionally supported.
        - The family should be informed about the situation and urgent need for referral.

<u>While waiting for referral: (follow the clinical protocol)</u>

- Magnesium Sulfate should be given for preventing and treating convulsions in severe pre-eclampsia and eclampsia.
- An antihypertensive should be given to lower the diastolic blood pressure and keep it between 90 mm Hg and 100 mm Hg to prevent cerebral hemorrhage. Nifedinepine is the drugs of choice as mentioned in the clinical protocol.
- Equipment to respond to a convulsion (airway, suction, mask and bag, oxygen) should be available at her bedside.
- Mrs. Celin **<u>should not</u>** be left alone if she has a convulsion.
- An IV of normal saline or Ringer's lactate should be started to administer IV drugs.
- An indwelling catheter should be inserted to monitor urine output and proteinuria (magnesium sulfate should be withheld if the urine output falls below 30 mL/hour over
4 hours).
- Vital signs (blood pressure and respiration rate, in particular), reflexes and fetal heart rate should be monitored hourly (magnesium sulfate should be withheld if the respiration rate falls below 16 breaths/minute or if patellar reflexes are absent).

Clinical simulation scenarios (? Direct to clinical guidelines)

Scenario 1 **(Information provided and questions asked by the teacher)**	KEY REACTIONS/RESPONSES **(Expected from participant)**
1. Mrs. Helen is 20 years old. She is 38 weeks pregnant. This is her second pregnancy. Her mother-in-law has brought Mrs. Helen to the health center this morning because she has had a severe headache and blurred vision for the past 6 hours. Mrs. Helen says she feels very ill. • What will you do?	• **Shouts** for help to urgently mobilize all available personnel • Places Mrs. Helen on the examination table on her left side • Makes a rapid evaluation of Mrs. Helen's condition, including vital signs (temperature, pulse, blood pressure, and respiration rate), level of consciousness, colour and temperature of skin • Simultaneously asks about the history of Mrs. Helen's present illness
2. Mrs. Helen's diastolic blood pressure is 96 mm Hg, her pulse 100 beats/minute and respiration rate 20 breaths/minute. Her mother-in-law tells you that Mrs. H. has had no symptoms or signs of the onset of labour. • What is Mrs. Helen's problem? • What will you do now? • What is your main concern at the moment?	• Q 1 States that Mrs. Helen's symptoms and signs are consistent with severe pre-eclampsia • Q 2 Has one of the staff who responded to her shout for help start oxygen at 4–6 L/minute • Q 2 Prepares and gives magnesium sulfate 10 g of 50% magnesium sulfate solution, 5 g in each buttock deep IM injection with 1 mL of 2% lignocaine in the same syringe ➢ Q 2 Makes arrangements for referral: o Informs the referral hospital o At the same informs Mrs. Helen about the findings and the implications for her and foetus and the need for referral. Responds sympathetically to their questions and concerns. o Informs the mother-in-law and other family members about the situation and the need for referral. • Q 3 States that the main concern at the moment is to prevent Mrs. H. from convulsing
What else will you do while waiting	• Monitors pulse, blood pressure and respiration every 15 minutes • Catheterises to monitor urinary output

Scenario 2 **(Information provided and questions asked by the teacher)**	KEY REACTIONS/RESPONSES **(Expected from participant)**
1. Mrs. Gabriele is 16 years old and is 37 weeks pregnant. This is her first pregnancy. She has presented to the labour unit with contractions and says that she has had a bad headache all day. She also says that she cannot see properly. While she is getting up from the examination table she falls back onto the pillow and begins to have a convulsion. • What will you do?	• **Shouts** for help to urgently mobilize all available personnel • Checks airway to ensure that it is open, and turns Mrs. Gabriele onto her left side • Protects her from injuries (fall) but does not attempt to restrain her • Has one of the staff members who responded to her shout for help take Mrs. Gabriele's vital signs (temperature, pulse, blood pressure and respiration rate) and check her level of consciousness, colour and temperature of skin • Has another staff member start oxygen at 4–6 L/minute • Prepares and gives magnesium sulphate: ➢ 10 g of 50% magnesium sulfate solution, 5 g in each buttock deep IM injection with 1 mL of 2% lignocaine in the same syringe ➢ Makes arrangements for referral: ➢ Informs the referral hospital ➢ At the same informs Mrs. Helen about the findings and the implications for her and foetus and the need for referral. Responds sympathetically to their questions and concerns. ➢ Informs the mother-in-law and other family members about the situation and the need for referral.
2. After 5 minutes, Mrs. Gabriel is no longer convulsing. Her diastolic blood pressure is 104 mm Hg and her respiration rate is 20 breaths/ minute. 1. What is Mrs. Gabriel's problem? 2. What will you do next? 3. What should the aim be with respect to controlling Mrs. Gabriel's blood pressure? 4. What other care does Mrs. Gabriel require now?	• Q 1 States that Mrs. G.'s symptoms and signs are consistent with eclampsia • Q 2 Nifedipine orally 10 mg • Q 3 States that the aim should be to keep Mrs. G.'s diastolic blood pressure between 90 mm Hg and 100 mm Hg to prevent cerebral haemorrhage • Q 4 Has one of the staff assisting with the emergency insertion of an indwelling catheter to monitor urinary output and proteinuria • Q 4 Has a second staff member start an IV infusion of normal saline or Ringer's lactate and draws blood to assess clotting status using a bedside clotting test • Q 4 Maintains a strict fluid balance chart

Module 10

Management of decreased foetal movements/ intrauterine foetal death

Training resource package for intrapartum and immediate post-partum care

Every pregnant woman who develops complications during antenatal period that leads to life threatening conditions receives evidence-based, immediate and appropriate care that prevents death and disability, both of her and new born (including appropriate referral).

Clinical protocol: Decreased foetal movements/intrauterine foetal death

Module: Management of decreased foetal movements/intrauterine foetal death

Key tasks
- Diagnosis of loss of foetal movements
- Managing cases of loss of foetal movements
- Counselling women who has been diagnosed with loss of foetal movements
- Care after delivery of dead foetus

Training schedule
Training schedule
- Key tasks
- Learning objectives
- Sessions plans
- Knowledge assessment

Trainer's guide
Session plan describes objectives of each session, topics, methodology and key points
- Case studies
- Role plays
- Learning guides

Key knowledge
- Causes of decreased foetal movements
- Diagnosis of intrauterine death
- Complications

Critical skills
- Confirmation of intrauterine death
- Management of cases
- Counselling women who has had an intrauterine death
- Care after delivery of still birth

Evaluation
- Post Test
- Skill assess: using learning guides
- Module evaluation

Module: Decreased foetal movements/intrauterine foetal death

Training schedule

Total time: 480 min (8 hours)

Time	Topic	Method	Resource materials
30 minutes	Welcome *Objective of the module*: To update the knowledge and skills in management of loss of foetal movements Discuss: Key tasks Learning objectives Explain the tools for evaluation of the session	Discussion	Slides 2-3
30 min	Knowledge assessment	Questionnaire	
Session 1 30 min	Causes of decreased foetal movements/foetal death	Discussion	MCPC 2017 **(S-155)** Clinical protocol on decreased foetal movement /intrauterine foetal death
Session 2 1 hour	Provisional diagnosis of loss of foetal heart	Discussion Exercise 1 Case study	Slide 4 Handout 1 Learning guide on loss of foetal movements
Session 3 3 hours	Management of Intrauterine foetal death	Discussion Role play Skill check	Learning guide on decreased foetal movements/intrauterine death
Session 30 min	Care after delivery	Discussion	Learning guide on decreased foetal movements/intrauterine foetal death
Session 5 1 hour	Supervised client practice		Learning guide
Session 6 1 hour	Evaluation	Post-test Skill check Module evaluation	Questionnaire Learning guide Module evaluation form

Session plans

Training process	Resources
Welcome (30 min)) *Objective of the module*: To update the knowledge and skills in management of loss of foetal movements Key tasks Present key tasks and discuss whether the participants would like to add any Learning objectives At the end of the session, the participants will be able to: 1. List the causes of decreased foetal movements/intrauterine foetal death 2. Diagnose provisionally loss of foetal movements 3. Manage women with decreased /loss foetal movements including care after delivery 4. Counsel women with intrauterine foetal death Explain the tools for evaluation of the session	Power points
Knowledge assessment	Questionnaire
Session 1: Causes of decreased foetal movements and loss of foetal movements *Objective of the session*: To update the knowledge on causes of decreased/ loss of foetal movements *Discussion* Ask the participants to list the foetal and maternal causes of decreased/loss of foetal movements. List the responses on the board and discuss.	MCPC 2017 **(S155)** Clinical protocol on decreased foetal movements
Session 2: Diagnosis of loss of foetal movements *Objective of the session*: To improve the skills in diagnosis loss of foetal movements *Discussion* Ask one of the participants to demonstrate foetal heart rate checking on the anatomical model. Discuss normal range of foetal heart rate. Ask the participants whether they have heard of foetal kick chart. Ask one of the participants to discuss foetal kick chart. Trainer should add any missing information. Ask about confirming diagnosis of loss of foetal movements. *Exercise* Distribute the table on differential diagnosis on loss of foetal movements with the second and third columns blank. Ask the participants to fill in the second and the last column. Discuss each condition and the rationale for the diagnosis. The trainer sums up the discussion highlighting key points in diagnosis *Case study* Project the case study up to evaluation. Ask the participants to respond to the questions and after all the participants have completed answering the questions, discuss each question. Trainer sums up the discussion highlighting the key points in diagnosis. Discuss likely complications of intra-uterine foetal death.	Slide 4 MCPC 2017 **(S155)** Exercise Handout Learning guide on management loss of foetal movements

Session 3: Management of decreased foetal movements/intrauterine death *Objective of the session*: To develop the skills in managing cases of loss of foetal movements *Discussion* Ask the participants about immediate management of loss of foetal movements. Emphasise the importance of emotional support. Distribute the clinical protocol on decreased foetal movements and ask the participants to review the same. Clarify points as needed. *Case study* Distribute the case study projected earlier and ask how they would manage the case by responding to questions under evaluation. After all participants have completed the exercise, discuss each of the questions under diagnosis, care provision and evaluation. Trainer sums up by highlighting the key points in managing cases of loss of foetal movements. *Role play* Counselling about foetal death to the woman and her family. Distribute the role play. Choose three participants to play the role of patient, husband and midwife. Observe the role play and provide feedback using the questions listed in the role play. *Skill practice*- Management of decreased foetal movements/intrauterine death (follow the instructions on skill practice and arrange all the supplies needed for the practice) Distribute the learning guide on management of decreased foetal movements/intrauterine death. Follow the instructions on skill practice. The trainer should observe the groups and provide feedback.	MCPC 2017 **(S155)** Learning guide on management of loss of foetal movements
Session 4: Care after delivery of the dead foetus *Objective of the session:* To highlight the importance of care after delivery of the dead foetus and to plan for future pregnancies *Discussion* Ask the participants about key points in care. List them on the board. Discuss suppression of lactation. Discuss about future pregnancies, timing, treatment in case of medical problems. Counsel for family planning.	WHO MCPC Learning guide on management of loss of foetal movements
Session 5: Supervised client practice *Objective of the session* is to practice skills with clients. This is the final stage of clinical skills developments and participants should be allowed to work with clients only after they have demonstrated skill competency in a simulated situation. Planning for the supervised practice is a critical component so that participants get adequate practice. It is important to respect the rights of clients – permission should be sought, privacy and confidentiality should be maintained and respectful dealings with the clients. Since one trainer	Learning guide

may not be sufficient to supervise all the participants, it will be good to identify potential assistants to help the trainer (preceptors) to observe the skill practices. The preceptors could be a doctor or senior midwife who is very proficient in the skills. The preceptors will need to be trained in the use of checklists to familiarise them with the checklists. It may not be possible to get more than one case of loss of foetal movements at the time of the training and all the participants may not get an opportunity to practice management. Skills in management may be acquired through simulated situations.	
Session 6: Evaluation	Questionnaire Learning guide Module evaluation form

Knowledge assessment questionnaire

Instructions: Write the letter of the single **best** answer to each question in the blank next to the corresponding number on the attached answer sheet.

1. The absence of foetal movements and foetal heart sounds after 22 weeks of pregnancy suggests

   a) abruptio placentae
   b) ruptured uterus
   c) foetal distress
   d) foetal death

2. Absent foetal movements and foetal heart sounds, together with intra-abdominal and/or vaginal bleeding and severe abdominal pain, suggest

   a) abruptio placentae
   b) ruptured uterus
   c) obstructed labour
   d) foetal distress

3. The options of expectant versus active management when loss of foetal movements has occurred should

   a) be discussed with the woman and her family
   b) not be discussed with the woman and her family
   c) be the decision of the doctor
   d) not be the decision of the doctor

4. Expectant management when loss of foetal movements has occurred involves

   a) delivery by caesarean section
   b) giving prostaglandins to induce labour
   c) rupturing the membranes to induce labour
   d) awaiting the spontaneous onset of labour during the next 4 weeks

5. Delivery by caesarean section in the case of loss of foetal movements

   a) should be used as a last resort
   b) is the intervention of choice
   c) is not usually necessary
   d) none of the above

Exercise
Differential diagnosis of loss of foetal movements

Presenting symptoms and other symptoms and signs typically present	Symptoms and signs sometimes present	Probable diagnosis
• Decreased/absent foetal movements • Intermittent or constant abdominal pain • Bleeding after 22 weeks of gestation (may be retained in the uterus)		
• Absent foetal movements and foetal heart sounds • Bleeding (intra-abdominal and/or vaginal) • Severe abdominal pain (may decrease after rupture)		
• Decreased/absent foetal movements • Abnormal foetal heart rate (less than 100 or more than 180 beats per minute)		
• Absent foetal movements and foetal heart		

Case study: Loss of foetal movements

Directions

Read and analyse 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 case study. When all groups have finished, the case studies and the answers each group has developed will be discussed.

Case study

Mrs. Arizona is a 22-year-old gravida three. She did not have any antenatal care for her previous pregnancies and gave birth at home, assisted by the village traditional birth attendant (TBA). This is her first visit to the antenatal clinic for this pregnancy. She thinks she is about 34 weeks pregnant and has come to the clinic today because she has not felt her baby move for 3 days.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

1. What will you include in your initial assessment of Mrs. Arizona, and why?

2. What particular aspects of Mrs. Arizona'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 Mrs. Arizona, and why?

Diagnosis (Identification of Problems/Needs)

You have completed your assessment of Mrs. Arizona and your main findings include the following:

A TBA assisted with the birth of Mrs. Arizona's two previous children at home. Her first child was born at term and is healthy. Her second pregnancy resulted in a stillbirth, after about 30 weeks gestation. According to Mrs. A.'s menstrual history, she is 34 weeks pregnant. Fundal height is 32 weeks. No foetal heart sounds are heard on abdominal examination and no fetal movements are detected. Her blood pressure is normal and she has no signs of anemia. The result of her rapid plasma reagin (RPR) test is positive.

4. Based on these findings, what is Mrs. Arizona's diagnosis, and why?

Care provision (Planning and Intervention)

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

Role play: Counselling woman with loss of foetal movements

Directions

The trainer will select three participants to perform the following roles: skilled provider, antenatal patient and patient's husband. The three participants participating in the role play should take a few minutes to prepare for the activity by reading the background information provided below. The remaining learners, who will observe the role play, should at the same time read the background information.

The purpose of the role play is to provide an opportunity for participants to appreciate the importance of interpersonal communication counselling skills when providing care for a woman experiencing loss of foetal movement.

Participant roles

Provider: The provider is an experienced midwife who has good interpersonal communication skills.

Patient: Mrs. Arizona is 22 years old. She is 34 weeks pregnant.

Patient's husband: Husband is 30 years old and he is a shopkeeper. He and his wife live in a nearby village.

Situation (Same as case study)

Mrs. A. is a 22-year-old gravida three. She did not have any antenatal care for her previous pregnancies and gave birth at home, assisted by the village traditional birth attendant (TBA). This is her first visit to the antenatal clinic for this pregnancy. She thinks she is about 34 weeks pregnant and has come to the clinic today because she has not felt her baby move for 3 days. Her husband has accompanied her.

Focus of the role play

The focus of the role play is the interpersonal interaction between the midwife and Mrs. Arizona and her husband, and the midwife's ability to demonstrate respect and kindness and provide emotional support and reassurance as she explains Mrs. Arizona's treatment and the consequences of her condition to the couple.

Discussion questions

The trainer should use the following questions to facilitate discussion after the role play:

1. How did the midwife explain Mrs. Arizona's treatment and the consequences of her condition to the couple?

2. How did the midwife demonstrate respect and kindness during her/his interaction with the couple?

3. How did the midwife provide emotional support and reassurance to Mrs. Arizona.

Skills practice session

Purpose

The purpose of this activity is to provide opportunities to observe and practice clinical skills, either in a simulated setting or at a clinical site.

Instructions

This activity should be conducted in a clinical setting (either in antenatal clinic or maternity ward)

Participants should review the appropriate learning guide before beginning the activity.

Under the guidance of the trainer, participants should work in groups of three to practice the steps/tasks and observe each other's performance; one plays the role of provider, the second one as woman who is experiencing decreased foetal movement and the third as observer. The observer uses the relevant learning guide related to management of decreased or loss of foetal movements. Participants reverse the roles until each has had an opportunity to practice and is competent. The trainer observes each participant when ready for observation and provides feedback. The participants who are not competent are made to repeat the exercise.

Resources

- Sphygmomanometer and stethoscope
- Thermometer
- Soap and water and betadine
- Gloves
- 0.5% chlorine solution and receptacle for decontamination
- Leak proof container or plastic bag
- Doppler
- Tab Bromocriptine
- Learning guide on management of decreased foetal movement/intrauterine death

Learning guide: Management of decreased foetal movement/intrauterine death

Rating scale
2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards

Steps/Tasks	2	1	0	CASES
Task 1: Preparations for history and examination				
1.1 Gets the equipment ready for examination - Thermometer - Sphygmomanometer - Stethoscope - Doppler - Gloves				
Client 1.2 Greets the client and asks her about her well-being.				
Provider 1.3 Reviews the ANC records for obstetric and medical history, history of current pregnancy, assessing gestational age and any abnormal conditions recorded 1.4 Tells the client about what is going to be done				
Task 2: Taking history and physical examination				
2.1 Takes history: -Asks about last menstrual period and confirms gestation - Reconfirms about history of diabetes, hypertension, syphilis, blood group, etc. -Asks about any history of fever, bleeding per vagina, meconium stained discharge, foul smelling discharge, etc. -Asks about foetal movements- times in a day - Notes the time when the foetal movements were not felt				
2.2 Does physical examination - Washes hands and wears sterile gloves - Checks the temperature, pulse, blood pressure, respiration - Checks foetal heart whether present, rate, regularity - IF foetal heart not heard, requests other providers to listen to confirm -Uses Doppler if available *Abdominal examination* -Measures fundal height (symphysis-fundal height) and checks whether it corresponds with gestation -Checks for uterine tenderness/ irritability -Checks for uterine contractions				

2.3 Discusses the findings in a sensitive manner with the woman and her family and mentions the need referral for ultrasonography for further confirmation.				
2.4 Manages as follows (following the clinical protocol) *If confirmed the foetus is dead*: -Counsels the woman and her family about waiting for spontaneous delivery. Informs that 90% delivers spontaneously within a week or two. -If not agreed, advises for induction of labour at the referral facility *If the foetus is* alive and foetal heart and movements improved: -Advises to monitor foetal kicks and lie on left lateral side. *If foetus is alive but foetal heart and movements are slow:* Monitor in the referral facility *If the foetus's condition worsens or is dead:* Counsels the mother as above				
2.5 Counsels mother -Informs the mother and family about the death of the foetus -If woman or family desires, show the dead foetus to them -Explains to the woman and family about possible cause of death -Explains that the current events don't have any bearing on the next pregnancies -Advise on preventive measures for the next pregnancy -Records the events and provides a copy to the woman/family				
2.6 Provides care to the mother after still birth - Advises on prevention of engorgement of breasts by applying cold compresses to the breast, avoiding massage or applying heat to breasts. - Gives Tab Bromocriptine 2.5 mg daily for 2-3 days to suppress lactation and 500 mg of Paracetemol as needed -Refers for appropriate treatment in case of medical problems or other pregnancy related problems or foetal abnormality - Counsels on appropriate family planning method				

Module evaluation

Module: Decreased foetal movements/intrauterine death

Please indicate your opinion of the course components using the following rating scale:

5.Strongly Agree 4. Agree 3. No opinion 4. Disagree 5. Strongly disagree

Course component	Rating
1.The discussions helped me to clarify elements related to basic care.	
2.The exercises were useful for learning about decreased foetal movements/intrauterine foetal death.	
3.The role plays on interpersonal communication skills were helpful.	
4.The case studies were useful for practising clinical decision making.	
5.The time for skill practice in a simulated setting was sufficient.	
6.The supervised client practice within the limitations of time was sufficient.	
7.I am confident about managing decreased foetal movements/intrauterine death.	

DECREASED FOETAL MOVEMENTS/ INTRAUTERINE FOETAL DEATH

Decreased foetal movement is defined as foetal movement less than 10 in 24 hours. It is a sign of a distressed foetus and may lead to foetal death if appropriate action is not taken.

Causes of decreased foetal movements/foetal death

- **Maternal:** Hypertensive disorders, diabetes, fever, antepartum haemorrhage, severe anaemia, maternal syphilis, hepatitis and other infections, post term pregnancy
- **Foetal:** Intra uterine growth retardation, foetal abnormalities, foetal infection such as rubella, Rh incompatibility
- **Idiopathic**

Suspect intrauterine death

- Absence of foetal heart sound by doppler
- Height of uterus is smaller than period of amenorrhoea

Counselling in intra-uterine foetal death

- Patient and her family should be explained the condition of the foetus and the need to confirm the diagnosis by a specialist using an ultrasound.
- Inform the woman and her family that though in 90% of the cases, the foetus will be expelled spontaneously with no complications, it is important to monitor complications in a hospital with laboratory facility and the importance of delivering in such a facility.
- Explain to the woman and her family that one foetal death does not have any impact on the future successful pregnancies.
- Refer to the specialist

Monitoring Foetal movement (Kick chart)

- Pregnant women should notice at least 10 foetal movements per day. Less than 10 movements is abnormal and should be evaluated
- Count foetal movement for 1 hour 2 hours after meal (breakfast, lunch, dinner), a total of 10 movements in 24 hours
- **Absence of foetal movement for 4 hours is a danger sign**

Care of the woman after delivery of a stillbirth

- *Engorged breasts*

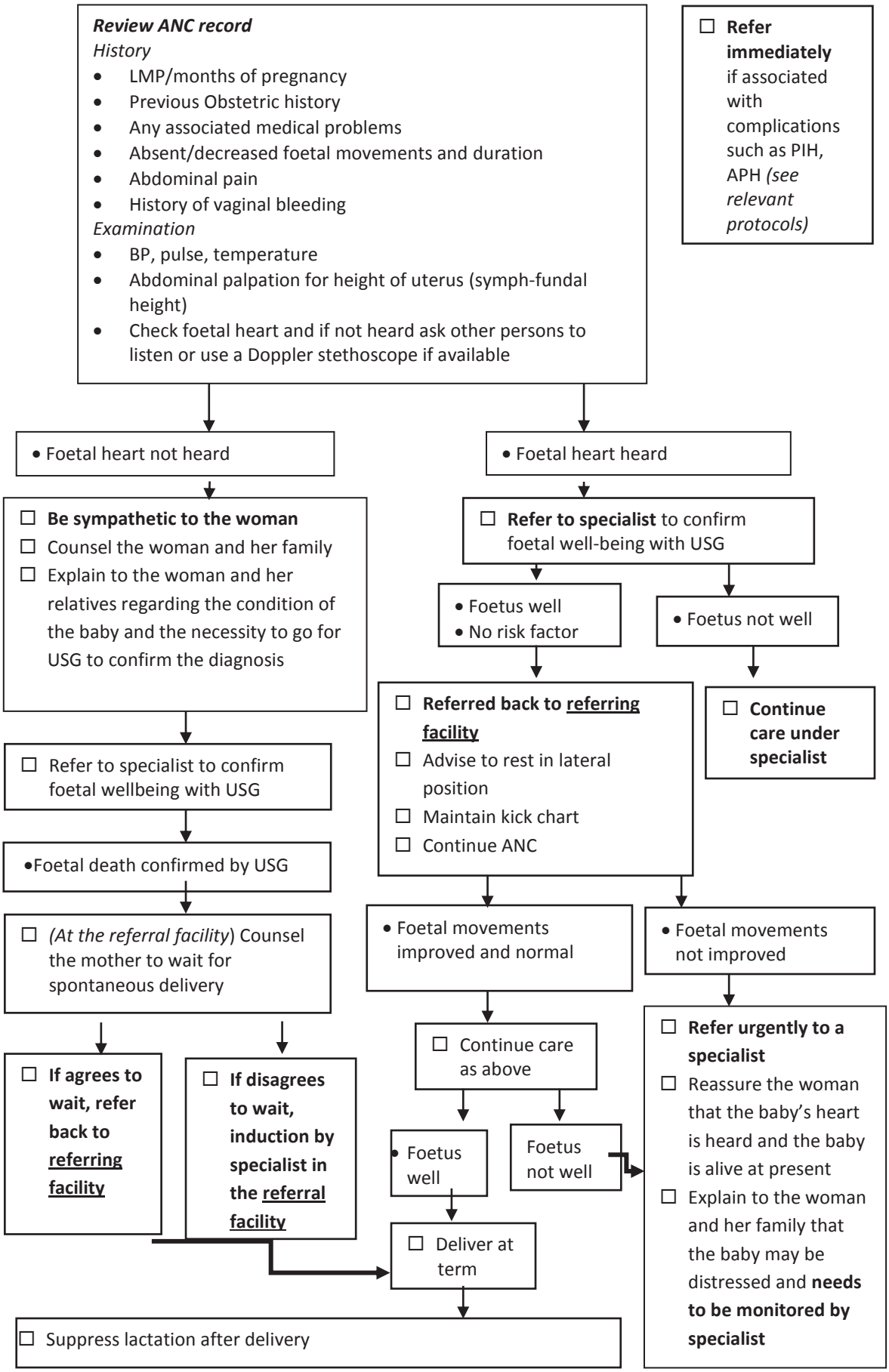
She may have breast engorgement and manage as follows:

- ❖ Support breasts with a binder or brassiere
- ❖ Apply cold compresses to the breast
- ❖ Avoid massaging or applying heat to the breasts
- ❖ Avoid stimulating the nipples
- ❖ Tab. Bromocriptine 2.5 mg daily for 2-3 days to suppress lactation
- ❖ Give paracetamol 500mg orally as needed
- ❖ Follow up in 3 days to ensure response
  - Counsel and provide emotional support
  - *If any foetal abnormality, discuss with woman and her spouse about the same*

Complications

- Intrauterine infection
- Bleeding disorders
- Postpartum haemorrhage
- Psychological problems

DECREASED FOETAL MOVEMENTS/ INTRAUTERINE FOETAL DEATH



ANSWER KEY
Module: Decreased foetal movements
Knowledge assessment questionnaire

Instructions: Write the letter of the single **best** answer to each question in the blank next to the corresponding number on the attached answer sheet.

1. The absence of foetal movements and foetal heart sounds after 22 weeks of pregnancy suggests
   a) abruptio placentae
   b) ruptured uterus
   c) foetal distress
   d) foetal death

2. Absent foetal movements and foetal heart sounds, together with intra-abdominal and/or vaginal bleeding and severe abdominal pain, suggest
   a) abruptio placentae
   b) ruptured uterus
   c) obstructed labour
   d) foetal distress

3. The options of expectant versus active management when loss of foetal movements has occurred should
   a) be discussed with the woman and her family
   b) not be discussed with the woman and her family
   c) be the decision of the doctor
   d) not be the decision of the doctor

4. Expectant management when loss of foetal movements has occurred involves
   a) delivery by caesarean section
   b) giving prostaglandins to induce labour
   c) rupturing the membranes to induce labour
   d) awaiting the spontaneous onset of labour during the next 4 weeks

5. Delivery by caesarean section in the case of loss of foetal movements
   a) should be used as a last resort
   b) is the intervention of choice
   c) is not usually necessary
   d) none of the above

Exercise 1 and Handout

Differential diagnosis of loss of foetal movements

Presenting symptoms and other symptoms and signs typically present	**Symptoms and signs sometimes present**	**Probable diagnosis**
• Decreased/absent foetal movements • Intermittent or constant abdominal pain • Bleeding after 22 weeks of gestation (may be retained in the uterus)	• Shock • Tense/tender uterus • Foetal distress or absent foetal heart sounds	Abruptio placentae
• Absent foetal movements and foetal heart sounds • Bleeding (intra-abdominal and/or vaginal) • Severe abdominal pain (may decrease after rupture)	• Shock • Abdominal distension/free fluid • Abnormal uterine contour • Tender abdomen • Easily palpable foetal parts • Rapid maternal pulse	Ruptured uterus
• Decreased/absent foetal movements • Abnormal foetal heart rate (less than 100 or more than 180 beats per minute)	• Thick meconium stained fluid	Foetal distress
• Absent foetal movements and foetal heart	• Symptoms of pregnancy cease • Symphysis-fundal height decreases • Uterine size decreases	Foetal death

Source: WHO MCPC 2017

Case study: Loss of foetal movements

Directions
Read and analyse 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 case study. When all groups have finished, we will discuss the case studies and the answers each group has developed.

Case study
Mrs. Arizon is a 22-year-old gravida three. She did not have any antenatal care for her previous pregnancies and gave birth at home, assisted by the village traditional birth attendant (TBA). This is her first visit to the antenatal clinic for this pregnancy. She thinks she is about 34 weeks pregnant and has come to the clinic today because she has not felt her baby move for 3 days.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

1. What will you include in your initial assessment of Mrs. Arizona, and why?
   - Mrs. Arizona should be greeted respectfully and with kindness.
   - She should be told what is going to be done. She should be encouraged to ask questions and her concerns should be dealt with sympathetically and in a calm and reassuring manner.
   - Because this is Mrs. A.'s first antenatal visit, a targeted history should be taken, including menstrual history (to establish estimated delivery date) and past and present pregnancy problems. Focus whether any of the previous pregnancies resulted in a preterm birth or a stillbirth, and whether foetal movement for her present pregnancy was normal until 3 days ago. She should also be asked about medication and alcohol use and smoking, tetanus immunization, HIV status and general health problems, including sexually transmitted infections.

2. What particular aspects of Mrs. Arizona's physical examination will help you make a diagnosis or identify her problems/needs, and why?
   - An abdominal examination should be done to check whether foetal movements and heart sounds are absent. Fundal height should be assessed to determine whether uterine size is consistent with gestation estimated by dates.
   - The shape and size of the abdomen and the presence of scars should also be noted. In addition, because this is Mrs. Arizona's first antenatal visit, her external genitalia should be examined, her blood pressure taken and her conjunctiva and palms checked for pallor.
3. What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. Arizona, and why?
   - Because Mrs. A. has had no antenatal care this pregnancy, haemoglobin and RPR tests should be done. An HIV test should also be done, if indicated and agreed to by Mrs. A.
   - If X-ray is available, foetal death can be confirmed after 2 more days (signs include overlapping skull bones, hyper-flexed spinal column, gas bubbles in heart and great vessels, and oedema of the scalp). Alternatively, ultrasound could be used, if available (signs include absent foetal activity, abnormal foetal head shape, reduced or absent amniotic fluid and doubled-up foetus).

Diagnosis (Identification of Problems/Needs)

You have completed your assessment of Mrs. Arizona and your main findings include the following:

A TBA assisted with the birth of Mrs. Arizona's two previous children at home. Her first child was born at term and is healthy. Her second pregnancy resulted in a stillbirth, after about 30 weeks gestation. According to Mrs. A.'s menstrual history, she is 34 weeks pregnant. Fundal height is 32 weeks. No foetal heart sounds are heard on abdominal examination and no fetal movements are detected. Her blood pressure is normal and she has no signs of anemia. The result of her rapid plasma reagin (RPR) test is positive.

4. Based on these findings, what is Mrs. Arizona's diagnosis, and why?

    - The absence of fetal movements and fetal heart sounds suggest that fetal death has occurred. In addition, Mrs. A.'s positive RPR test, and history of a previous stillbirth, further suggest that the fetal death may be due to syphilis.

Care provision (Planning and Intervention)

5. Based on your diagnosis, what is your plan of care for Mrs. Arizona, and why?
6. The findings and probable cause of death should be explained to Mrs. Arizona. The options of expectant (await spontaneous onset of labour) or active management (induce labour) should be discussed. Mrs. A. should be reassured that in 90% of cases the foetus is spontaneously expelled during the waiting period with no complications. She should also be encouraged to express her concerns, listened to carefully, and provided emotional support and reassurance.
7. Counselled and sent to referral hospital for reconfirmation of diagnosis

8. Mrs. A. and her husband should be counselled for taking treatment for syphilis and sent to referral hospital

Role play

Discussion questions

The trainer should use the following questions to facilitate discussion after the role play:

1. How did the midwife explain Mrs. Arizona's treatment and the consequences of her condition to the couple?

2. How did the midwife demonstrate respect and kindness during her/his interaction with the couple?

3. How did the midwife provide emotional support and reassurance to Mrs. Arizona?

Answers

The following answers should be used by the trainer to guide discussion after the role play:

1. The doctor should speak in a calm and reassuring manner, using terminology that Mrs. Arizona will easily understand. The information provided about management should reassure Mrs. Arizona that no treatment is typically needed to begin labour because the foetus is usually expelled spontaneously. The doctor should explain that Mrs. Arizona will need to come back regularly to ensure her continued health. In addition, Mrs. Arizona should be treated with respect and reassured that treatment for syphilis is necessary and available for her and her husband.

2. The doctor should listen and express understanding and acceptance of Mrs. Arizona's feelings about her situation. For example, nonverbal behaviours, such as a squeeze of the hand or a look of concern (depending on culture), could be enormously helpful in providing emotional support and reassurance for Mrs. Arizona

3. If the doctor demonstrates the verbal and nonverbal behaviours mentioned above, Mrs. Arizona is less likely to be anxious and upset and more likely to speak openly about her situation, particularly since the result of her RPR test was positive, indicating a need for treatment for herself and her husband.

Module 11

Management of prelabour rupture of membranes

Training resource package for intrapartum and immediate post-partum care

Every woman who develops complications during labour and delivery receive evidence-based appropriate care including appropriate referral.
Clinical protocol: Prelabour rupture of membranes

Module: Management of prelabour rupture of membranes

Key tasks
- Diagnosis of prelabour rupture of membranes (PROM)
- Monitoring complications
- Management including prevention of respiratory distress syndrome in newborn

Training schedule
- Key tasks
- Learning objectives
- Sessions plans
- Knowledge assessment

Trainer's guide
Session plan describes objectives of each session, topics, methodology and key points
- Case studies
- Role plays
- Learning guides

Key knowledge
- Diagnosis PROM
- Potential complications including intrauterine infection
- Antibiotics

Critical skills
- Diagnosis of PROM
- Monitoring complications
- Management of PROM before 37 weeks and after 37 weeks

Evaluation
- Post Test
- Skill assess: using learning guides
- Module evaluation

Module: Management of prelabour rupture of membranes

Training schedule

Total time: 330 min (5hours 30 min)

Time	Topic	Method	Resource materials
30 minutes	Welcome *Objective of the module*: To enable participants to update their knowledge and skills in management of prelabour rupture of membranes (PROM) *Discuss:* Key tasks Learning objectives Explain the tools for evaluation of the session	Discussion	Slides 2-3
30 min	Knowledge assessment	Test	Questionnaire
Session 1 60 min	Diagnosis of PROM	Discussion Case study Exercise	Slides 4-5 MCPC 2017 **(S159)** Clinical protocol on PROM Handout 1
Session 2 30 min	Monitoring complications of PROM	Discussion Case study	Slide 6 Clinical protocol on PROM
Session 3 60 min	Management – immediate management and specific management	Discussion Role play Skill check	MCPC **(S159, 161)** Learning guide on PROM
Session 4 60 min	Supervised client practice		Learning guide
Session 5 60 min	Evaluation	Post-test Skill check Module evaluation	Questionnaire Learning guide Module evaluation form

Session plans

Training process	Resources
Welcome - **(30 min)** *Objective of the module*: To enable participants to review and update their knowledge and skills on management of prelabour rupture of membranes (PROM) Key tasks Present key tasks and discuss whether the participants would like to add any *Learning objectives* At the end of the session, the participants will be able to: 1. Diagnose prelabour rupture of membranes (PROM) 2. Monitor complications 3. Manage women with PROM before 37 weeks of gestation and after 37 weeks of gestation Explain the tools for evaluation of the session	Slide 2-3
Knowledge assessment **(30 min)**	Questionnaire
Session 1: Diagnosis of PROM **(60 min)** *Objective of the session*: To update the knowledge on diagnosis of PROM *Exercise* Distribute the table on differential diagnosis with the second and third columns blank. Ask the participants to fill in the second and the last column. *Discussion* Discuss each condition and the rationale for the diagnosis. Ask the participants steps in confirming the diagnosis of PROM. The trainer should sump up the discussion highlighting key points in diagnosis.	Slides 4-5 WHO MCPC 2017 **(S 159)** Clinical protocol on PROM Handout 1
Session 2: Monitoring complications of PROM **(30 min)** *Objective of the session*: To update the skills in monitoring complications *Discussion* Ask the participants about the likely complications of PROM in mother and newborn. List the responses on the board. *Case study* Project the case study up to care provision. Ask the groups to discuss the three assessment questions. After all the participants have completed answering the questions, discuss each of the questions. Ask the groups what is their diagnosis and factors supporting the diagnosis. The trainer should sum up the key points.	Slide 6-8 MCPC Clinical protocol on PROM
Session 3: Management of PROM **(60 min)** *Objective of the session*; To develop the skills in managing PROM Distributes the clinical protocol on management of PROM and ask the participants to review the same and seek clarifications if needed. *Case study* Distribute /project the rest of the case study. Ask the groups to discuss management using the clinical protocol. After all the groups have completed, discuss the answers. The trainer should review the clinical protocol with the participants and highlight key points especially management before 34 weeks, between 34-37 weeks and after 37 weeks. *Role play* NEEDED? Communicating about complications during pregnancy Distribute the role play. Choose three participants to play the role of patient,	MCPC **(S159, 161)** Clinical protocol Learning guide on management of PROM

husband and midwife. Observe the role play and provide feedback using the questions listed in the role play. *Skill practice*- Managing PROM (follow the instructions on skill practice and arrange all the supplies needed for the practice) Distribute the learning guide on management of PROM. Follow the instructions on skill practice. The trainer should observe the groups and provide feedback.	
Session 4: Supervised client practice **(60 min)** *Objective of the session* is to practice skills with clients. This is the final stage of clinical skills developments and participants should be allowed to work with clients only after they have demonstrated skill competency in a simulated situation. Planning for the supervised practice is a critical component so that participants get adequate practice. It is important to respect the rights of clients – permission should be sought; privacy and confidentiality should be maintained and respectful dealings with the clients. Since one trainer may not be sufficient to supervise all the participants, it will be good to identify potential assistants to help the trainer (preceptors) to observe the skill practices. The preceptors could be a doctor or senior midwife who is very proficient in the skills. The preceptors will need to be trained in the use of checklists to familiarise them with the checklists. It may not be possible to get more than one case of PROM at the time of the training and all the participants may not get an opportunity to practice management. Skills in management may be acquired through simulated situations.	Learning guide
Session 5: Evaluation **(60 min)**	Questionnaire Learning guide Module evaluation form

Knowledge assessment

Instructions: Write the letter of the single **best** answer to each question in the blank next to the corresponding number on the attached answer sheet.

1. The typical presenting symptom for prelabour rupture of membranes is

   a) watery vaginal discharge
   b) foul-smelling, watery vaginal discharge
   c) bloody vaginal discharge
   d) blood-stained mucus

2. The typical odour of amniotic fluid confirms the diagnosis of

   a) amnionitis
   b) vaginitis
   c) cervicitis
   d) prelabour rupture of membranes

3. General management of prelabour rupture of membranes involves

   a) confirming accuracy of calculated gestational age, if possible
   b) using a high-level disinfected speculum to assess vaginal discharge and exclude urinary incontinence
   c) (a) and (b)
   d) none of the above

4. If prelabour rupture of membranes occurs before 37 weeks gestation and there are no signs of infection

   a) emergency caesarean section should be performed
   b) labour should be induced
   c) prophylactic antibiotics should be given and the woman should be delivered at term
   d) prophylactic antibiotics should be given and the woman should be delivered at 37 weeks

5. Management of amnionitis involves

   a) discontinuing antibiotic therapy postpartum if the woman delivers vaginally
   b) continuing antibiotic therapy postpartum if the woman delivers vaginally
   c) discontinuing antibiotic therapy postpartum following vaginal delivery or caesarean section
   d) continuing antibiotic therapy postpartum following vaginal delivery or caesarean section

Exercise
Differential diagnosis of vaginal discharge

Presenting symptoms and other symptoms and signs typically present	Symptoms and signs sometimes present	Probable diagnosis
• Watery and vaginal discharge		
• Fever/chills • Maternal tachycardia • Abdominal pain • Foetal tachycardia		
• Foul-smelling vaginal discharge • No history of loss of fluid		
• Bloody vaginal discharge		
• Vaginal bleeding • Intermittent or constant abdominal pain		
• Blood stained mucus or bloody vaginal discharge		

Case study: Prelabour rupture of membranes

Directions

Read and analyse 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 case study. When all groups have finished, the case studies and answers each group has developed will be discussed.

Case study

Mrs. Betty is 30 years old. She is 36 weeks pregnant and has attended the antenatal clinic three times this pregnancy. Her last antenatal visit was 3 days ago. She has been well and her pregnancy has progressed normally. Mrs. Betty has come to the clinic this morning to report that she has had watery vaginal discharge for the past 12 hours.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

1. What will you include in your initial assessment of Mrs. Betty and why?

2. What particular aspects of Mrs. Betty'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 Mrs. Betty, and why?

Diagnosis (Identification of Problems/Needs)

You have completed your assessment of Mrs. Betty and your main findings include the following:

Mrs. Betty's watery vaginal discharge has the typical odour of amniotic fluid. She has not had any contractions, or any vaginal bleeding with abdominal pain. Her temperature is 36.8º C, her pulse is 80 beats/minute and her blood pressure is 120/70 mm Hg. She is not experiencing contractions.

4. Based on these findings, what is Mrs. Betty's diagnosis, and why?

Care provision (Planning and Intervention)

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

Role play: Communicating about complications during pregnancy (IS THIS NEEDED)

Directions

The trainer will select three participants to perform the following roles: skilled provider, antenatal patient and patient's husband. The three participants participating in the role play should take a few minutes to prepare for the activity by reading the background information provided below. The remaining participants, who will observe the role play, should at the same time read the background information.

The purpose of the role play is to provide an opportunity for participants to appreciate the importance of interpersonal communication skills when providing care for a woman experiencing an obstetric complication.

Participant roles

Provider: The provider is an experienced midwife who has good interpersonal communication skills.

Patient: Mrs. Anna is 18 years old. She is 34 weeks pregnant.

Patient's husband: Mr. Samson is 30 years old and a farmer. He and his wife live in a nearby village.

Situation

Mrs. Anna's husband brought her to the emergency department of the district hospital because she started leaking from the vagina. The midwife has assessed Mrs. Anna, diagnosed prelabour rupture of membranes and initiated immediate management. The midwife explains the situation to Mr. Samson.

Focus of the role play

The focus of the role play is the interpersonal interaction between the midwife and Mrs. Anna's husband, and the midwife's ability to demonstrate respect and kindness and provide emotional support and reassurance as she explains Mrs. Anna's treatment and the consequences of her condition to Mr. Samson.

Discussion questions

The teacher should use the following questions to facilitate discussion after the role play:

1. How did the midwife explain Mrs. Anna's treatment and the consequences of her condition to Mr. Samson?

2. How did the midwife demonstrate respect and kindness during her/his interaction with Mrs. Anna and Mr. Samson.?

3. How did the midwife provide emotional support and reassurance to Mrs. Anna?

Skills practice session: PROM

Purpose

The purpose of this activity is to provide opportunities to observe and practice clinical skills, either in a simulated setting or at a clinical site.

Instructions

This activity should be conducted in a simulated setting using the appropriate pelvic and foetal models.

Participants should review the appropriate learning guide before beginning the activity.

Under the guidance of the trainer, participants should work in groups of three to practice the steps/tasks and observe each other's performance; one plays the role of provider, the second one as woman with PROM and the third as observer. The observer uses the relevant learning guide related to management of PROM. Participants reverse the roles until each has had an opportunity to practice and are competent. The trainer observes each participant when ready for observation and provides feedback. The participants who are not competent are made to repeat the exercise.

During supervised practice at a clinical site, the trainer assesses the skills competency of each participant using learning guides.

Resources

- Childbirth simulator
- Sphygmomanometer and stethoscope
- Delivery kit
- Speculum
- Thermometer
- Soap and water and betadine
- Sterile gloves
- Personal protective barriers
- 0.5% chlorine solution and receptacle for decontamination
- Leak proof container or plastic bag
- Antibiotic
- Corticosteroids
- Learning guide on management of PROM

Learning guide: Management of prelabour rupture of membranes

Rating scale
2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards

Learning guide on management of PROM				
Step/Task	2	1	0	**CASES**
Task 1: Preparations for history and examination				
1.1 Gets the equipment ready for examination ▪ Thermometer ▪ Sphygmomanometer ▪ Stethoscope ▪ Sterile pads ▪ HDL speculum ▪ HDL gloves				
Client 1.2 Greets the client and asks her about her well-being.				
Provider 1.3 Reviews the ANC records for assessing gestational age, any history of mal-presentations and polyhydramnios in the current or past pregnancy, history of amniocentesis and attempted termination of pregnancy. 1.4 Tells the client about what is going to be done				
Task 2: Taking history and physical examination				
2.1 Takes history: ▪ Asks about last menstrual period and confirms gestation ▪ Asks whether she had any vaginal examination ▪ Documents time and details of vaginal discharge ▪ Asks about foetal movements depending on the gestation				
2.2 Does physical examination ▪ Washes hands and wears gloves ▪ Checks the temperature, pulse, blood pressure, respiration ▪ Checks foetal heart whether present, rate, regularity				

Abdominal examination ▪ Measures fundal height (symphysis-pubis) and checks whether it corresponds with gestation ▪ Presentation depending on the gestational age ▪ Uterine tenderness/ irritability ▪ Uterine contractions ▪ Palpates abdomen for presenting part ▪ If fundal height is more than the gestation in weeks				
2.3 Confirms diagnosis by doing a pelvic examination ▪ Tells the woman about the examination ▪ Changes the gloves or wash the hands in betadine ▪ Cleans the external genitalia ▪ Uses a HDL speculum to assess vaginal discharge (amount, colour, odour) ▪ Excludes urinary incontinence ▪ Fluid may be collecting inside the posterior fornix and to rule out the same asks the woman to cough and a gush of fluid may happen ▪ Rules out cord prolapse ▪ Determines cervical dilatation				
2.4 Discusses the findings with the woman and her family and mentions the need to observe for complications and need for referral				
2.5 Admits the woman Place a sterile pad over the vulva and examines the pad one hour later				
2.6 Manages as follows (follow the protocol): *If the gestation is less than 37 weeks* and no evidence of infection ▪ Gives antibiotics (erythromycin 250 mg one dose) ▪ Refers to referral level facility *If gestation is less than 34 weeks and no signs of infection* ▪ Gives antibiotics (erythromycin 250 mg one dose) ▪ Gives corticosteroids one dose (6mg IM) (MENTIONS TIME of giving the medicine) ▪ Refers referral facility *If gestation is more than 37 weeks* ▪ Refers after giving antibiotics				
2.7 Monitors foetal heart while waiting for referral and during transfer				
2.8 Immerses both gloved hands in a container filled with 0.5% chlorine solution and removes the gloves.				
2.9 Washes hands with soap and water and dries with a clean dry cloth or air dries				

Module evaluation

Module: Pre-mature rupture of membranes

Please indicate your opinion of the course components using the following rating scale:

5. Strongly Agree
4. Agree
3. No opinion
2. Disagree
1. Strongly disagree

Course component	Rating
1. The discussions helped me to clarify elements related to basic care.	
2. The exercises were useful for learning about management of premature rupture of membranes.	
3. The role plays on interpersonal communication skills were helpful.	
4. The case studies were useful for practising clinical decision making.	
5. The time for skill practice in a simulated setting was sufficient.	
6. The supervised client practice within the limitations of time was sufficient.	
7. I am confident about managing premature rupture of membranes.	

PRELABOUR RUPTURE OF MEMBRANES

Prelabour rupture of membranes (PROM) is rupture of the membranes before labour has begun. PROM can occur either when the foetus is immature (preterm or before 37 weeks) or when it is mature (term).

Symptoms

- Woman complains of sudden gush of fluid per vagina or intermittent leaking of fluid

Term rupture:

- Diagnosis confirmed by pelvic examination- membranes absent. *Occasionally, if membranes are present with persistent leaking, likely diagnosis is hind water rupture of membranes.*

Pre-term rupture:

- *Sterile (high level disinfected) speculum examination to see pooling of liquor Amnii*
- If a vaginal pad is placed over the vulva and examined after one hour, it may be wet and /or have the odour (in urinary incontinence, typical smell of urine may be there)
- Digital vaginal examination does not help to establish the diagnosis and can introduce infection and SHOULD BE AVOIDED.

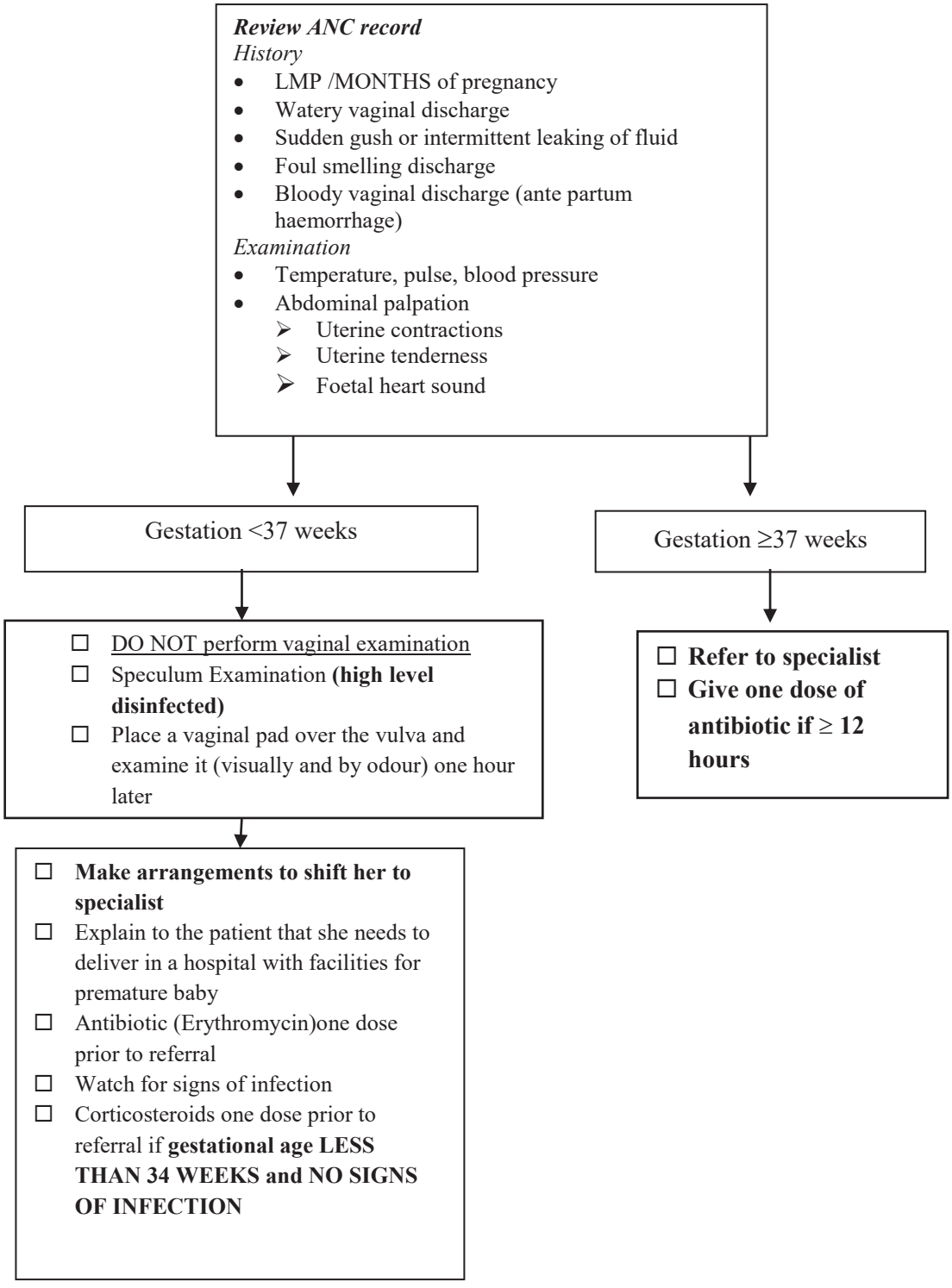
Signs of intra uterine infection

- Maternal tachycardia
- Pyrexia >38^{o}C
- Foetal tachycardia
- Uterine tenderness
- Foul smelling discharge
- Dirty blood stain discharge

Prophylactic antibiotic
Erythromycin 250 mg by mouth (one dose before referral)

Corticosteroids
If gestation is <34weeks give Dexamethazone 6 mg IM (one dose before referral)
ONLY IF THERE ARE NO SIGNS OF INTRAUTERINE INFECTION

PRELABOUR RUPTURE OF MEMBRANES



ANSWER KEY
MODULE: PROM

Knowledge assessment

Instructions: Write the letter of the single **best** answer to each question in the blank next to the corresponding number on the attached answer sheet.

1. The typical presenting symptom for prelabour rupture of membranes is
   a) watery vaginal discharge
   b) foul-smelling, watery vaginal discharge
   c) bloody vaginal discharge
   d) blood-stained mucus

2. The typical odour of amniotic fluid confirms the diagnosis of
   a) amnionitis
   b) vaginitis
   c) cervicitis
   d) **prelabour rupture of membranes**

3. General management of prelabour rupture of membranes involves
   a) confirming accuracy of calculated gestational age, if possible
   b) using a high-level disinfected speculum to assess vaginal discharge and exclude urinary incontinence
   c) **(a) and (b)**
   d) none of the above

4. If prelabour rupture of membranes occurs before 37 weeks gestation and there are no signs of infection
   a) emergency caesarean section should be performed
   b) labour should be induced
   c) prophylactic antibiotics should be given and the woman should be delivered at term
   d) **prophylactic antibiotics should be given and the woman should be delivered at 37 weeks**

5. Management of amnionitis involves
   a) discontinuing antibiotic therapy postpartum if the woman delivers vaginally
   b) continuing antibiotic therapy postpartum if the woman delivers vaginally
   c) discontinuing antibiotic therapy postpartum following vaginal delivery or caesarean section
   d) **continuing antibiotic therapy postpartum following vaginal delivery or caesarean section**

Handout 1
Differential diagnosis of vaginal discharge

Presenting symptoms and other symptoms and signs typically present	Symptoms and signs sometimes present	Probable diagnosis
• Watery and vaginal discharge	• Sudden gushing or intermittent leaking of fluid • Fluid seen at introitus • No contractions within one hour	Prelabour rupture of membranes
• Fever/chills • Maternal tachycardia • Abdominal pain • Foetal tachycardia	• History of loss of fluid • Foul smelling watery discharge after 22 weeks • Tender uterus • Light vaginal bleeding[1]	Amnionitis
• Foul-smelling vaginal discharge • No history of loss of fluid	• Itching • Frothy/curd like discharge • Abdominal pain • Dysuria	Vaginitis/cervicitis[2]
• Bloody vaginal discharge	• Abdominal pain • Loss of foetal movements • History of prolonged vaginal bleeding	Antepartum haemorrhage
• Vaginal bleeding • Intermittent or constant abdominal pain	• Shock • Tense/Tender uterus • Decreased/absent foetal movements • Foetal distress or absent foetal heart	Abruptio placentae
• Blood stained mucus or bloody vaginal discharge	• Cervical dilatation and effacement • Contractions	Possible term labour

1.Takes longer than 5 minutes for a pad to be soaked
2.Determine cause and treat accordingly
Source:WHO MCPC 2017

Case study: Prelabour rupture of membranes

Directions

Read and analyse 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 case study. When all groups have finished, the case studies and answers each group has developed will be discussed.

Case study

Mrs. Betty is 30 years old. She is 36 weeks pregnant and has attended the antenatal clinic three times this pregnancy. Her last antenatal visit was 3 days ago. She has been well and her pregnancy has progressed normally. Mrs. Betty has come to the clinic this morning to report that she has had watery vaginal discharge for the past 12 hours.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

6. What will you include in your initial assessment of Mrs. Betty and why?
   - Mrs. Betty should be greeted respectfully and with kindness.
   - She should be told what is going to be done and listened to carefully. Her questions should be answered in a calm and reassuring manner.
   - Mrs. Betty should be asked whether she has had any other symptoms, such as vaginal bleeding with abdominal pain (possible abruptio placentae) or fever and foul-smelling vaginal discharge (signs of infection). She should also be asked whether she has passed blood-stained mucus vaginally (show) or had any contractions (may indicate the start of preterm labour).
   - Vaginal discharge should be examined to determine whether the watery vaginal discharge is amniotic fluid (confirmed by typical odour).
   - Mrs. B.'s temperature, pulse and blood pressure should be taken.
   - Mrs. B.'s abdomen should be palpated to determine size and lie and to check for indications of contractions. Foetal heart sounds should be listened for.
7. What particular aspects of Mrs. Betty's physical examination will help you make a diagnosis or identify her problems/needs, and why?
   - A speculum examination should be done, using a high-level disinfected speculum, to check whether fluid is coming from the cervix or pooling in the posterior fornix of the vagina. While the examination is being done, Mrs. B. should be asked to cough to see whether this causes a gush of fluid. The typical odour of amniotic fluid should confirm the diagnosis when membrane rupture is recent.
   - A digital vaginal examination should not be performed as this does not help establish the diagnosis and can introduce infection.
8. What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. Betty, and why?

No test such as nitrazine test or ferning test is possible at the CHC

Diagnosis (Identification of Problems/Needs)

You have completed your assessment of Mrs. Betty and your main findings include the following:

Mrs. Betty's watery vaginal discharge has the typical odour of amniotic fluid. She has not had any contractions, or any vaginal bleeding with abdominal pain. Her temperature is 36.8º C, her pulse is 80 beats/minute and her blood pressure is 120/70 mm Hg. She is not experiencing contractions.

9. Based on these findings, what is Mrs. Betty's diagnosis, and why?
    - Mrs. Betty's symptoms and signs (e.g., watery vaginal discharge with typical odour of amniotic fluid and no contractions) are consistent with prelabour rupture of membranes.

Care provision (Planning and Intervention)

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

    - Mrs. Betty should be treated with antibiotics (erythromycin 250 mg by mouth three times/day for 7 days and amoxicillin 500 mg by mouth three times/day for 7 days) to reduce maternal and newborn infective morbidity and to delay childbirth.
    - Mrs. Betty should also be treated with corticosteroids (betamethasone 12 mg IM, two doses 12 hours apart or dexamethasone 6 mg IM, four doses 6 hours apart) to improve fetal lung maturity.
    - Arrangements should be made for her to be admitted to the nearest health facility that provides maternal and newborn care services, to enable her and her newborn to receive appropriate care.
    - At 37 weeks, labor should be induced based on assessment of the cervix.
    - The steps taken to manage the complication should be explained to Mrs. Betty and her family and she should be encouraged to express her concerns, listened to carefully, and provided emotional support and reassurance.

Role play: Communicating about complications during pregnancy

Directions

The trainer will select three participants to perform the following roles: skilled provider, antenatal patient and patient's husband. The three participants participating in the role play should take a few minutes to prepare for the activity by reading the background information provided below. The remaining participants, who will observe the role play, should at the same time read the background information.

The purpose of the role play is to provide an opportunity for participants to appreciate the importance of interpersonal communication skills when providing care for a woman experiencing an obstetric complication.

Participant roles

Provider: The provider is an experienced midwife who has good interpersonal communication skills.

Patient: Mrs. Anna is 18 years old. She is 34 weeks pregnant.

Patient's husband: Mr. Samson is 30 years old and a farmer. He and his wife live in a nearby village.

Situation

Mrs. Anna's husband brought her to the emergency department of the district hospital because she started leaking from the vagina. The midwife has assessed Mrs. Anna, diagnosed prelabour rupture of membranes and initiated immediate management. The midwife explains the situation to Mr. Samson.

Focus of the role play

The focus of the role play is the interpersonal interaction between the midwife and Mrs. Anna's husband, and the midwife's ability to demonstrate respect and kindness and provide emotional support and reassurance as she explains Mrs. Anna's treatment and the consequences of her condition to Mr. Samson.

Discussion questions

The teacher should use the following questions to facilitate discussion after the role play:

4. How did the midwife explain Mrs. Anna's treatment and the consequences of her condition to Mr. Samson?

5. How did the midwife demonstrate respect and kindness during her/his interaction with Mrs. Anna and Mr. Samson.?

6. How did the midwife provide emotional support and reassurance to Mrs. Anna?

Module 12

Management of anaemia in pregnancy

Training resource package for intrapartum and immediate post-partum care

Every pregnant woman who develops complications during antenatal period that leads to life threatening conditions receives evidence-based, immediate and appropriate care that prevents death and disability, both of her and new born (including appropriate referral).

Clinical protocol: Anaemia in pregnancy

Module: Management of anaemia in pregnancy

Key tasks
- Diagnosis of Anaemia and classification of its severity
- Management of anaemia
- Counselling for FP

Training schedule

Training schedule
- Key tasks
- Learning objectives
- Sessions plans
- Knowledge assessment

Trainer's guide

Session plan describes objectives of each session, topics, methodology and key points
- Case studies
- Role plays
- Learning guides

Key knowledge
- Causes of anaemia
- Prevention
- Diagnosis of anaemia
- Management of anaemia

Critical skills
- Diagnosis of anaemia
- Management of anaemia
- Counselling on care and future pregnancies

Evaluation
- Post Test
- Skill assess: using learning guides
- Module evaluation

Module: Management of anaemia in pregnancy

Training schedule

Total time: 330 mi (5 hours and 30 min)

Time	Topic	Method	Resource materials
30 minutes	Welcome Objective of the module: To update the knowledge and skills in management of anaemia during pregnancy Discuss: Key tasks Learning objectives Explain the tools for evaluation of the session	Discussion	Slide 2-6
30 minutes	Knowledge assessment	Test	Questionnaire
Session 1 30 minutes	Causes of anaemia and prevention	Discussion	Slides 7-9 MCPC 2017 (in several topics and severe anaemia **S-151)** Clinical protocol on anaemia
Session 2 1 hour	Diagnosis of anaemia	Case study	Slide 10-11 Clinical protocol on anaemia
Session 3 1 hour	Management	Case study Skills practice	Slides 12-14 Learning guide on anaemia and counselling on care and future pregnancies
Session 4 1 hour	Supervised client practice		Learning guides
Session 5 1 hour	Evaluation	Post-test Skill check Module evaluation	Questionnaire Learning guide Evaluation form

Session plans

Training process	Resources
Welcome **(30 min)** Objective of the module: To review and update their knowledge and skills on diagnosis and management of anaemia in pregnancy Key tasks Present key tasks and discuss whether the participants would like to add any Learning objectives At the end of the session, the participants will be able to: 1. List the causes of anaemia and its prevention 2. Diagnose anaemia and classify grades of anaemia 3. Manage mild-moderate cases of anaemia Explain the tools for evaluation of the session	Slides 2-3
Knowledge assessment **(30 min)**	Questionnaire
Session 1: Causes and prevention Objective of the session: To update the knowledge on causes of anaemia and prevention *Discussion* Ask the participants whether they consider anaemia an important cause of maternal mortality and morbidity. Ask them whether they know the proportion of maternal deaths are attributable to anaemia and what proportion of pregnant women are anaemic. Record the responses on the board. Show the slides related to increased risk due to anaemia in pregnancy. Ask the participants to list the causes of anaemia. Discuss prevention of anaemia. Present the related slides and discuss.	Slides 4-8 Clinical protocol on anaemia in pregnancy
Session 2: Diagnosis of anaemia **(60 min)** Objective of the session: To update skills in diagnosis of anaemia *Discussion* Ask the participants about symptoms and signs of anaemia. *Case study* Project the case study up to diagnosis and ask the participants to respond to the three questions. After all have completed the answers, discuss the responses to questions 1-4 by asking groups one by one to respond to specific questions. Trainer should sum up by highlighting the key points.	Slide 9-11 Clinical protocol on anaemia Case study
Session 3: Management of anaemia **(60 min)** Objective of the session: To develop the skills in managing mild-moderate cases of anaemia *Discussion* Ask the participants how mild to moderate anaemia is managed and what specific advice is given to prevent anaemia in the future. *Case study* Distribute the case study projected earlier and ask how they would manage the case by responding to questions under evaluation. After all participants have completed the exercise, discuss each of the questions under diagnosis, care provision and evaluation. Trainer should sum up by highlighting the key points in managing cases of anaemia.	Slides 12-14 Learning guide on management of anaemia Learning guide on education and counselling on care and future pregnancies

Skill practice: Management of mild-moderate anaemia in pregnancy (follow instructions on skill practice and arrange all the supplies needed for the practice) Distribute the learning guide. Follow the instructions on skill practice. The trainer should observe each participant using the learning guide/performing the procedure and give feedback. *Every participant should be provided a chance to practice using the learning guide.* *Skills practice:* Counselling on care and future pregnancies (follow instructions on skill practice and arrange all the supplies needed for the practice) Distribute the learning guide. Follow the instructions on skill practice. The trainer should observe each participant using the learning guide/performing the procedure and give feedback. *Every participant should be provided a chance to practice using the learning guide.*	
Session 4: Supervised client practice **(60 min)** Objective of the session is to practice skills with clients. This is the final stage of clinical skills developments and participants should be allowed to work with clients only after they have demonstrated skill competency in a simulated situation. Planning for the supervised practice is a critical component so that participants get adequate practice. It is important to respect the rights of clients – permission should be sought, privacy and confidentiality should be maintained and respectful dealings with the clients. Since one trainer may not be sufficient to supervise all the participants, it will be good to identify potential assistants to help the trainer (preceptors) to observe the skill practices. The preceptors could be a doctor or senior midwife who is very proficient in the skills. The preceptors will need to be trained in the use of checklists to familiarise them with the checklists.	Learning guides
Session 5: Evaluation **(60 min)**	Questionnaire Learning guide Module evaluation form

Knowledge assessment questionnaire

Instructions: Write the letter of the single **best** answer to each question in the blank next to the corresponding number on the attached answer sheet.

1. Women with severe anaemia are usually
   a) breathless
   b) has oedema
   c) conjunctiva is yellow
   d) none of the above

2. Risk of PPH is high if :
   a) anaemic
   b) has heart disease
   c) obstructed labour
   d) foetal distress

3. Women with mild anaemia should receive:
   a) ferrous sulphate 200 mg with 5 mg of folic acid
   b) ferrous sulphate 200 mg with vitamin C 500 mg daily
   c) no supplementation needed
   d) none of the above

4. In case of women with Hb less than 8 g/dL
   a) if more than 32 weeks of gestation, refer
   b) if less than 32 weeks of gestation, treat in CHC with ferrous sulphate 200 mg and folic acid 5 mg twice a day
   c) give dietary advice
   d) all of the above

5. Severe anaemia is associated with:
   a) premature birth
   b) increased maternal and perinatal mortality
   c) infection
   d) all of the above

Case study

Directions

Read and analyse the 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 case study. When all groups have finished, the case studies and the answers each group has developed will be discussed.

Case study

Mrs. Anna is 24 years old, gravida four and has come for her second antenatal visit. She is 28 weeks pregnant. She complaints of feeling very tired. Her children are four years, three years and 18 months.

Pre-assessment

1. Prior to assessment, what should you do for and ask Mrs. Anna?

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

1. What will you include in your initial assessment of Mrs. Anna, and why?

2. What particular aspects of Mrs. Anna'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 Mrs. Anna, and why?

Diagnosis (Identification of Problems/Needs)

You have completed your assessment of Mrs. Anna and your main findings include the following:

Mrs. Anna's BP is 112/66, pulse 78 per minute, uterus is 24 weeks by dates and examination. Her conjunctive is pale, nail beds pale and has slight spooning, Hb is 9g/dL. She has not been taking any medicines.

4. Based on these findings, what is Mrs. A.'s diagnosis, and why?

Care provision (Planning and Intervention)

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

Evaluation

Mrs. A. comes to the health center 1 month week later and her blood test shows that her HB level has increased.

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

Skills practice session

Purpose

The purpose of this activity is to provide opportunities to observe and practice clinical skills, either in a simulated setting or at a clinical site.

Instructions

This activity should be conducted in a clinical setting (either in antenatal clinic or maternity ward)

Participants should review the appropriate learning guide before beginning the activity.

Under the guidance of the trainer, participants should work in groups of three to practice the steps/tasks and observe each other's performance; one plays the role of provider, the second one as woman who is anaemic and the third as observer. The observer uses the relevant learning guide related to management of anaemia. Participants reverse the roles until each has had an opportunity to practice and is competent. The trainer observes each participant when ready for observation and provides feedback. The participants who are not competent are made to repeat the exercise.

Resources

- Sphygmomanometer and stethoscope
- Thermometer
- Soap and water and betadine
- Gloves
- 0.5% chlorine solution and receptacle for decontamination
- Leak proof container or plastic bag
- Learning guide on management of anaemia and education and counselling on care and future pregnancy.

Learning guide: Management of anaemia in pregnancy

Rating scale
2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards

Step/task	2	1	0	Comments
Task 1: Preparations for history and examination				
1.1 Gets the equipment ready for examination - Thermometer - Sphygmomanometer - Stethoscope - Doppler - Sahley's haemoglobinometer or filter paper - Gloves				
1.2 Greets the client and asks her about her well-being.				
Provider 1.3 Reviews the ANC records for obstetric and medical history, history of current pregnancy, history of bleeding, infections 1.4 Washes hands and wears gloves 1.5 Tells the client about what is going to be done				
Task 2: Taking history and physical examination				
2.1 Takes history: -Asks about excessive blood loss in the past pregnancies, whether treated for hookworm, malaria and treated for anaemia -Asks about last menstrual period and confirms gestation - Asks about excessive tiredness, breathlessness, oedema, etc.				
2.2 Does physical examination Checks - conjunctiva, nails and tongue for pallor -temperature, pulse, blood pressure, respiration - oedema -heart and lungs *Abdominal examination* -Measures fundal height (whether corresponds with gestational age), lie, position, foetal heart				
2.3 Does investigations -Hb estimation				
2.4 Shares findings with the woman and explains potential danger signs				

2.5 Manages as follows (following the clinical protocol) *HB less than 10g/dL* *If gestation is less than 32 weeks,* • Advised locally available iron foods • Give double dose of iron (1 tab twice daily) • Give folic acid 400 mcg orally once daily • Deworm after 12 weeks of gestation • Counsel on compliance with treatment • Reassess 3-4 weeks — **If anaemia persists, refer to specialist** — If better, continue with iron and folic acid. *If gestation is more than 32 weeks,* • Refer to specialist				
2.6 Counsels mother about regular intake of iron and folic acid and diet rich in iron and importance of compliance (See the Learning Guide on education and counselling on care and future pregnancies) — Tells the mother about the importance of taking iron and folic acid regularly — Dangers of anaemia — -Advises to take after food — -Tells about black stools and not to worry about the same — Tells about possibility of getting constipated and to drink plenty of water — -To return to the CHC if side effects cannot be tolerated.				
2.7 Counsels on importance of using FP after delivery to prevent immediate pregnancy and also to help build up iron stores (See Learning Guide on education and counselling on care and future pregnancies)				
2.8 Removes gloves and puts in chlorine solution. Washes hands and wipes with a clean towel or air dries hand.				

Learning guide: Education and counselling on care and future pregnancies

Rating scale
2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards

Learning guide on education and counselling on care and future pregnancies				
STEP/TASK	2	1	0	**Comments**
Task 1: Makes initial positive contact with the woman				
1.1 Greets the woman and asks her how she is feeling, whether she feels tired.				
1.2 Reviews records to obtain information about parity, previous obstetric history, and current obstetric history.				
1.3 Asks whether she would like her spouse to join in the discussion.				
1.4 Assures privacy and confidentiality				
Task 2: Educating about following treatment and advice on nutrition				
2.1 Informs about the likely complications of anaemia such as bleeding after childbirth and risk of infection as well as about breathlessness and other difficulties during labour. Also about the effect on growth of the child, the likelihood of the newborn becoming anaemic.				
2.2 Informs about the importance of complying with treatment (iron tablets and folic acid) as prescribed.				
2.3 Informs about the importance of iron-rich foods and informs about the types of foods rich in iron.				
Task 3: Advises about future pregnancies				
3.1 Discusses importance of maternal recovery, neonatal development and the role of healthy spacing for at least 2-3 years.				
3.2 Encourages the woman and her spouse to ask questions.				
3.3 Asks about their plans for future pregnancies.				
3.4 Tells about likely return of fertility in 6 weeks even if menses has not returned or she is breast feeding and the need for contraception to avoid pregnancies.				
3.5 Asks about knowledge and experience with contraceptives in the past.				
3.6 Provides general information about all methods, its advantages and disadvantages.				
3.7 Encourages the couple to ask questions and clarifies doubts.				
3.8 Encourages them to inform about their decisions.				
3.9 Thanks the woman and advises her about return visit.				

Module evaluation

Module: Anaemia

Please indicate your opinion of the course components using the following rating scale:

5. Strongly Agree
4. Agree
3. No opinion
2. Disagree
1. Strongly disagree

Course component	Rating
1.The discussions helped me to clarify elements related to basic care.	
2.The exercises were useful for learning about anaemia.	
3.The role plays on interpersonal communication skills were helpful.	
4.The case studies were useful for practising clinical decision making.	
5.The time for skill practice in a simulated setting was sufficient.	
6.The supervised client practice within the limitations of time was sufficient.	
7.I am confident about managing mild-moderate anaemia.	

ANAEMIA IN PREGNANCY

Screen all pregnant women for anaemia at first visit and subsequently every four weeks until delivery.

WHO Classification

Haemoglobin level	Classification of anaemia
Hb>11 gm/dL	No anaemia
Hb 7-11 gm/dL	Moderate anaemia
Hb <7 gm/dL	Severe anaemia

♦Timor Leste considers Hb level of 10 gm/ Decilitre (dL) as cut off

Locally available Iron rich foods

- Liver
- Beef
- TOFU
- Vegetables: Spinach, broccoli, string beans, Beet greens, peas, string beans

Symptoms and signs of heart failure in anaemia

- Difficulty in breathing
- Oedema
- Cough
- Swelling of legs
- Enlarged liver
- Prominent neck veins
- Crepitations in lungs

Instructions for taking iron tablets

- Take tablets after food or at night to avoid nausea
- Do not worry about black stools which is normal
- If constipated, drink more water
- **Avoid taking black tea and coffee with iron tablets and iron rich food**

Iron and folic acid tablet dosage

- Iron tablet – 60mg elemental iron and Folic acid 400 micrograms - 1 tablet per day for prophylaxis
- IF ANAEMIC: Increased to 120 mg of elemental iron per day along with folic acid

Compliance with iron treatment

Explain to mother and family

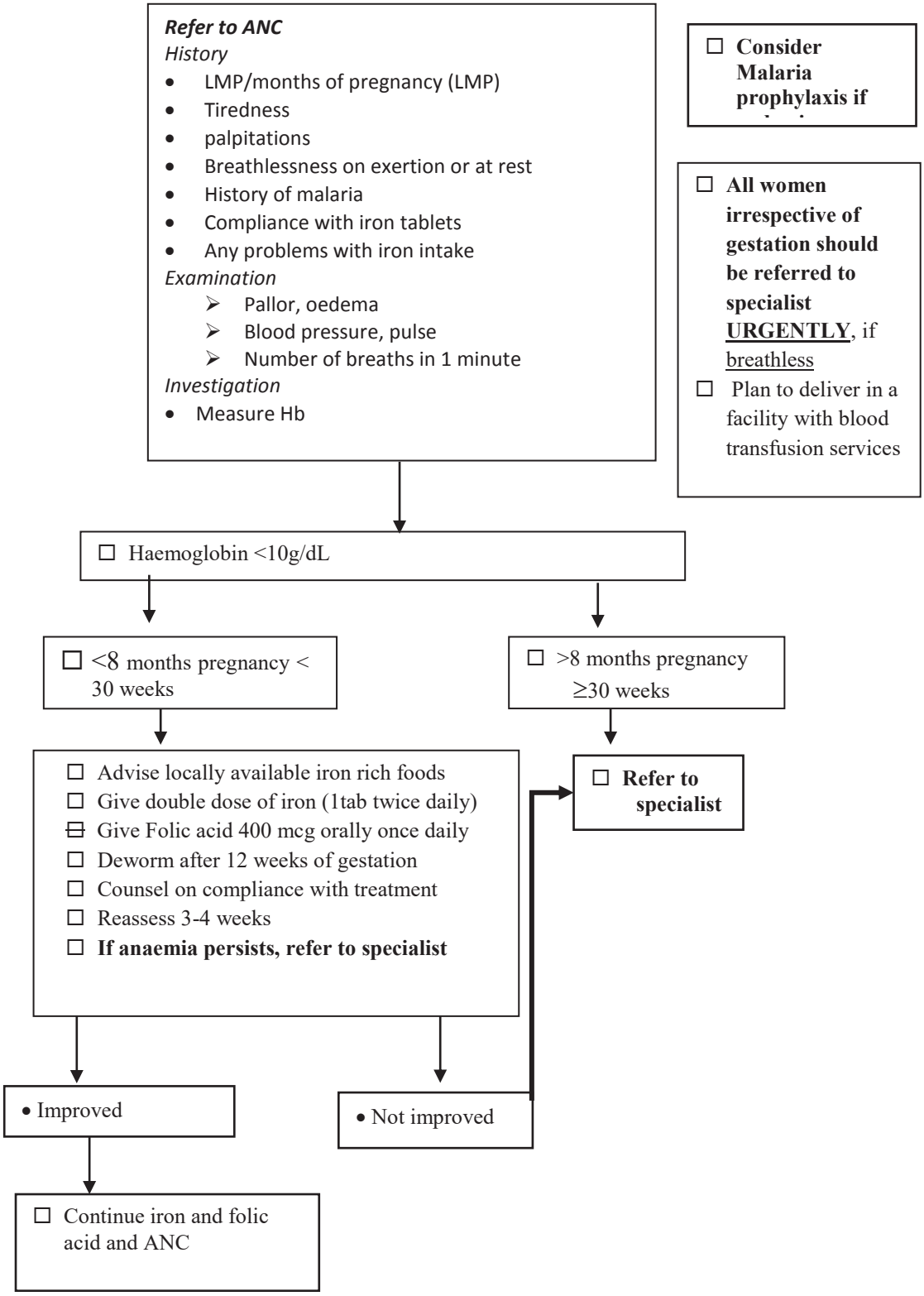
- Iron is essential for pregnancy
- Danger of anaemia
- Discuss any incorrect perceptions

- Advise on how to take the tablets
- Advise on how to manage side effects
  - if constipated, drink more water
  - explain that side effects are not serious
  - advise to return if she has problems

Dose of Albendazole (for deworming): 400 mg single dose (GIVE ONLY AFTER 12 WEEKS)

In malaria endemic areas, intermittent preventive treatment is recommended for all pregnant women.
TREATMENT SHOULD START IN THE SECOND TRIMESTER

ANAEMIA IN PREGNANCY



Module: Anaemia
ANSWER KEY

Instructions: Write the letter of the single **best** answer to each question in the blank next to the corresponding number on the attached answer sheet.

1. Women with severe anaemia are usually
   a) breathless
   b) has oedema
   c) conjunctiva is yellow
   d) none of the above

2. Risk of PPH is high if :
   a) anaemic
   b) has heart disease
   c) obstructed labour
   d) foetal distress

3. Women with mild anaemia should receive:
   a) ferrous sulphate 200 mg with 5 mg of folic acid
   b) ferrous sulphate 200 mg with vitamin C 500 mg daily
   c) no supplementation needed
   d) none of the above

4. In case of women with Hb less than 8 g/dL

   a) if more than 32 weeks of gestation, refer
   b) if less than 32 weeks of gestation, treat in CHC with ferrous sulphate 200 mg and folic acid 5 mg twice a day
   c) give dietary advice
   d) all of the above

5. Severe anaemia is associated with:
   a) premature birth
   b) increased maternal and perinatal mortality
   c) infection
   d) all of the above

Case study

Directions

Read and analyse the 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 case study. When all groups have finished, discuss the case studies and the answers each group has developed.

Case study

Mrs. Anna is a 24 years old, gravida four and has come for her second antenatal visit. She is 28 weeks pregnant. She complaints of feeling very tired. Her children are four years, three years and 18 months.

Pre-assessment steps

2. Prior to assessment, what should you do for and ask Mrs. Anna?

- Mrs. Anna should be greeted respectfully and with kindness and offered a seat to help her and feel comfortable and welcome. Establish a good rapport with her.
- Ask Mrs Anna whether she has any problems that is affecting her day-today activities.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

2. What history will you include in your assessment of Mrs. Anna's, and why?

- Because this is her first visit, a complete history (including calculating the expected date of confinement) should be taken to guide further assessment and help individualize care provision. Some responses may point towards the underlying reason for her pale/tired appearance or point towards life threatening complication that requires special care or immediate attention.
- History should include the following key points:
    - experiencing weakness, tiredness, dizziness, breathlessness or fainting to help determine severity of anaemia, ask about history of fever, chills and rigors to rule out malaria
    - history of contraceptive use as Mrs. Anna's children are born at short birth intervals (less than3 years) as well as perceptions about contraceptive use should be assessed
    - history of anaemia in the previous pregnancies (feeling of tiredness), whether she ever got treatment
    - history of abortion, bleeding after childbirth, whether the previous babies were premature or low birth weight as these factors can also be associated with anemia in pregnancy
    - dietary habits – diet rich in iron

3. What particular aspects of Mrs. Anna's physical examination will help you make a diagnosis or identify her problems/needs, and why?

- Because this is her first visit, complete physical examination should be done to guide further assessment and individualise care provision. Some of the findings may point towards the underlying reason for her pale appearance or points towards life threatening complication that requires special care or immediate attention.
- Assessment should include the following:
    - Conjunctival pallor
    - Temperature
    - Respiratory rate
    - Oedema
    - Fundal height (for foetal growth)

4. What laboratory tests will you include in your assessment of Mrs. Anna and why?

- All routine tests including Hb, peripheral blood smear, smear for malaria (if fever) screening for syphilis, Rh factor and blood group) to guide further assessment and help individualise care provision.

Diagnosis (Identification of Problems/Needs)

You have completed your assessment of Mrs. A. and your main findings include the following:

- History: Mrs. Anna has never attended antenatal clinics in the previous pregnancies and was never treated for anaemia. Her diet includes green vegetables. Her last baby's weight was less than 2.5 kg (weighed at the time of first immunization). No significant findings in her obstetric or medical history that points to causes of anaemia.
- Mrs. Anna's BP is 112/66, pulse 78 per minute, respiratory rate is 12 per minute, her temperature is 37.6 ^{0}C. Her conjunctive is pale, nail beds pale and slight spooning. Breast examination is normal. Uterus is 28 weeks by dates and examination and foetal hear is normal. Hb is 9g/dL, she is O- Rh positive and syphilis test (RPR) and HIV are negative.

5. Based on these findings, what is Mrs. Anna's diagnosis, and why?

History of tiredness, short birth interval, physical examination findings suggestive of pallor, retarded foetal growth and HB level of 9g/dL suggest moderate anaemia.

Care provision (Planning and Intervention)

6.Based on your diagnosis, what is your plan of care for Mrs. Anna, and why?

- Mrs. Anna should be informed of the diagnosis and the increased risk of maternal complications, retarded foetal growth and mortality in mother and baby if not treated.
- Mrs. Anna should be given iron/folate, 2 iron tablets daily and one tablet of folic acid throughout the pregnancy and three months after delivery.
  - Should be advised to take after meals and not with tea, coffee or cola as it interferes with absorption.
  - Should be informed that she may experience constipation, nausea or vomiting and black stools but to continue taking. More fruits and vegetables and water will prevent constipation
  - Should be provided sufficient supply of iron and folic acid to last till her next visit
- Should be given a course for deworming as described in the clinical protocol.
- Mrs Anna should be informed about the importance of eating nutritious food (rich in iron and vitamin C (see slides for details).
- She should be advised about rest and activity: To reduce her workload if possible and to ask adequate rest especially in the afternoon.
- Should be counselled about family planning
- In addition, should receive basic care provision about self-care (hygiene, prevention of infection, sexual relationships, safer sex and use of potential harmful substances), immunization, etc.) that will help and support and maintain her normal pregnancy and ensure a healthy labour/delivery and postpartum and health of foetus and newborn).
- She should be advised to watch out for danger signs and action to be taken.
- Advise about return visit after a month or earlier if any concern.
- Mrs. Anna needs to be monitored closely until her anaemia is treated and more frequent ANC visits are required.

Evaluation

Mrs. Anna comes to the health center 1 month week later at the scheduled visit.

- She has been taking iron/folate tablets regularly and has had no problems
- She has been taking foods rich in iron and Vitamin C.
- Has been taking more rest
- ON examination has mild pallor.
- Fundal height is 32 weeks (gestation age 32 weeks)
- Hb level is 10 g/dL.

7.Based on these findings, what is your continuing plan of care for Mrs. Anna, and why?

- Mrs Anna should be complemented.
- She should be counselled about continuing to take iron/folate and should be provided sufficient supply till her next visit in two weeks.
- She should be advised to continue taking iron rich and Vitamin C rich foods
- Mrs. Anna should be monitored closely till her Hb level is 11 g/dL.
- She should be advised to return in two weeks or earlier if she has any problems/concerns.

Module 13

Postpartum care of mother and newborn 2-72 hours after delivery

Training resource package for intrapartum and immediate post-partum care

Standard: Every woman who has recently delivered and her new born receive routine postnatal care.
Quality statement: Every woman in postnatal period is monitored for normal recovery after childbirth, provided appropriate and culturally sensitive care that respects the rights of women, supported for exclusive breastfeeding and counselled on danger signs in themselves and their babies and family planning.
Clinical protocol: Post-partum care of the mother (new born care protocol is separate)

Module: Postpartum care of mother and newborn 2-72 hours after delivery

Key tasks
- Prepares for post-partum history and examination (mother and new born)
- Obtains post-partum history mother and newborn
- Performs post-partum examination mother and new born
- Assesses progress of involution and maternal health status and assesses the new born gestational age and health status and makes diagnosis
- Shares assessment and diagnoses with the mother about herself and her newborn
- Provides care to the mother and her newborn in collaboration with the mother including FP counseling and services and follow up care
- Records assessments, diagnosis and care provided to mother and newborn and follow up plan.

Training schedule
- Key tasks
- Learning objectives
- Sessions plans
- Knowledge assessment questions

Trainer's guide
Session plan describes objectives of each session, topics, methodology and key points
- Exercises
- Case studies
- Role plays
- Learning guides

Key knowledge
- Changes in reproductive organs during involution and recovery
- Emotional and behavioural responses to involution and recovery
- Common discomforts
- and life threatening conditions and major complications in mother and newborn

Critical skills
- Performs post-partum examination of mother and assesses involution and maternal health status
- Performs newborn examination and assesses gestational age and health status
- Provides care and advice to mother and about herself and care of newborn
- FP counseling

Evaluation
- Post Test
- Skill assess: using learning guides
- Module evaluation

Module: Postpartum care 2-72 hours after delivery of woman and new born

Training schedule

Total time: 1260 min (21 hours)

Time	Topic	Method	Resource materials
30 min	Welcome Objective of the module: To enable participants to update their knowledge and skills related to care of the woman and her new born 2-72 hours after delivery Key tasks Learning objectives Explain the tools for evaluation of the session Distribute knowledge test	Discussion	Slides 2-4
30 min	Knowledge assessment		Questionnaire
Session 1 30 min	Process of involution and recovery during postpartum period	Discussion	Sldies 5-8 Midwifery text book MCPC 2017 Handout 1
Session 2 30 min	Preparation for post-partum history and examination of woman	Discussion	Learning guide on providing care to woman 2-72 h after childbirth
Session 3 2 hr	Assessment of postpartum woman 2-72 hrs after delivery through history taking and physical examination	Discussion Exercise – postpartum examination of woman Case study Skills practice	MCPC 2017 Learning guide on providing care to woman Handout history taking of post-partum woman and filled up exercise sheet on examination
Session 4 1 hr	Assessment of progress of involution and maternal health status and making diagnosis	Discussion Exercise Skills practice	Slides 11-13 MCPC 2017 Handout on history taking of post-partum woman and filled up exercise sheet on examination Learning guide on providing care to woman
Session 5 30 min	Communicating with the woman about findings from assessment	Discussion Role play Skills practice	Learning guide on providing care to woman
Session 6 2 hr	Provision of care to the mother in collaboration with the mother and advising on preventive care and follow up	Discussion Skills practice	Slide 14-17 Learning guide on providing care to woman

			Clinical protocol on postpartum care
Session 7 1 hr	Counselling for family planning	Discussion Role play Skills practice	Learning guide on FP counselling WHO decision making tool for FP clients and providers
Session 8 15 min	Recording of assessments, diagnosis and care provided to other and follow-up plan	Discussion Demonstration	Postpartum records
Session 9 30 min	Preparation for history and examination of newborn	Discussion	Learning guide providing care to newborn 2-72 h after birth
Session 10 2 hr	Taking newborn history and performing newborn examination	Discussion Exercise – Newborn examination Case study Skills practice	TL newborn care training materials Learning guide providing care to newborn Handout history taking Filled exercise sheet
Session 11 1 hr	Assessment of newborn's gestational age and health status and making diagnosis	Discussion Exercise Case study Skills practice	TL newborn care training materials Learning guide providing care to newborn Filled exercise sheet Gestational assessment chart?? Ballard score chart??
Session 12 30 min	Communicating with the mother about findings from assessment, treatment if any required, advice on preventive measures and follow up	Discussion Role play Skills practice	Learning guide providing care to newborn
Session 13 2 hr	Provision of care to the new born in collaboration with the mother and planning for follow up care	Discussion Skills assessment	TL newborn care training materials Learning guide 2-72 hr –newborn Clinical protocol on post-partum care
Session 14 15 min	Recording assessments, diagnosis and care provided and follow-up plan	Discussion Demonstration	New born records
Session 15 4 hr	Supervised client practice on post-partum care and new born care		Learning guide
Session 16 2 hr	Evaluation	Post-test Skill check through role play Module evaluation	Questionnaire Learning guides Module evaluation form

Session plan

Training process	Resources
Greet participants **(30 min)** Objective of the module: To enable participants to update their knowledge and skills related to care of the woman and her new born 2-72 hours after delivery Discuss the key tasks and ask the participants to contribute Discuss the learning objectives. Learning objectives: At the end of the module the midwife will be able to: 1. Describe the main process of involution after delivery 2. Demonstrate skills in taking history and performing examination of woman in early post-partum 3. Demonstrate skills in assessing progression of involution and recognition of warning symptoms and signs in early postpartum and taking appropriate action 4. Demonstrate skills in taking history and performing examination of a new born 5. Demonstrate skills in assessing the newborn's gestational age and health status and warning symptoms and signs and taking appropriate action 6. Demonstrate skills in communicating the information from the assessment to mother about herself and about her new born and preventive measures 7. Demonstrate skills in post-partum family planning counselling	Slides 2-4 List of key tasks Learning objectives
Knowledge assessment **(30 min)**	Questionnaire
Session 1: Process of involution and recovery during postpartum period *Objective of the session*: Describe physiological and psychological changes during postpartum period *Discussion* Ask the participants to define changes in involution in the uterus, the cervix and the breasts. Discuss the responses. List the possible deviations from the normal and the implications for the same. Present the relevant power points and discuss. Ask about likely emotional changes during postpartum period and what symptoms and signs to watch for. Present the relevant power points related to emotional changes and discuss. Discuss initiation of lactation through suckling and influence of hormones. Discuss menstruation and ovulation and return to fertility. Present the relevant power point and discuss.	Slides 5-8 Text book of midwifery MCPC 2017
Session 2: Preparation for history and physical examination **(30 min)** *Objective of the session*: Emphasise the importance of preparations for history and physical examination *Discussion* Discuss preparations for history and physical examination. Discuss equipment and supplies needed interaction with the client and preparation of the client.	Learning guide on providing care to woman 2-72 h after childbirth
Session 3: Assessment of postpartum woman 2-72 h after delivery through history taking and physical examination **(120 min)** *Objective of the session*: Demonstrate history taking and physical	MCPC 2017 C-77 Handout history taking of post-

examination *Case study* Project the scenario of the case study on postpartum assessment *up to diagnosis*. Divide the participants into groups and ask each group to read the case study. Ask the groups to respond to the question related to history. Group the responses by antenatal history (key points), labour and delivery and recent history. Ask the respondents about the rationale for the responses and ask others to add if any point is missing (highlight the importance of finding out about incontinence). Distribute the handout on taking history of post-partum woman. Discuss the rationale for each of the questions. Ask the groups to respond to the questions related to physical examination. Discuss the responses. *Exercise* Distribute blank exercise sheet. Ask the participants to fill the first column of the blank table (postpartum examination) provided. After all the groups have finished, ask each group to discuss the table and record answers on the board. Summarize and point out missing points in examination. Emphasise the importance of examination of different parts. *Skills practice* – Providing care 2-72 h after delivery (follow instructions on skill practice and arrange all the supplies needed for the practice) Distribute the learning guide on providing care to a woman 2-72 h after delivery. Follow the instructions on skill practice. Limit the practice to *history taking and examination (Tasks 1-3)*. Observe each participant using the learning guide/performing the procedure and give feedback. Ask the observers to report on their group and add findings (trainers) from observing the groups.	partum woman Answer sheet to exercise on examination Learning guide on providing care to woman
Session 4: Assessment of the progress of involution and maternal health status and makes diagnosis **(60 min)** Objective of the session: Develop skills in assessing progress of involution *Exercise* Ask the participants to fill in the 2nd and 3rd columns of the exercise sheet. Discuss the responses. Summarize the discussion. Distribute the answer sheet to the exercise. Discuss the actions to be taken in case of abnormal findings. *Case study* Project the case study up to Question 5 and ask the participants for diagnosis. Discuss rationale for the diagnosis. *Skills practice (continuation from Session 3)* Ask one of the groups to demonstrate the assessment of the progress of involution and interpretation of the same (*task 4).* Provide feedback. Distribute case scenarios – one to each group (uterus above umbilicus, uterus 3 cm below the umbilicus, lochia- slow trickle of bleeding). Ask the participants to practice in groups using relevant sections of the learning guide. Observe the groups and provide feedback. Discussion (Take out and discuss under relevant section 6?) Discuss the healing of the perineum from episiotomy or repaired tear or laceration. Discuss the common discomforts associated with the healing	Slides 11-13 Learning guide on providing care to woman Handout history taking of post-partum woman and Answer sheet to exercise on examination

and how to minimise the discomfort and prevent infection of the episiotomy wound or repaired tear.	
Session 5: Communicating with the woman about findings from assessment **(30 min)** *Objective of the session*: Demonstrate communicating with a woman in post-partum period *Role play* (see instructions) The role play is based on the scenario used in the case study. The roles of the group members may be changed as instructed in the role play instructions (one as post-partum mother and the other as midwife). Ask one of the groups to do the role play and ask the other participants to observe and provide feedback using the learning guide. Provide feedback (trainer). Ask the participants to comment on the behaviour of the midwife.	Learning guide on providing care to woman
Session 6: Provision of care to the mother in collaboration with the mother and advising on preventive care and follow up **(120 min)** *Objective of the session*: Demonstrate education and counselling of the postnatal mother and care as well as to arrange for referral in cases needed. *Discussion* Discuss key components of care (self-care, hygiene, preventive measures and prophylaxis, nutrition, FP, how to breast feed, breast care, care of the baby, etc.) Ask about signs and symptoms of life-threatening complications. List them on the board. Discuss the risk factors for major complications of the postpartum, especially late post-partum complications and preventive measures. Discuss complication readiness plan. Distribute the clinical protocol on postpartum care and discuss the clinical protocols. Specifically point to the situations that need urgent referral. *Skills practice session (continuation from session 4)* Using the learning guide, practice skills in providing care (*tasks 6,7*). Ask one of the groups to demonstrate education and counselling, another group to demonstrate sections related to support, prevention and treatment. The rest of the groups observe and provide feedback. Discuss the feedback. Ask the groups to practice tasks 6 and 7. Observe the groups (trainer) and provide feedback. Summarise the key points. Discuss special care to be provided in case of episiotomy or repair of tear. Discuss situations where referral is needed. – depression, fistula, prolapse, Ask the participants about national guidelines on recommended post-partum visits and the importance of the visits. Discuss what are the key points in history and examination to be done at each visit. Emphasise the importance of adopting a FP method at six weeks.	Slides 14-17 Learning guide on providing care to woman Clinical protocol on postpartum care
Session 7: Counselling for family planning **(60 min)** *Objective of the session*: Demonstrate family planning counselling *Role play* (see instructions) The role play is based on the scenario used in the case study. The roles of the group members may be changed as instructed in the role play instructions (one as post-partum mother and the other as midwife). Ask	Learning guide on counselling for family planning

one of the groups to do the role play while the other participants observe using the learning guide and provide feedback. Provide feedback (trainer).	
Session 8: Recording assessments, diagnosis and care provided to other and follow-up plan **(15 min)** *Objective of the session*: Emphasise the importance of accurate recording *Discussion and demonstration* Discuss records used in the country – registers as well as reporting formats. Ask one of the participants to demonstrate the records.	Postpartum records
Session 9: Preparation for history and examination of new born **(30 min)** *Objective of the session*: Emphasise the importance of preparations for history and physical examination of the newborn *Discussion* Ask participants about preparations for history and examination including review of records. List the responses on the board. List what records needs to be reviewed and importance of reviewing the same.	Learning guide – Providing care to newborn 2-72 h after birth
Session 10: Taking new born history and performing new born examination **(120 min)** Objective of the session: Demonstrate newborn history taking and performing newborn examination *Case study* Divide the participants into groups (use the same groups used for post-partum care). Project the case study on new born care and ask the participants to respond to the question related to history. Ask about the rationale for the responses. Group the responses on the board by questions. Distribute the handout on taking history of the newborn. Add any missing point. Ask the participants to focus on the second question in the case study related to physical examination and respond to the question. Record the responses on the board. *Exercise* Distribute the exercise sheet on newborn assessment. Ask the participants to fill the first column of the table on new born assessment. After all participants have finished, ask each group to discuss the table and record answers on the board. *Skills practice* – Providing care to newborn 2-72 h after birth (follow instructions on skill practice and arrange all the supplies needed for the practice) Distribute the learning guide on providing care to newborn 2-72 h after birth. ask the participants to review the preparations, history taking and examination. In the groups created earlier, ask the groups to select group members to play the role of a postpartum woman, a midwife and observer. Limit the practice to *history taking and examination (Tasks 1-3).* Observe each group. Ask the observers to report on their respective groups and then add own (trainers') findings from observations of the groups.	TL newborn care training materials Handout on history taking Learning guide – Providing care to newborn Filled up exercise sheet on newborn examination

Session 11: Assessment of newborn's gestational age and health status and making diagnosis **(60 min)** *Objective of the session*: Demonstrate assessment of gestational age and health status and diagnosis *Exercise* Ask the participants to fill the 2nd and 3rd columns of the table on new born examination. Ask participants of one group to discuss the last column. Ask the other participants whether they agree and add if needed. The trainer summarises and adds what is missing. Distribute the answer sheet to the exercise and discuss the action to be taken in case of abnormal findings. *Case study* Project the case study on newborn up to question 5. Using the case study on new born, asks the participants to make a diagnosis on the health status of the new born. *Skills practice session(continuation of Session 10)* Ask the groups to refer to the learning guide on newborn care and refer to the section on assessing the newborn's gestational age and health status. Demonstrate assessing neuromuscular and physical maturity (refer to newborn exercise sheet). Demonstrate assessing neuromuscular and physical maturity (USING BALLARD SCORE CHART) (refer to newborn examination exercise). Distribute gestational age chart and asks the participant to fill in the same. Demonstrate plotting the gestational age chart. Provide different gestational age to each group and ask them to plot on the chart. Ask the groups to practice assessing newborn gestational age using the learning guide.	TL newborn care training materials Learning guide – Providing care to newborn Answer sheet on examination Gestational age chart?? Ballard score chart??
Session 12: Communicating with the mother about findings from assessment **(30 min)** *Objective of the session*: Develop skills in communicating with mothers about their new borns *Role play (*see instructions for role play) Use the same role play in session 5 and follow the instructions.	Learning guide – Providing care to newborn
Session 13: Provision of care to the new born collaboration with the mother and plans for follow-up care of the new born **(120 min)** *Objective of the session*: Update knowledge on education and counselling of the mothers about their new borns as well as to arrange for referral in cases needed. *Discussion* Ask the participants what are the most important components of care. List the answers on the board. Discuss key components of care – breast feeding, maintain warmth, preventing infection/hygiene, cleanliness taking care not to remove the vernix, cord stump care, immunization, etc. Also tells her about sleep pattern and bowel pattern of the new born Ask the participants to list the danger signs. Discuss complication readiness plan. *Skills practice session* Using the learning guide on new born care, practice skills in providing care. Switch the roles within the groups so that each group member gets a chance to play different roles. Ask participants not taking part observe the steps using the learning guide.	TL newborn care training materials Learning guide – Providing care to newborn

Discusses follow up plans. Ask the participants about the national recommendations for follow up of new born. Discusses when to return for the next follow up.	
Session 14: Recording assessments, diagnosis and care provided to new born and follow-up plan **(15 min)** *Objective of the session*: To emphasise the importance of accurate recording *Discussion and demonstration* Discuss records used in the country – registers as well as reporting formats. Ask one of the participants to demonstrate the use of recording forms.	Registers, records and reporting forms
Session 15: Supervised client practice **(120 min)** *Objective of the session* is to practice skills with clients. This is the final stage of clinical skills developments and participants should be allowed to work with clients only after they have demonstrated skill competency in a simulated situation. Planning for the supervised practice is a critical component so that participants get adequate practice. To save time and to get more hands-on-experience, consider dividing the group into two- one group working with postpartum women and another with new borns and their mothers. It is important to respect the rights of clients – permission should be sought; privacy and confidentiality should be maintained and respectful dealings with the clients. Since one trainer may not be sufficient to supervise all the participants, it will be good to identify potential assistants to help the trainer (preceptors) to observe the skill practices. The preceptors could be a doctor or senior midwife who is very proficient in the skills. The preceptors will need to be trained in the use of checklists to familiarise them with the checklists. Before and after each supervised client practice, there should be discussions. Feedback should be provided. Minimum of 3-4 experiences in screening and assessing progress should be planned for each of the participants (may vary depending on the baseline skill level). The participants should be divided into groups	Learning guides on care to woman and newborn and counselling on family planning
Session 16: Evaluation (post-test and skill check) **(120 min)**	Post-test (same as pre-test) Learning guide /check list Module evaluation form

Knowledge assessment

1. During the first six hours after birth: (repeated from module on assisting with childbirth)
   a. List three things you would do to determine the new mother's well-being.
   b. How would you determine that the mother is losing too much blood?
   c. What steps would you take to stop the bleeding?

2. What five signs of excessive blood loss would cause you to transfer the mother to the hospital?

3. What are the common emotional changes in new mothers?

4. Check (√) the correct response(s)

Following the birth, the fundus
   a. decreases about 3 cm/day for the first 9-10 days
   b. decreases about 2 cm/day for the first 9-10 days
   c. decreases about 1 cm/day for the first 9-10 days
   d. Increases in the first two days and then decreases

5. Check (√) the correct response(s).

   To assess a new born's health, important questions to ask the mother are:
   a. how often the baby breastfeeds
   b. how many times the baby wets per day
   c. whether the baby sucks her thumb
   d. whether the baby has a strong suck

6. Check (√) the correct response(s)

   During the new born's physical examination, important things to check include:
   a. weight of the baby
   b. length of the baby
   c. fontanel of the baby
   d. umbilical cord

7. Check (√) the correct response(s)

   Warning signs of serious new born health problems include:
   a. discharge, redness or foul smell around the umbilical stump
   b. baby sleeps all night and does not bother the mother to eat often during the day
   c. baby hiccups three or four times a day
      New born whose whites of the eyes look yellow
   d.

8. Check (√) the correct response(s)

The postpartum woman should be

a. asked which family planning method she has used and whether she wants to use a method in the future
b. told that family planning method is not necessary during the immediate postpartum period
c. told that she must begin using a family planning method immediately if she is not fully breastfeeding

Exercise
Post-partum examination

Type of examination	Normal findings	Abnormal findings and action to be taken

Exercise
Newborn examination

Type of examination	Normal findings	Abnormal findings and action to be taken

Case study: Postpartum assessment and care of woman

Directions

Read and analyse 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 case study. When all groups have finished, the case studies and the answers each group developed will be discussed.

Client profile

Mrs. Cecilia gave birth 3 days ago in community health centre. Her pregnancy, labour, and birth were uncomplicated. She was discharged 24 hours after delivery. This is her first postpartum clinic visit. Mrs. Cecilia has one other child, who is three years of age. She does not want to become pregnant again for at least 2 years.

PRE-ASSESSMENT

1. Before beginning your assessment, what should you do for and ask Mrs. Cecilia?

Assessment (information gathering through history, physical examination, and testing)

2. What history will you include in your assessment of Mrs. Cecilia and why?

3. What physical examination will you include in your assessment of Mrs. Cecilia and why?

4. What laboratory tests will you include in your assessment of Mrs. Cecilia and why?

Diagnosis (interpreting information to identify problems/needs)

You have completed your assessment of Mrs. Cecilia and your main findings include the following:

History:

- Mrs. Cecilia is feeling well.
- Mrs. Cecilia reports no complications or problems during this pregnancy, labor/childbirth, or postpartum period. Her medical history is not significant: she is taking no medications, nor does she have any chronic conditions or illnesses.
- Mrs. Cecilia's first child is well and was breastfed for 6 months.
- She is exclusively breastfeeding her new born baby and intends to do so for at least 6 months.
- She wants to know whether she should start using contraception now, as she does not want to become pregnant again for at least 2 years. All other aspects of her history are normal or without significance.

Physical Examination:

- Mrs. Cecilia's general appearance is healthy.
- Vital signs are as follows: BP is 120/76, Pulse is 78 beats per minute, Temperature is 37.6°C.
- Her breasts appear normal.
- Her abdominal exam is without significant findings and involution is proceeding normally.
- Her lochia is a pale, creamy brown in colour
- All other aspects of her physical examination are within normal range.

Laboratory test
Tested blood for haemoglobin and is Hb is 10 gms/DL

5. Based on these findings, what is Mrs. Cecilia's diagnosis (problem/need) and why?

CARE PROVISION (implementing plan of care and interventions)

6. Based on your diagnosis (problem/need identification), what is your plan of care for Mrs. C and why?

Case study: Newborn assessment and care

Directions

Read and analyse 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. When all groups have finished, the case studies and the answers each group developed will be discussed.

Client profile

Mrs. Fatima is 20 years of age and gave birth to her first baby at Community Health Centre (CHC) 2 days ago. The baby weighed 2.6 kg. Both she and Baby Fatima came to the health centre for the first post-natal visit.

Pre-assessment

1. Before beginning your assessment, what should you do for and ask Mrs. Fatima and Baby Fatima?

Assessment (information gathering through history, physical examination, and testing)
2. What history will you include in your assessment of Baby Fatima and why?
3. What physical examination will you include in your assessment of Baby F and why?

4. What laboratory tests will you include in your assessment of Baby Fatima and why?

Diagnosis (interpreting information to identify problems/needs)

You have completed your assessment of Baby Fatima and your main findings include the following:

History:

- Record review reveals that Mrs. Fatima had a normal delivery. The baby cried at birth and weighed 2.6 kilograms.
- Mother and baby were discharged 24 hours after delivery.
- Baby was given BCG at birth.
- She reports that the baby is feeding well.
- All other aspects of the baby's history are normal or without significance.

Physical examination:

- The baby's weight is 2.6 kilograms.
- Baby's respiration is normal and the colour of lips, tongue and nails are pink.
- Baby's skin colour is normal.
- Baby is alert.
- Umbilical cord is not infected.

5. Based on these findings, what is Baby Fatima's diagnosis (problem/need) and why?

Care provision (implementing plan of care and interventions)

6. Based on your diagnosis (problem/need identification), what is your plan of care for Baby Fatima and why?

Role play: Communicating assessment findings

Directions
The trainer should select two participants to perform the following roles: health care provider and woman who delivered recently. The two participants taking part in the role play should take a few minutes to prepare for the activity by reading the background information provided below. The remaining participants, who will observe the role play, should at the same time read the background information.

The purpose of the role play is to provide an opportunity for participants to develop/practice effective interpersonal skills.

Participant roles
Healthcare provider: The healthcare provider is an experienced midwife who has good interpersonal skills.

Postpartum woman: Mrs. Celia gave birth 3 days ago in a community health centre. . Her pregnancy, labour, and birth were uncomplicated. She was discharged 24 hours after delivery. This is her first postpartum clinic visit. Mrs. Cecilia has one other child, who is three years of age. She does not want to become pregnant again for at least 2 years.

Focus of the role play

The focus of the role play is the communication skills of the midwife while conveying the assessment findings to Mrs.Celia.

Discussion questions

The trainer should use the following questions to facilitate discussion after the role play.

How did the midwife communicate the assessment findings?

Role play: Counselling for family planning

Directions
The trainer Should select two participants to perform the following roles: health care provider and woman in labour. The two participants taking part in the role play should take a few minutes to prepare for the activity by reading the background information provided below. The remaining participants, who will observe the role play, should at the same time read the background information.

The purpose of the role play is to provide an opportunity for participants to develop/practice effective interpersonal skills.

Participant roles

Healthcare provider: The healthcare provider is an experienced midwife who has good interpersonal skills.

Postpartum woman: Mrs. Celia gave birth 3 days ago in a community health centre. . Her pregnancy, labour, and birth were uncomplicated. She was discharged 24 hours after delivery. This is her first postpartum clinic visit. Mrs. Cecilia has one other child, who is three years of age. She does not want to become pregnant again for at least 2 years.

Focus of the role play

The focus of the role play is the skills of the midwife in counselling for family planning.

Observe the midwife counselling Mrs. Celia using the learning guide on counselling for FP.

Skills practice session: Providing care to a woman and her newborn 2-72 hr after delivery

Purpose

The purpose of this activity is to provide opportunities to observe and practice clinical skills, either in a simulated setting or at a clinical site.

Instructions

This activity should be conducted in a simulated setting using the appropriate pelvic and foetal models.

Participants should review the appropriate learning guide before beginning the activity.

Under the guidance of the trainer, participants should then work in groups of three to practice the steps/tasks and observe each other's performance; one plays the role of provider, the second one as post partum woman with her newborn and the third as observer. The observer uses the relevant section of learning guide on providing care to woman 2-72 h after delivery and to newborn 2-72 h after birth to observe performance. Participants reverse the roles until each has had an opportunity to practice and is competent. The trainer observes each participant when ready for observation and provides feedback. The participants who are not competent are made to repeat the exercise.

During supervised practice at a clinical site, the trainer assesses the skills competency of each participant using learning guides.

The above process should be repeated for each of the skills practice session.

Resources

- Childbirth simulator
- Newborn doll
- Sphygmomanometer and stethoscope
- Speculum
- Soap and water and betadine
- Sterile gloves
- 0.5% chlorine solution and receptacle for decontamination
- Leak proof container or plastic bag
- Postpartum and newborn records
- Learning guides on providing care 2-72 hours after childbirth (postpartum woman), providing care 2-72 hours after birth (newborn) and counselling for family planning

Learning guide: Providing care 2-72 hours after childbirth- POSTPARTUM WOMAN

Rating scale: 2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards even after prompting

	2	1	0	Comments
Task 1: Prepares history and physical examination in HOSPITAL SETTING				
Setting 1.1 Decontaminates and cleans work surface 1.2 Ensures availability and arranges: ▪ maintains adequate light ▪ linen, pillows, and examination table ▪ bin and cover ▪ soap, water and clean hand towel ▪ gloves (new or reusable that been sterilized) ▪ antiseptic lotion ▪ sphygmomanometer, stethoscope ▪ weighing scale ▪ 0.5% chlorine solution ▪ for the room to be sufficiently warm for newborn examination *Provider* 1.3 Reviews previous antenatal and intrapartum records, new born records for: ▪ normal progress of involution/recovery ▪ common discomforts ▪ problems/life threatening complications ▪ risk factors 1.4 Washes hands with soap and water and air dries or uses a clean towel *Client* 1.5 Greets the woman and introduces self 1.6 Makes the woman comfortable, ensuring privacy 1.7 Explains the purpose of the history and examination				
Task 2: Obtains post-partum history				
Present pregnancy and childbirth 2.1 Obtains the following information: ▪ date of delivery ▪ place of delivery ▪ Care giver ▪ duration of labour and delivery ▪ type of birth (spontaneous vaginal or otherwise- reason for the latter) ▪ laceration or episiotomy ▪ any problem with this labour such as prolonged labour, rupture of membranes, obstructed labour, convulsions, delivery of placenta ▪ any problem with delivery of placenta such and whether placenta complete				

▪ since delivery any high fever, chills or any other medical problem *Present post-partum history* 2.2 Obtains from the woman: ▪ Perceptions about labour delivery and the baby, feelings about ability to cope with caring for the baby ▪ Rest and sleep pattern ▪ Activity pattern – work load (home chores, taking care of other kids, etc) ▪ Appetite and fluid intake ▪ History of bleeding since childbirth ▪ Whether the lochia is slightly blood stained or foul smelling ▪ Bladder and bowel function including history of incontinence or leakage of urine and faeces through the vagina ▪ Experience with breast feeding (details) and whether the baby is satisfied ▪ Any discomforts or pain ▪ Any emotional or physical trauma (violence) ▪ Any concerns or questions *Past obstetric history* History of pre-eclampsia, eclampsia, depression *Past medical history* History of diabetes, hypertension, heart disease, hepatitis, tuberculosis or other chronic illness History of sexually transmitted infections or HIV in her or spouse (Enquire about need for protection) *Contraceptive history* History of contraceptive use (type, duration) Number of children desired and *plans for use of contraception*				
Task 3: Performs post-partum physical examination				
General approach to examination 3.1 Wash hands and wears gloves 3.2 Observes the woman's energy level and emotional tone throughout the examination 3.3 Observes her gait 3.4 Observes her skin for bruises or other lesions 3.5 Examines conjunctiva for pallor 3.6 Explains as performs all the procedures of the examination 3.7 Asks further questions for clarification as conducting the examinations as needed and appropriate *Laboratory tests (put number if included)* *Vital signs* 3.9 Measures weight 3.10 Measures BP, heart rate and temperature 3.11Asks the woman to undress, ensuring privacy 3.12 Assists woman to lie on examination table				

Breast examination 3.13 With the woman's hands on her side, examines breasts: ▪ nipples: for secretions (milk or bloody discharge, fissures, ▪ engorgement ▪ abscess *Abdomen* 3.14 With the woman lying on her back with the knees bent, inspects the abdomen for: ▪ scars – healing /infected ▪ bladder distension ▪ uterine displacement 3.15 Palpates the uterus for size, location, consistency, tenderness 3.16 Palpates supra-pubic area for full bladder *Back* 3.17 Palpates costo-vertebral area for tenderness *Extremities* 3.18 Inspects the legs for: ▪ tenderness, warmth ▪ varicose veins ▪ tibia and ankles for pitting oedema ▪ Dorsiflexes for presence or absence of calf pain (Homan's sign) *Pelvic: External genitalia* 3.19 Assists the woman into a position for the examination and explains the procedure 3.20 Requests the woman to uncover her genital area and to remove the pad, ensuring privacy 3.21 Removes gloves and puts on sterile gloves 3.22 Inspects the vulva, perineum and rectum for: ▪ trauma, redness, haematoma, lesions ▪ palpates labia minora for swelling, discharge, tenderness, lesions ▪ (if) episiotomy or tear repair 3.23 Inspects vaginal discharge (lochia) for: ▪ colour ▪ amount ▪ clots or tissue fragments 3.24 Inspects the woman's sanitary pad for lochia, bleeding, foul smelling 3.25 Assists woman to get off the bed and requests her to dress 3.26 Thanks the woman for her cooperation 3.27 Immerses the gloved hands in 0.5% chlorine solution and removes the gloves by turning inside out and immerses the gloves in the chlorine solution 3.28 Washes hands and air dries/ dries with clean cloth				

Task 4: Assesses the progress of involution and maternal health status and makes diagnosis				
Progress of involution 4.1 Compares uterine position, size and consistency -lochia colour, amount and consistency with expected characteristics 4.2 Decides if there is consistency among actual findings and expected findings and if not, manages appropriately *Maternal well being* 4.3 Evaluates physical findings for: - presence or absence of post-partum depression or psychosis -life threatening complications and manages immediately if any 4.4 Evaluates physical findings for presence or absence of risk factors 4.5 Decides if maternal health status is normal and if not consults/refers the woman as appropriate.				

Task 5: Shares assessments and diagnosis with the woman				
5.1 Informs the woman in a reassuring manner about the findings and progress 5.2 Informs about any abnormalities found and discusses actions to be taken 5.3 Encourages the woman to ask questions and seek clarification				
Task 6: Provides care in collaboration with the woman				
Education and counselling 6.1 Explores the woman's need for and provides information about the following topics: - normal postpartum involution -normal emotional responses to birth -changes in family relationships -getting enough sleep and rest -nutritional needs for breast feeding and how to meet these needs -personal hygiene and perineal care -initiation of lactation, breast feeding and breast care, breast feeding techniques and positions, treatment/care of common problems, expression of breast milk, importance of feeding baby colostrum -sexuality, resumption of intercourse, return to fertility and menses -protection from pregnancy and STIs - family planning methods -likely common discomforts (perineal pain, breast engorgement, constipation, etc.) and how to cope with them -signs of complications in mother (increasing vaginal bleeding, passing clots, foul smelling lochia, fever, chills, and baby,				

severe perineal pain, burning micturition, hard lump in breast, severe calf pain) - importance of follow up visit 6.2 Help the woman to make positive decisions about planning her next pregnancy *Support* 6.3 Offers the woman reassurance and encouragement 6.4 Answers any questions related to labour and birth and new born care 6.5 Helps the woman to maintain hygiene by providing or assisting with changing clothes, pad, etc. 6.6 Encourages the woman to maintain an empty bowel and bladder and assists to facilities 6.7 Encourages nourishment and fluids 6.8 Offers client physical comfort (massage, bathing etc.) 6.9 Assists with breastfeeding *Preventive measures* 6.10 Discusses continued iron and folate supplements 6.11 Discusses continued malaria prophylaxis if on prophylaxis 6.12 Gives RH immune globulin within 72 hrs of birth where indicated (after explaining to the mother) 6.13 Counsels on appropriate family planning method for breastfeeding and assists to make an informed choice (see learning guide) *Treatment or intervention* 6.14 Provides /teaches the woman about relief measures for common discomforts 6.15 Teaches client abdominal and pelvic floor strengthening exercises 6.16 Treats or refers other problems as necessary and appropriate				
7. Plans follow-up care in collaboration with the woman				
7.1 Discusses with the woman instructions related to preventive measures and treatments, if any. 7.2 Asks the woman to repeat instructions, if any 7.3 Encourages the client to ask any answered questions, if any. 7.4 Discusses with the client the timing and importance of post-partum follow up care 7.5 Discusses with the client possible time/date for the next post-partum visit 7.6 Schedules follow-up visit and gives the date and time as appropriate 7.7 Encourages the client to include her husband during the post-partum visit, as she desires				

Task 8: Records findings, assessments, diagnoses, care provided and follow-up plan				
8.1 Neatly and clearly writes all findings, assessments, diagnoses, care provided and plans for follow-up on the post-partum record. 8.2 Gives the client a copy of the post-partum record with the follow-up date indicated on it				

Learning guide: Providing care 2-72 hours after birth- NEWBORN

Rating scale: 2 = Done according to standards
1 = Done according to standards after prompting
0 = Not done or done below standards even after prompting

	2	1	0	Comments
Task 1: Prepares history and physical examination of the new born				
Setting 1.1 Decontaminates and cleans work surface if in hospital setting 1.2 Ensures availability and arranges: ▪ maintains adequate light ▪ clean and warm linen, pillows, and examination table ▪ bin and cover ▪ soap, water and clean hand towel ▪ pen light, stethoscope, watch, tape measure, infant weighing scale, growth chart ▪ gloves (new or reusable that been sterilized) ▪ antiseptic lotion ▪ 0.5% chlorine solution ▪ for the room to be sufficiently warm for new born examination *Provider* 1.3 Reviews delivery and new born records and notes the following: ▪ date and time of birth ▪ duration of labour ▪ Type of delivery (spontaneous, assisted, C-section) ▪ APGAR score ▪ gestational age by record ▪ gestational age by examination ▪ maternal antenatal and natal problems ▪ maternal use of medications which may affect the new born *Client* 1.4 Greets the mother of new born and introduces self and acknowledges the newborn 1.5 Makes the mother comfortable, seated comfortably with the new born, ensuring privacy 1.6 Explains the purpose of the history and examination				
Task 2: Obtains new born health history from the mother				
Present pregnancy and childbirth 2.1 Obtains the following information from the mother or reviews records for the following: ▪ date and time of delivery ▪ place of delivery and birth attendant ▪ duration of labour and delivery ▪ pre-labour premature rupture of membranes more than 18 hours ▪ uterine infection				

▪ type of birth (spontaneous, breech, assisted or C-section) ▪ any shoulder dystocia ▪ whether baby breathed at birth spontaneously or with assistance ▪ whether full term at birth ▪ whether any problem noticed at birth ▪ weight and length of the baby at birth Post-partum history (newborn period) 2.2 Obtains from the mother: ▪ her feelings about the baby (sex and appearance) ▪ -feelings of siblings and family ▪ baby's activity, crying and sleeping patterns ▪ suckling and feeding pattern and whether baby satisfied after feeding ▪ about baby's bladder and bowel function ▪ -condition of baby's umbilical cord ▪ -whether baby had any immunization at birth ▪ -signs of any potentially serious problem ▪ (sleeping too much, not active, vomits a lot, watery green stools, skin feels cold or hot, fast breathing (>60 /min) or with difficulty, skin and eyes are yellow, other concerns *Maternal past obstetric and medical history* History of pre-eclampsia, eclampsia, depression History of diabetes, hypertension, heart disease or other chronic illness				
Task 3: Performs new born general examination				
General approach to examination 3.1 Observes baby's general appearance throughout noting: ▪ posture in supine position (notes asymmetrical movements, convulsions, spasms or arched back) ▪ body proportion and symmetry ▪ skin for colour (for cyanosis, jaundice or pallor), texture, bruises, rash or bumps ▪ spontaneous activity ▪ cry (frequency and pitch) ▪ respiratory effort 3.2 Explains while performing all the procedures of the examination 3.3 Asks further questions for clarification as conducting the examinations as needed and appropriate 3.4 Calms the baby as needed 3.5 Asks the mother to place the baby on the examination table 3.6 Requests the mother to undress the baby 3.7 Washes hands with soap and water and wears clean gloves				

Vital signs and body measurements 3.8 Measures ▪ heart rate and rhythm ▪ respiration rate and rhythm for full minute and observes for grunting or chest indrawing ▪ temperature 3.14 Measures weight, length and head circumference 3.15 Movements and posture (whether any asymmetrical movements, convulsions, spasms or back arching) 3.16 Level of alertness and muscle tone (whether responds to stimuli, no lethargy, no irritability) *Head and neck* 3.17 Fontanelle- whether bulging 3.18 Inspects eyes for bleeding, pus, reaction of pupil to light, colour of sclera, corneal reflex etc. 3.14 Inspects nose for patency 3.15 Inspects ears for presence or absence of canal, response to loud voice 3.16 Inspects mouth for symmetry, cleft lip, cleft palate 3.17 Elicits rooting and sucking reflexes 3.18 Determines range of neck movements *Chest* 3.19 Inspects breasts for engorgement, discharge from nipple, in-drawing of chest or grunting *Abdomen* 3.20 Inspects the abdomen for: ▪ Size (whether distended) ▪ Shape (protrusion at the level of umbilicus) ▪ umbilical cord – whether red and infected and skin around inflammed 3.21 Palpates abdomen for separation of abdominal muscles, presence or absence of hernia *Extremities* 3.22 Inspects arms, hands and digits for size, shape and any deformity, colour of nail bed 3.23 Determines range of motion and muscle tone 3.24 Inspects leg, feet and toes for size, shape and any deformity, colour of nail bed 3.25 Determine range of motion and muscle tone 3.26 Check for dislocation of hips 3.27 Check for reflexes – palmar *External genitalia* 3.28 If girl: Examines external genitalia for oedema, discharge, bleeding, irritation, redness If boy: inspects the penis, retracts the prepuce to see whether any redness, irritation, discharge, examines the scrotum and palpates for descent of testis 3.29 Inspects the anus for patency 3.30 Removes used gloves and disposes them in a decontamination solution				

Back 3.31 Lifts the baby up and inspects spine for mobility, any evidence of dimples or openings *Other reflexes* 3.32 Elicits walking/stepping reflex 3.33 Elicits moro reflex 3.34 Asks the mother to dress the baby and thanks her for her cooperation 3.35 Washes hands with soap and water and air dries/dries with clean cloth. OBSERVATION OF BREAST FEEDING and BONDING				
Table 4: Assesses the new born's gestational age and health status and makes diagnosis				
New born gestational weight for age 4.1 Evaluates signs of neuro muscular and physical maturity and calculates gestation age using the gestational age chart?? 4.2 Plots the newborn's weight, length and head circumference on a growth chart 4.3 Decides if the newborn's weight for gestational age is small, average or large *New born well being* 4.4 Evaluates historical and physical findings for presence or absence of health problems 4.5 Evaluates historical and physical findings for presence or absence of risk factors 4.6 Decides if the newborn's health status is normal based on the above evaluations and if not appropriately consults or refers for further evaluations				
Task 5: Shares assessments and diagnosis of the newborn's health status with the mother				
5.1 Informs the mother, in a reassuring manner of the assessments and diagnoses of the newborn's health status 5.2 Explains possible causes if any abnormalities discovered and informs about next steps in addressing them 5.3 Encourages client to share reactions to the information provided.				
Task 6: Provides care to new born in collaboration with the mother				
Education and counselling 6.1 Explores the mother's need for and provides information about the following: - normal behavioural and physical changes in the new born (sleep and wake patterns, bowel and bladder movements, growth) -nutritional needs of the new born and meeting them with breast feeding - importance of maintaining the baby's body temperature -review signs of potentially serious problems (not feeding well, sleeping most of the time, vomiting, watery dark green stools, skin feels too hot or cold, fast breathing (>60/min) or with difficulty -skin and eyes are yellow				

6.2 Helps the mother to make decisions which positively affect her baby's health and well being 6.3 Discusses and demonstrates care of the umbilical cored 6.4 Discusses immunization as per the national schedule and gives the immunizations given in the first week of birth 6.6 Encourages to continue breast feeding and its benefits *Treatment or intervention* 6.7 Treats or refers new born problems as necessary and appropriate				
Task 7: Plans follow-up care to the new born in collaboration with the mother				
7.1 Discusses with the client follow up treatments or preventive measures 7.2 Asks the mother to repeat the instructions 7.3 Encourages the mother to ask questions. 7.4 Discusses the timing and importance of new born follow up care 7.5 Discusses possible dates for next visit or the 4-6 weeks well-baby check up and schedules the visit 7.6 Encourages the mother to bring her husband along during the next visit				
Task 8: Records all findings, assessments, diagnosis and care provided to the new born and follow-up plan				
8.1 Neatly and clearly writes all findings, assessments, diagnosis and care provided and plans for follow-up 8.2 Gives a copy of the new born's records to the mother with return dates notes on it 8.3 Teaches the client how to interpret and use the information on the baby's record.				

Learning guide: Counselling for family planning (Compare WITH PPH)

Rating scale
2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards

LEARNING GUIDE FOR POST-PARTUM FAMILY PLANNING COUNSELLING				
STEP/TASK	2	1	0	**Comments**
Task 1: Makes initial positive contact with the woman				
1.1 Greets the woman and asks her how she is feeling and how is the baby				
1.2 Reviews records (if available) particularly post-partum history to obtain information on contraceptive use /plans				
1.3 Asks her permission to counsel for family planning				
1.4 Assures privacy and confidentiality				
Task 2: Asks about woman's individual needs, situations and preferences				
2.1 Asks whether she would like her spouse/partner to join 2.2 Asks: ▪ about age, number of pregnancies and children, last pregnancy (if no records are available) ▪ about the use of contraception in the past ▪ asks whether she had any problems ▪ asks her plans for future pregnancies ▪ asks her about concerns and fears 2.2 Asks whether: ▪ she is breast feeding and whether exclusive (finds out how many times during the day and night, on demand and whether any other food or fluid is given) *2.3 Asks whether her menses has returned (if the client has returned after six weeks)*				
Task 3: Addresses the woman's individual needs, situation and preferences				
3.1 Provides information about return of fertility and chances of getting pregnant even while breast feeding				
3.2 Asks the woman whether she has preference for any method. ▪ Provides information about the preferred method, its mode of action and benefits and side effects				
3.3 Tells her that information about other methods is being provided to enable her to make an informed choice. ▪ Provides information about all methods of family planning and their mode of action and encourages her to ask questions				
4. Helps the woman to make an informed choice of a FP method				

4.1 Helps the woman to choose an appropriate method				
4.2 If the woman is in her early post-partum: ▪ wants to use a permanent method of contraception, informs the mother and her spouse that the method will be available in a referral facility and makes arrangement to move the mother and baby to a referral facility. ▪ if a temporary method of contraception has been chosen, ask her to return after six weeks for screening and the method (as in tasks 4-6)				
4.3 Asks the woman whether she has any doubts and responds				
4.4 Records the information in the family planning record and follow up card given to the mother.				
4.5 Thanks the woman and advises her about return visit.				

Module evaluation

Module: Postpartum care

Please indicate your opinion of the course components using the following rating scale:

5. Strongly Agree
4. Agree
3. No opinion
2. Disagree
1. Strongly disagree

Course component	Rating
1.The discussions helped me to clarify elements related to basic care.	
2.The exercises were useful for learning about basic care during postpartum period.	
3.The role plays on interpersonal communication skills were helpful.	
4.The case studies were useful for practising clinical decision making.	
5.The time for skill practice in a simulated setting was sufficient.	
6.The supervised client practice within the limitations of time was sufficient.	
7.I am confident about providing care during postpartum period.	

POSTPARTUM CARE OF THE MOTHER

The delivered mother needs extra care for early detection of any complications. Immediate treatment will reduce maternal mortality and long term maternal morbidity.

Recommended visits

- If home delivery, first visit within 24 hours
- After 24 hours,3 additional visits (Day 3 (48-72 hrs), between 7-14 days and after 6 weeks)
- Home visits to be done if visit to health centre not possible

Complications:

The following are the common complications:

- Vaginal bleeding: This may be atonic postpartum haemorrhage or bleeding from vaginal, perineal or cervical tears
- Infection: Postpartum women may develop uterine infection, urinary tract infection or breast abscess. This should be diagnosed and managed appropriately.
- Anaemia: A routine check of haemoglobin should be done in the postpartum period and anaemia treated if detected.

Preventive measures before discharge and follow up for problems

- Give 3 months' supply of iron and counsel on compliance
- Counsel on breast feeding (*refer to protocol)*
- Advise on postpartum care and hygiene
- Advise on new born care
- Advise on nutrition (eat more and healthy foods)
- Advise on routine and follow up postpartum visits
- Advise on danger signs in mother and new born
- Counsel on family planning as appropriate

Postpartum care and hygiene

Advise mother:

- Enough rest and sleep
- Eat well and drink plenty of water
- Importance of washing to prevent infection of the mother and her baby
  - Wash hands before handling baby
  - Wash perineum daily and after excretion
  - Change perineal pads 4-6 hourly or more frequently if heavy lochia
  - Wash body daily
- Avoid sexual intercourse until perineal wound (from episiotomy or repair of tears) heals
- Educate the mother and family to report immediately (see box below)

After discharge:

Problems that need immediate referral after immediate management as per protocols

- Shock
- Vaginal bleeding- more than 2 pads in 20-30 minutes or bleeding increases (Secondary PPH protocol)
- BP high
- Convulsions (eclampsia protocol)
- Fast or difficult breathing
- Tender abdomen
- Severe abdominal pain (rule out uterine rupture)
- High temperature
- Pain and swelling of leg and calf tenderness

Problems that need referral as early as possible to a specialist

- Fever
- Abdominal pain
- Feeling ill
- Swollen and tender breasts
- Urine dribbling or burning micturition
- Pain the perineum
- Foul smelling lochia
- Mother depressed or unhappy

- **Provide psycho-social support to those who feel unhappy or cry easily** in the first two weeks after delivery
  - Counsel the woman and her family.
  - Follow up in two weeks and refer if symptoms continue

- Vaginal bleeding- more than 2 pads in 20-30 minutes or bleeding increases
- Convulsions
- Fast or difficult breathing
- Severe abdominal pain
- High temperature
- Pain and swelling of leg and calf tenderness
- Swollen and tender breasts
- Urine dribbling or burning on micturition
- Pain the perineum
- Foul smelling lochia
- Any problem with new born including with breast feeding

No mother should be discharged from hospital till 24 hours after delivery

POSTPARTUM CARE OF THE MOTHER

Review delivery record

Monitoring in the ward/visit in first 24 hours at home if home delivery

- Check BP, pulse, temperature every 6 hours (Once at the time of home visit)
- Assess the amount of vaginal bleeding
- **Keep the baby and mother together**
- Encourage the mother to eat and drink
- Watch for any problems with passing urine
- Advise on postpartum care and hygiene
- Counsel on birth spacing and family planning

☐ **Care of the new born is very critical.** *(Refer to new born protocol)*

- Problems in mother or new born during delivery

☐ Follow instructions provided by doctor

- **NO** problems in mother or new born during delivery

- No problems in mother and baby within 24 hours after delivery

☐ Discharge after 24 hours
☐ Follow up visits:
- ❖ First visit in 2-3 days
- ❖ Second visit 7-14 days
- ❖ Third visit 4-6 weeks

☐ Advise on:
- ❖ Postpartum hygiene and new born care
- ❖ Advise when to seek care Breast feeding and new born care (*see new born protocol*)
- ❖ Advise on nutrition
- ❖ Advise to avoid constipation
- ❖ Continue iron and folic acid AT LEAST for 3 months

☐ FP counselling and provide appropriate method at the time or after six weeks

- Problems in mother or baby within 24 hours after delivery

☐ **Refer immediately after primary management as per protocols**
- ❖ Shock
- ❖ Vaginal bleeding- more than 2 pads in 20-30 minutes or bleeding increases (PPH protocol)
- ❖ BP high
- ❖ Convulsions (eclampsia protocol)
- ❖ Fast or difficult breathing
- ❖ Tender abdomen
- ❖ Severe abdominal pain (rule out uterine rupture)
- ❖ Fever

☐ **Problems in new born** **(***Refer as per new born protocol)*

☐ **Provide psycho-social support to those who feel unhappy or cry easily** in the first two weeks after delivery
- ❖ Follow up in two weeks and refer if symptoms continue

ANSWER KEY: Module on postpartum care of the other and newborn 2-72 hrs after delivery

Knowledge assessment

1. During the first six hours after birth: (repeated from module on assisting with childbirth)

d. List three things you would do to determine the new mother's well-being.

- *Check uterus for size and contraction*
- *Check amount, consistency and colour of vaginal bleeding*
- *Check pulse and blood pressure*

e. How would you determine that the mother is losing too much blood?

- *Check amount, consistency and colour of vaginal bleeding over time*
- *Check pulse and blood pressure over time and determine whether within normal range*
- *Compare character and estimated blood loss with expected blood loss*
- *Look for signs of shock*

f. What steps would you take to stop the bleeding?

- *Rub the uterus whenever the uterus is soft*
- *Make sure the bladder is empty*
- *Put the baby to breast*
- *Examine the placenta and rule out retained parts*
- *Examine the perineum and vagina for tears*

2. What five signs of excessive blood loss would cause you to transfer the mother to the hospital?

- *If the uterus stays soft*
- *If the bleeding is heavier than a heavy monthly period*
- *If there is heavy, fresh, bright red blood*
- *If the uterus feels hard but is getting bigger*
- *If the woman shows signs of shock*

3. What are the common emotional changes in new mothers?

- *Feeling overwhelmed*
- *Feeling sad, crying easily*
- *Worry about doing a good job with the baby*

4. Check (√) the correct response(s)

Following the birth, the fundus

a. decreases about 3 cm/day for the first 9-10 days
b. decreases about 2 cm/day for the first 9-10 days
c. **decreases about 1 cm/day for the first 9-10 days**
d. Increases in the first two days and then decreases

5. Check (√) the correct response(s).

To assess a new born's health, important questions to ask the mother are:

a. how often the baby breastfeeds
b. how many times the baby wets per day
c. whether the baby sucks her thumb
d. **whether the baby has a strong suck**

6. Check (√) the correct response(s)

During the new born's physical examination, important things to check include:

a. weight of the baby
b. length of the baby
c. fontanelle of the baby
d. umbilical cord

7. Check (√) the correct response(s)

Warning signs of serious new born health problems include:

a. **discharge, redness or foul smell around the umbilical stump**

b. **baby sleeps all night and does not bother the mother to eat often during the day**

c. baby hiccups three or four times a day

d. **New born whose whites of the eyes look yellow**

8. Check (√) the correct response(s)

The postpartum woman should be

d. asked which family planning method she has used and whether she wants to use a method in the future

e. told that family planning method is not necessary during the immediate postpartum period

f. told that she must begin using a family planning method immediately if she is not fully breastfeeding

Exercise
Post-partum examination

Type of examination	Normal findings	Abnormal findings and action to be taken
General well being(every visit) ▪ Gait and movements ▪ Facial expression ▪ Behaviour ▪ General cleanliness ▪ Skin ▪ Conjunctiva	Walks without limp Alert and responsive Normal behaviour Clean No lesions or bruises Conjunctiva is pink	If findings are not normal: ▪ find out about food and fluid intake, ▪ further assessments and counselling ▪ If bruises on the skin, assess for violence ▪ Conjunctiva pale, manage as *per clinical protocol on anaemia*
Vital measurements (every visit) ▪ BP ▪ Temperature ▪ Pulse	Systolic BP 90-140 mmHg Diastolic less than 90 mmHg Less than 38^0 Celsius Pulse 90-110 beats /min	If systolic <90, rapid assessment to rule out shock If systolic 90-110 mmHg, act based on *clinical protocol on Hypertensive disorder in pregnancy* If diastolic BP is more than 110 mmHg, act based on *clinical protocol on Hypertensive disorder in pregnancy* If more, tepid sponge Encourage increased fluid intake Consider paracetamol 500–1000 mg Rule out foul smelling discharge Act as per *clinical protocol on puerperal fever* Less than 90 or 110 or more per min, rule out shock Act as per *clinical protocol on shock*
Breast inspection (every visit)	No cracks or discharge No engorgement, lumps and non-tender	Cracks or fissures, engorgement or abscess, act as per clinical protocol on *mastitis*
Abdominal examination (every visit) ▪ Surface ▪ Uterus/involution ▪ Bladder	No scar Uterus feels firm and not tender Fundal height decreases by about 1 cm per day for the first 9-10 days ▪ Immediately after completion of 3rd stage, uterus is only 1 finger bread below the umbilicus ▪ At six days, usually between the umbilicus and symphysis pubis ▪ At six weeks, not palpable abdominally ▪ In multiparous it may be slower ▪ Bladder not felt	If sutures or scars found, find out the cause and act as per follow up instructions of the procedure. If uterus is tender, act as per *clinical protocol on puerperal fever* If the uterus has increased in size or has not decreases, do further assessment for uterine sub-involution (when uterine size increases or does not decrease or increase in lochia), specifically for fever, abdominal pain and bleeding Bladder felt and cannot pass urine when the urge is felt, refer to specialist
Leg examination (first visit)	No calf tenderness on dorsiflexion	If calf tenderness, act as per *clinical protocol on deep vein thrombosis*
External genital examination (every visit) ▪ Overall appearance ▪ Lochia	▪ No bruises, swelling, sores or tears or sutures ▪ Lochia Day 1- bleeding similar to menses Day 2 – 4: red or dark red or brownish Day 5-14: pink lochia	▪ Refer if swelling or sores For sutures from tear or episiotomy, act as per post-procedure instructions ▪ Lochia Lochia is foul smelling, act as per *clinical protocol on puerperal fever* If lochia lasts for more than 2 weeks refer to specialist

▪ Vaginal bleeding	Day 15- 3-4 weeks pp white lochia (may continue up to 6 weeks) ▪ Vaginal bleeding Normal Day 1: Amount of bleeding similar to menses or smaller clots passed. Day 2- 6 weeks pp- No bleeding ▪ If heavy bleeding/slow steady trickle of blood or gush of bleeding, assess and act as *per clinical protocol on PPH* ▪ Perineum Not tender, no swelling	▪ Vaginal bleeding If heavy bleeding/slow steady trickle of blood or gush of bleeding, assess and act as *per clinical protocol on PPH* ▪ Severe tenderness, rule out abscess ▪ If repaired tear or episiotomy, follow post-procedure instructions ▪ If incontinence or leakage of urine or faeces from the vagina, rule out fistula and refer to specialist
▪ Perineum		

Exercise
Newborn examination (align with learning guide)

Type of examination	Normal findings	Abnormal findings and action to be taken
Overall appearance and well-being (every visit)		
▪ Weight	Birthweight between 2.5 -4 Kg	DISCUSS TL NORMS
▪ Respiration	30-60 per minute NO gasping No grunting No chest in-drawing	If not within normal range, refer to an expert
▪ Temperature	$36.5^0$to 37.5^0Celsius	If not within normal range, refer. If the baby's temperature is low, refer ensuring baby is well covered and if mother is okay practises kangaroo-mother care
▪ Colour	Pink lips, tongue, nail beds, palms and soles No jaundice (Physiological jaundice 2-4 days of birth) No pallor	If cyanosis (lips, tongue, nails blue) or jaundice in first 24 hours or pallor, refer urgently
▪ Movements and posture	No convulsions, spasms or back arching No irregular or asymmetrical arm or leg movement	If not within normal range, refer to an expert
▪ Level of alertness and muscle tone	Responds actively to stimuli Can be easily aroused from sleep No floppy or lethargic	If not within normal range, refer to an expert
▪ Skin	No evidence of bruise, rash or bumps	If not within normal range, refer to an expert
Head, face, mouth, eyes (every visit)		
▪ Head	No abnormality in shape, size normal, fontanelle not bulging	If any of the following: Large head Anterior fontanelle bulging Increasing head circumference Swelling Refer to an expert
▪ Face and mouth	No cleft lip Facial movements are regular and symmetrical	If cleft lip or if asymmetrical movements, refer to an expert
▪ Eyes	No redness, no pus, no puffiness	Swelling or redness of eyes or pus, refer to

		an expert
Chest, Abdomen, cord and external genitalia (every visit) ▪ Chest ▪ Abdomen ▪ Cord ▪ External genitalia and anus	 Regular and symmetrical movements No in-drawing of chest Abdomen rounded and soft Not red or infected and skin Genitalia not swollen Passes stools	 If chest movements are not within normal range, refer urgently to an expert Distended – refer urgently to an expert If abnormal protrusion especially at the base of the cord (umbilical hernia) refer If bleeding or signs of infection, refer urgently to an expert If not within normal range, refer to an expert
Back and limbs (first visit)	Back free of lesions, swelling, dimples or hairy patches Limbs – Posture and movements normal and symmetrical NO swelling	Refer if not within normal range
Breast feeding (every visit)	Normal positioning and holding the baby Attachment and suckling normal Finishing feed (newborn releases breast by self rather than being pulled off)	If not within normal range, counselling on breast
Mother-baby bonding	Mother caresses, makes eye contact, responds with concern	If not within normal range, do further assessments

Handout
Postpartum assessment – history taking

Question	Use of information/follow-up action
1.Personal information (first visit) (may be available from ANC/delivery records)	
Name	Identification
Age	If adolescent, special care needed
Contact details	Contacting the woman
Number of previous pregnancies (gravida) and childbirth (parity)	Planning for individualised basic care provision
Current problems (obstetric, medical, social or personal) Any problems in postnatal period	For gathering additional information for further assessment and plan of action
Care giver (other than the midwife in the health centre)	Purpose of seeking care and outcome
2. Daily habits and life style (first visit)	
Daily work load including information on working outside the home Rest/sleep adequate Food habits (whether adequate) History of smoking or alcohol	Balance between work and rest and also whether newborn gets care Personal advice on rest, nutrition, etc
Who does she live with	Useful when developing complication readiness plan
Ask sensitively and ensuring privacy and confidentiality, whether any history of physical violence	For further assessment and care
3. Present pregnancy/labour/childbirth (first visit) (information may be obtained from ANC/delivery records)	
Delivery history Obtains the following information: ▪ date of delivery ▪ place of delivery ▪ Care giver ▪ duration of labour and delivery ▪ type of birth (spontaneous vaginal or otherwise- reason for the latter) ▪ laceration or episiotomy ▪ any problem with this labour such as prolonged labour, rupture of membranes, obstructed labour, convulsions, delivery of placenta ▪ any problem with delivery of placenta such and whether placenta complete ▪ Since delivery, any high fever, chills or any other medical problem	For further care provision
Any newborn complications and specify	
4. Present postpartum period (<u>every visit</u>)	
Feelings about the baby and ability to care	If she reports feeling of inadequacy, worry or fear or she reports crying, feelings of sadness, or of being overwhelmed, further assessment is needed
Bleeding- amount	Normal Day 1: Amount of bleeding similar to menses or smaller clots passed.

	Day 2- 6 weeks pp- No bleeding If heavy bleeding/slow steady trickle of blood or gush of bleeding, assess and act as *per clinical protocol on PPH*
Lochia- colour and smell	Day 1- bleeding similar to menses Day 2 – 4: red or dark red or brownish Day 5-14: pink lochia Day 15- 3-4 week pp white lochia (may continue up to 6 weeks) If lochia is foul smelling, act as per *clinical protocol on puerperal fever*
Any problems with bowel and bladder Incontinence Leakage of urine or faeces from vagina Burning micturition Constipation	If incontinence or leakage of urine or faeces, rule out fistula, refer to specialist If burning micturition, manage as per *clinical protocol on puerperal fever* Advise plenty of fluids and vegetables and other high fibre foods to avoid constipation
Breast feeding Whether breast feeding and if breast feeding, any problems? Is the baby satisfied?	If breast feeding and problems, advise on correct technique of breast feeding. If not breast feeding, find out reasons and counsel
5. Obstetric and medical history (first visit)	
History of diabetes, hypertension, heart disease, hepatitis, tuberculosis or other chronic illness	To be alert signs of pre-eclampsia, eclampsia and watch out for signs of depression In case of medical problems, to facilitate referral for follow up
6. Medical history (first visit)	
Medical history of diabetes, hypertension, heart disease or other chronic illness History of sexually transmitted infections or HIV in her or spouse (Enquire about need for protection)	In case of medical problems, to facilitate referral for follow up Counselling, use of condoms and to facilitate referral for treatment
7.Contraceptive history/plans (first visit)	
Number of children desired If more children desired, when History of contraceptive use Plans to use contraception	The information is needed for counselling for family planning and personalize the advice as well as help chose appropriate method.

Newborn history taking

Question	Use of information/follow up action
Personal information (first visit) (may be available from delivery/newborn records)	
Woman's name, baby's name, date of birth, mother's contact details Has the newborn received care from another care giver	Identification Reasons for seeking care
Present labour/childbirth (first visit)	
Place of birth and type of provider Whether mother had uterine infection Whether mother had ruptured membrane for more than 18 hours	If facility, to get information about delivery and type of care received If home delivery, to be alert for signs of complications If uterine infection or ruptured membranes for more than 18 hours, *act as per clinical protocol on PROM*

Whether baby needed any resuscitation Birthweight	Watch out for signs of breathing difficulty Birthweight (DISCUSS TL NORMS) More than 4 Kg Less than 2 Kg
Maternal obstetric and medical history (first visit)	
History of still births, neonatal deaths Medical history of chronic illness (see maternal history taking)	Reasons and identify reasons for further assessment (example congenital anomalies) To facilitate referral
Present newborn period (every visit)	
Breast feeding (adequacy, baby satisfied) Bowel and bladder patterns Congenital malformation	If not going well, reasons. Counsel on correct techniques Baby urinates at least once in first 24hours If not refer to an expert. Baby passes stool within first 48 hours If not or if diarrhoea, refer to expert Refer to expert

Handout on psychological or emotional distress

Probable diagnosis	Signs and symptoms	Prevention and action
Post-partum sadness	Feelings of inadequacy, worry or fear, irritability 3-6 days after delivery	Emotional support, counselling
Post-partum depression	Insomnia, excessive or inappropriate sadness or guilt or feelings of worthlessness Anxiety Lasting for more than 1 week	Counsel and refer
Postpartum psychosis	Hallucinations, delusions, morbid or suicidal thoughts	Counsel and refer

Case study: Postpartum assessment and care of woman

Directions

Read and analyse 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 case study. When all groups have finished, the case studies and the answers each group developed will be discussed.

Client profile

Mrs. Cecilia gave birth 3 days ago in community health centre. Her pregnancy, labour, and birth were uncomplicated. She was discharged 24 hours after delivery. This is her first postpartum clinic visit. Mrs. Cecilia has one other child, who is three years of age. She does not want to become pregnant again for at least 2 years.

PRE-ASSESSMENT

1. Before beginning your assessment, what should you do for and ask Mrs. Cecilia?

    - Mrs. Celia should be greeted respectfully and with kindness and offered a seat to feel comfortable and welcome, establish rapport and build trust.
    - Ascertain from records whether Mrs. Cecilia had a quick check. Conduct a quick check if she has not. Checks for life threatening complications so that she receives urgent care before receiving routine assessment/care.

Assessment (information gathering through history, physical examination, and testing)

2. What history will you include in your assessment of Mrs. Cecilia and why?
    - Do a complete history as this is Mrs. Celia's first visit (personal information, obstetric and medical history, history of recent pregnancy, labour and delivery, present postpartum period, contraceptive history/plans) to guide further assessment and care and also to identify situations that require immediate attention.
    - Information about the baby should be obtained especially feeding.
    - Contraceptive plans is an important component as Mrs. Celia does not want another pregnancy soon.
3. What physical examination will you include in your assessment of Mrs. Cecilia and why?
    - Do a complete examination as this is her first postpartum visit (see filled sheet of exercise 1) to guide further assessment and care and also to identify situations that require immediate attention.
4. What laboratory tests will you include in your assessment of Mrs. Cecilia and why?
    - Hb – to rule out anaemia

Diagnosis (interpreting information to identify problems/needs)

You have completed your assessment of Mrs. Cecilia and your main findings include the following:

History:

- Mrs. Cecilia is feeling well.
- Mrs. Cecilia reports no complications or problems during this pregnancy, labor/childbirth, or postpartum period. Her medical history is not significant: she is taking no medications, nor does she have any chronic conditions or illnesses.
- Mrs. Cecilia's first child is well and was breastfed for 6 months.
- She is exclusively breastfeeding her new born baby and intends to do so for at least 6 months.
- She wants to know whether she should start using contraception now, as she does not want to become pregnant again for at least 2 years. All other aspects of her history are normal or without significance.

Physical Examination:

- Mrs. Cecilia's general appearance is healthy.
- Vital signs are as follows: BP is 120/76, Pulse is 78 beats per minute, Temperature is 37.6°C.
- Her breasts appear normal.
- Her abdominal exam is without significant findings and involution is proceeding normally.
- Her lochia is a pale, creamy brown in colour
- All other aspects of her physical examination are within normal range.

Laboratory test

Tested blood for haemoglobin and is Hb is 10 gms/DL

5. Based on these findings, what is Mrs. Cecilia's diagnosis (problem/need) and why?
Mrs. Celia has a normal postpartum. She is fully breastfeeding and can wait for six months to use a contraceptive.

CARE PROVISION (implementing plan of care and interventions)

6. Based on your diagnosis (problem/need identification), what is your plan of care for Mrs. Celia and why?

Mrs. Celia should receive basic care provision which will help to support and maintain healthy postpartum period which will help her to maintain a health postpartum period. Special emphasis should be on post-partum family planning particularly lactational amenorrhoea as she intends to fully breastfeed for six months. Mrs. Celia should be explained how to ensure that lactational amenorrhoea is effective by ensuring exclusive and on demand breastfeeding (breast feeding at least every four hours during the day and every six hours at night) and not giving the baby other feeds). She should be counselled about other contraceptive options and return for follow up visit in six weeks.

Case study: Newborn assessment and care

Directions

Read and analyse 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 case study. When all groups have finished, the case studies and the answers each group developed will be discussed.

Client profile

Mrs. Fatima is 20 years of age and gave birth to her first baby at CHC 2 days ago. The baby weighed 2.6 kg. Both she and Baby Fatima came to the health centre for the first post-natal visit.

Pre-assessment

1. Before beginning your assessment, what should you do for and ask Mrs. Fatima and Baby Fatima?

- Mrs. Fatima should be greeted respectfully and with kindness and offered a seat to feel comfortable and welcome, establish rapport and build trust. Congratulate Mrs. Fatima on the birth of the baby.
- Ascertain from records whether Baby Fatima had a quick check. Conduct a quick check if she has not. Checks for life threatening complications so that she receives urgent care before receiving routine assessment/care.

Assessment (information gathering through history, physical examination, and testing)

2. What history will you include in your assessment of Baby Fatima and why?
   Because this is Baby Fatima's first visit, full history should be taken (about birth (whether normal, cried at birth, birth weight), present history (whether breast feeding, passing urine and stool, any history of convulsions spasms, etc) to guide further assessment and detect problems
3. What physical examination will you include in your assessment of Baby Fatima and why?
   Because this is Baby Fatima's first visit, full physical examinational should be done ((refer to filled in exercise sheet) to detect further assessment and detect problems
4. What laboratory tests will you include in your assessment of Baby Fatima and why?
   None

Diagnosis (interpreting information to identify problems/needs)

You have completed your assessment of Baby Fatima and your main findings include the following:

History:

- Record review reveals that Mrs. Fatima had a normal delivery. The baby cried at birth and weighed 2.6 kilograms.
- Mother and baby were discharged 24 hours after delivery.
- Baby was given BCG at birth.
- She reports that the baby is feeding well.
- All other aspects of the baby's history are normal or without significance.

Physical examination:

- The baby's weight is 2.6 kilograms.
- Baby's respiration is normal and the colour of lips, tongue and nails are pink.
- Baby's skin colour is normal.
- Baby is alert.
- Umbilical cord is not infected.

5. Based on these findings, what is Baby Fatima's diagnosis (problem/need) and why?
Normal newborn

Care provision (implementing plan of care and interventions)

6. Based on your diagnosis (problem/need identification), what is your plan of care for Baby Fatima and why?

Baby Fatima should receive basic care provision (breast feeding, keeping the baby warm, hygiene, cord care, etc)

Role play: Communicating assessment findings

Directions

The trainer selects two participants to perform the following roles: health care provider and woman in labour. The two participants taking part in the role play should take a few minutes to prepare for the activity by reading the background information provided below. The remaining participants, who will observe the role play, should at the same time read the background information.

The purpose of the role play is to provide an opportunity for participants to develop/practice effective interpersonal skills.

Participant roles

Healthcare provider: The healthcare provider is an experienced midwife who has good interpersonal skills.

Postpartum woman: Mrs. Celia gave birth 3 days ago in a community health centre. . Her pregnancy, labour, and birth were uncomplicated. She was discharged 24 hours after delivery. This is her first postpartum clinic visit. Mrs. Cecilia has one other child, who is three years of age. She does not want to become pregnant again for at least 2 years.

Focus of the role play

The focus of the role play is the communication skills of the midwife while conveying the assessment findings to Mrs. Doris.

Discussion questions

The trainer should use the following questions to facilitate discussion after the role play.

How did the midwife communicate the assessment findings?
Was the midwife's behaviour reassuring?

- The midwife spoke in a calm, reassuring manner.
- She explained the findings from history and examination.
- She asked Mrs. Celia whether she has any questions or needs any clarifications.

Role play: Counselling for FP

Directions
The trainer selects two participants to perform the following roles: health care provider and woman in labour. The two participants taking part in the role play should take a few minutes to prepare for the activity by reading the background information provided below. The remaining participants, who will observe the role play, should at the same time read the background information.

The purpose of the role play is to provide an opportunity for participants to develop/practice effective interpersonal skills.

Participant roles
Healthcare provider: The healthcare provider is an experienced midwife who has good interpersonal skills.

Postpartum woman: Mrs. Celia gave birth 3 days ago in a community health centre. . Her pregnancy, labour, and birth were uncomplicated. She was discharged 24 hours after delivery. This is her first postpartum clinic visit. Mrs. Cecilia has one other child, who is three years of age. She does not want to become pregnant again for at least 2 years.

Focus of the role play

The focus of the role play is the skills of the midwife in counselling for family planning.

Observe the midwife counselling Mrs. Celia using the learning guide on counselling for Fp.

Module 14

Management of puerperal complications

Training resource package for intrapartum and immediate post-partum care

Every postpartum woman who develops fever receives appropriate care including care for new born.

Clinical protocols: Puerperal fever, Mastitis, Deep vein thrombosis

Module: Management of puerperal complications

Key tasks
- Diagnosis of complications
- Management of puerperal fever, mastitis and deep vein thrombosis
- Counselling for breast feeding

Training schedule
- Key tasks
- Learning objectives
- Sessions plans
- Knowledge assessments

Trainer's guide

Session plan describes objectives of each session, topics, methodology and key points
- Case studies
- Role plays
- Learning guides

Key knowledge
- Differential diagnosis of puerperal fever
- Differential diagnosis of engorged breasts
- Risk factors for DVT

Critical skills
- Diagnosis of puerperal fever, mastitis and deep vein thrombosis
- Management
- Counselling for breast feeding

Evaluation
- Post Test
- Skill assess: using learning guides
- Module evaluation

Module: Management of puerperal complications

Training schedule

Total time: 570 min (9 hours and 30 min)

Time	Topic	Method	Resource materials
30 minutes	Welcome Objective of the module: To enable participants to update their knowledge and skills in management of puerperal complications Discuss Key tasks Learning objectives Explain the tools for evaluation of the session	Discussion	Slides 2-3
30 min	Knowledge assessment	Test	Questionnaire
Session 1 1 hour	Differential diagnosis of fever after childbirth	Discussion Exercise	MCPC 2017 **(S127)** Clinical protocol on management of puerperal fever, mastitis and deep vein thrombosis Handout 1
Session 2 30 min	Management of endometritis	Discussion Case study Skills check	MCPC **(S130)** Learning guide on management of puerperal complications
Session 3 30 min	Management of wound infection	Discussion Case study Skills check	MCPC 2017 **(S135)** Learning guide
Session 4 30 min	Management of mastitis	Discussion Case study Role play Skills check	MCPC 2017 **(S132)** Learning guide
Session 5 I hour	Management of deep vein thrombosis	Discussion Case study Skills check	MCPC 2017 Learning guide
Session 6 3 hours	Supervised client practice	Skill check	Learning guide
Session 7 2 hours	Evaluation	Post-test Skill check Module evaluation	Questionnaire Learning guide Module evaluation form

Session plans

Training process	Resources
Welcome **(30 min)** Objective of the module: To enable participants to review and update their knowledge and skills on management of puerperal complications. Key tasks Present key tasks and discuss whether the participants would like to add any Learning objectives At the end of the session, the participants will be able to: 1. List the causes of puerperal fever 2. Diagnose causes of puerperal fever 3. Manage cases of puerperal fever- endometritis, breast engorgement and mastitis and deep vein thrombosis Explain the tools for evaluation of the session	Power point
Knowledge assessment **(30 min)**	
Session 1: Causes of puerperal fever and diagnosis and general management of fever **(60 min)** *Objective of the session*: To update the knowledge on causes of puerperal fever and upgrade skills in diagnosis *Discussion* Ask the participants to list the common causes of puerperal fever. List the responses on the board. *Exercise* Project the first column of the table showing differential diagnosis of puerperal fever. Ask about diagnosis and possible additional symptoms and signs. Trainer sums up highlighting the key points in diagnosis. Discusses general management of fever (tepid sponge, paracetamol, rest, plenty of fluids).	MCPC 2017 **(S127)** Clinical protocol puerperal fever, mastitis, deep vein thrombosis Handout 1
Session 2: Management of endometritis **(30 min)** *Objective of the session*: To improve the skills in management of endometritis *Discussion* Discuss the leading causes of maternal deaths in Timor Leste. If puerperal sepsis is not listed by the participants, find out if it is a leading cause of death. Find out what are the most common reasons for sepsis. Trainer informs the trainees about sequelae of endometritis. *Case study* Project the case study up to evaluation. Ask the participants to respond to the questions and after all the participants have completed answering the questions, discuss each question. Trainer should sum up the discussion highlighting the key points in diagnosis. Distribute the case study and ask trainees to answer the questions related to diagnosis, care provision and evaluation. After the participants have completed the questions, discuss. Review the section of the clinical protocol on puerperal fever and learning guide. Highlights the importance of combination of all three antibiotics (ampicillin, gentamycin and metronidazole).	MCPC 2017 **(S130)** Clinical protocol on puerperal fever Learning guide on puerperal complications

Secondary PPH should be also discussed as a manifestation of endometritis and as an important puerperal complication.	
Session 3: Management of wound infections **(30 min)** *Objective of the session*: To upgrade the skills in management of wound infections – repair of episiotomy or tear *Case study* Distribute the case study and ask the trainees to respond to all the questions in the case study. Discuss the case study. Refer to the protocol on puerperal fever and the learning guide on management of puerperal complication.	MCPC 2017 **(S135)** Clinical protocol on puerperal fever Learning guide on puerperal complications
Session 4: Management of mastitis **(30 min)** *Objective of the session*: To develop the skills in management of cracked nipple, breast engorgement and mastitis. *Discussion* *Case study* Distribute the case study projected earlier and ask how they would manage the case by responding to questions under evaluation. After all participants have completed the exercise, discuss each of the questions under diagnosis, care provision and evaluation. Trainer should sum up by highlighting the key points in managing cases of loss of foetal movements. *Role play* Counselling about breast feeding Distribute the role play. Choose three participants to play the role of patient, husband and midwife. Observe the role play and provide feedback using the questions listed in the role play. *Skill practice*- Learning guide on management of complications of puerperium Distribute the learning guide on management of complications of puerperium. Divide the participants into groups and ask one of the participants from each group to role play as patient and another as midwife. Practises using the learning guide. The rest of the group observes and marks on the learning guide whether steps are being followed correctly. The participants take turns to play different roles. The trainer observes the groups and provides feedback.	MCPC 2017 (S132) Clinical protocol on mastitis Learning guide on management puerperal complications
Session 5: Management cases of deep vein thrombosis **(60 min)** *Objective of the session*: To upgrade the skills in diagnosis of deep vein thromobosis *Discussion* Ask the participants about key points in care. List them on the board. Discuss suppression of lactation. Discuss about future pregnancies, timing, treatment in case of medical problems. Counsel for family planning.	MCPC 2017 (S128) Clinical protocol on deep vein thrombosis Learning guide on management of puerperal complications
Session 6: Supervised client practice **(180 min)** *Objective of the session* is to practice skills with clients. This is the final stage of clinical skills developments and participants should be allowed to work with clients only after they have demonstrated skill competency in a simulated situation. Planning for the supervised practice is a critical component so that participants get adequate practice. It is important to respect the rights of clients – permission should be sought,	Learning guides

privacy and confidentiality should be maintained and respectful dealings with the clients. Since one trainer may not be sufficient to supervise all the participants, it will be good to identify potential assistants to help the trainer (preceptors) to observe the skill practices. The preceptors could be a doctor or senior midwife who is very proficient in the skills. The preceptors will need to be trained in the use of checklists to familiarise them with the checklists.	
Session 7: Evaluation **(120 min)**	Questionnaire Learning guide Module evaluation form

Knowledge assessment questionnaire

Instructions: Write the letter of the single **best** answer to each question in the blank next to the corresponding number on the attached answer sheet.

1. The probable diagnosis for a postpartum woman who presents with lower abdominal pain, absence of bowel sounds and low grade fever/chills is
   a) pelvic abscess
   b) metritis
   c) peritonitis
   d) wound cellulitis

2. Breast pain and tenderness 3 to 5 days after childbirth is usually due to
   a) breast abscess
   b) mastitis
   c) breast engorgement
   d) all of the above

3. A reddened, wedge-shaped area on the breast is a typical sign of
   a) breast abscess
   b) mastitis
   c) breast engorgement
   d) none of the above

4. Lower abdominal pain and uterine tenderness, together with foul-smelling lochia, are characteristic of
   a) pelvic abscess
   b) metritis
   c) peritonitis
   d) appendicitis

5. Bloody or serous discharge from a perineal wound could be due to
   a) wound abscess
   b) wound seroma
   c) wound hematoma
   d) all of the above

6. Breast engorgement is the result of
   a) over distension of the breast with milk
   b) an exaggeration of the lymphatic and venous engorgement that occurs prior to lactation
   c) the inability of the new born to attach to the breast
   d) the inability of the new born to suck well

7. General management of the woman who develops a fever after childbirth includes
   a) bed rest
   b) adequate hydration by mouth or IV
   c) use of a fan or sponging with tepid water
   d) all of the above

8. The treatment of metritis should include
   a) IV ampicillin or IV gentamicin or IV metronidazole
   b) IV ampicillin, plus IV gentamicin and IV metronidazole
   c) a combination of oral antibiotics
   d) a broad spectrum oral antibiotic

9. A woman who experiences breast engorgement should be encouraged to
   a) breastfeed more frequently, alternating breasts at feedings
   b) breastfeed more frequently, using both breasts at each feeding
   c) breastfeed every 4 to 6 hours, alternating breasts at feedings
   d) breastfeed every 4 to 6 hours, using both breasts at each feeding

10. Relief measures for breast engorgement include
   a) application of warm compresses to the breasts just before breastfeeding
   b) the support of breasts with a binder or brassiere
   c) application of cold compresses to the breasts between feedings
   d) all of the above

12. A woman who develops a breast abscess should be advised to
   a) stop breastfeeding until the abscess resolves
   b) stop breastfeeding altogether
   c) continue breastfeeding but only from the unaffected breast
   d) continue breastfeeding from both breasts even when there is a collection of pus

Differential diagnosis of fever after childbirth

Presenting symptoms and other symptoms and signs typically present	Symptoms and signs sometimes present	Probable diagnosis
• Fever/chills • Lower abdominal pain • Purulent foul-smelling lochia • Tender uterus		
Persistent spiking fever/chills Lower abdominal pain and distension • Tender uterus		
• Low-grade fever/chills • Lower abdominal pain • Absent bowel sounds		
• Breast pain and tenderness three to six days after giving birth		
• Breast pain and tenderness • Reddened, wedge shaped area on breast		
• Firm, very tender breast • Overlying erythema		
• Unusually tender wound with bloody or serous discharge		
• Painful and tender wound • Erythema and oedema beyond edge of incision		
• Dysuria • Increased frequency and urgency of urination		
• Spiking fever/chills • Dysuria • Increased frequency and urgency of urination • Flank pain		
• Spiking fever despite antibiotics • Swelling in affected leg • Calf muscle tenderness		
• Abrupt onset of pleuritic chest pain • Shortness of breath • Tachypnea • Hypoxia • Tachycardia		

Source: WHO MCPC 2017 (selected sections of the table)

Case study 1: Fever after childbirth

Directions

Read and analyse 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 case study. When all groups have finished, the case studies and the answers each group has developed will be discussed.

Case study

Mrs. Cecilia is a 35-year-old para two. She gave birth at home 48 hours ago. Her pregnancy was term and her birth attendant was a traditional birth attendant. Since the labour was progressing slowly and the TBA did pelvic examination several times. The new born breathed spontaneously and appears healthy. Mrs. Cecilia's husband has brought her to the health center today because she has had fever and chills for the past 24 hours.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

1. What will you include in your initial assessment of Mrs. Cecilia, and why?

2. What particular aspects of Mrs. Cecilia'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 Mrs. Cecilia, and why?

Diagnosis (Identification of Problems/Needs)

You have completed your assessment of Mrs. Cecilia and your main findings include the following:

Mrs. Cecilia's temperature is 39.8º C, her pulse rate is 136 beats/minute, her blood pressure is 100/70 mm Hg and her respiration rate is 24 breaths/minute.
She is pale and lethargic and slightly confused.
She has lower abdominal pain, her uterus is soft and tender, and she has foul-smelling vaginal discharge.
It is not known whether the placenta was complete.
Mrs. Cecilia is fully immunized against tetanus.

4. Based on these findings, what is Mrs. Cecilia's diagnosis, and why?

Care provision (Planning and Intervention)

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

Evaluation

Thirty-six hours after initiation of treatment, you find the following:

6. Mrs. Cecilia's temperature is 38º C, her pulse rate is 96 beats/minute, her blood pressure is 110/70 mm Hg and her respiration rate is 20 breaths/minute. She is less pale and no longer confused.
7. Based on these findings, what is your continuing plan of care for Mrs. Cecilia, and why.

Case study: Fever after childbirth

Directions

Read and analyse 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 case study. When all groups have finished, the case studies and the answers each group has developed will be discussed.

Case study

Mrs. Betsy is 22 years old. She gave birth to a full-term new born 3 days ago at the health center. It was a breech presentation and she had an episiotomy. She was counselled about danger signs before leaving the health center, including the need to seek care early if any danger signs occur. Mrs. Betsy has come back today complaining that her perineal wound has become increasingly tender during the past 12 hours. She also says that she feels hot and unwell.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

1. What will you include in your assessment of Mrs. Betsy, and why?

2. What particular aspects of Mrs. Betsy'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 Mrs. Betsy, and why?

Diagnosis (Identification of Problems/Needs)

You have completed your assessment of Mrs. Betsy and your main findings include the following:

Mrs. Betsy's temperature is 38º C, her pulse rate is 88 beats/minute, her blood pressure is 120/80 mm Hg and her respiration rate is 20 breaths/minute.
Her perineal wound is tender, with pus draining from the center. The wound is not oedematous but there is slight erythema present extending beyond the edge of the incision.
She has no abdominal pain or tenderness. Her lochia is red, normal in amount, and does not have an offensive odour.

4. Based on these findings, what is Mrs. Betsy's diagnosis, and why?

Care provision (Planning and Intervention)

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

Evaluation
Mrs. Betsy returns to the health center the next day. Her temperature is 37.6º C. Her perineal wound is slightly less tender and there is less discharge.

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

Case study 3: Fever after childbirth

Directions
Read and analyse 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 case study. When all groups have finished, the case studies and the answers each group has developed will be discussed.

Case study
Mrs. Daphne is 17 years old. She gave birth to her first new born 3 weeks ago at the health center. Her birth was uncomplicated and the new born was healthy and of normal birth weight. You last saw Mrs. Daphne 2 days after the birth, when she and her new born 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)
What will you include in your initial assessment of Mrs. Daphne, and why?

1. What particular aspects of Mrs. Daphne's physical examination will help you make a diagnosis or identify her problems/needs, and why?

2. What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. Daphne, and why?

Diagnosis (Identification of Problems/Needs)

You have completed your assessment of Mrs. Daphne 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.

Mrs. Daphne reports that for the first week or so after birth, her new born 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. Mrs. Daphne had breastfed the new born less than an hour before you examined her.

3. Based on these findings, what is Mrs. Daphne's diagnosis, and why?

Care provision (Planning and Intervention)

4. Based on your diagnosis, what is your plan of care for Mrs. Daphne, and why?

Evaluation

Three days later Mrs. Daphne reports that she is feeling better and has stopped taking her medication. Her temperature is 37.6º C, 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 six times in 24 hours. She also reports that the newborn seems to be attaching better to the breast.

5. Based on these findings, what is your continuing plan of care for Mrs. Daphne, and why?

Role play: Counselling clients with mastitis

Directions

The trainer will select three participants to perform the following roles: skilled provider, woman suffering with mastitis and mother-in-law. Three participants participating in the role play should take a few minutes to prepare for the activity by reading the background information provided below. The remaining participants, who will observe the role play, should at the same time read the background information.

The purpose of the role play is to provide an opportunity for participants to appreciate the importance of interpersonal communication counselling skills when providing care for a woman suffering from mastitis.

Participant roles

Provider: The provider is an experienced midwife who has good interpersonal communication skills.

Patient: Mrs Daphne (see case study 3)

Mother-in-law: Mrs Eunice

Situation (Same as case study 3)

Focus of the role play

The focus of the role play is the interpersonal interaction between the midwife and Mrs. Daphne and her mother-in-law, and the midwife's ability to demonstrate respect and kindness and provide emotional support and reassurance as she explains Mrs. Daphne's problem.

Discussion questions

The trainer should use the following questions to facilitate discussion after the role play:

1. How did the midwife explain Mrs. Daphne's problem and its management?
2. Did she demonstrate breastfeeding?
3. How did the midwife demonstrate respect and kindness during her/his interaction with Mrs. Daphne and her mother-in-law?

Learning guide: Management of puerperal complications

Rating scale
2= Done according to standards
1= Done according to standards after prompting
0= Not done or done below standards

Learning guide for management of puerperal complications				
Step/Task	2	1	0	**CASES**
Task 1: Getting ready				
1.1 Gets the equipment ready for examination - Thermometer - Sphygmomanometer - Stethoscope - Gloves				
Client 1.2 Greets the client and asks her how she is feeling.				
Provider 1.3 Tells the woman what is going to be done, listen to her, and respond attentively to her questions and concerns. 1.4 Does a quick review of the records of ANC, delivery and medical history 1.4 Washes hands and wears sterile gloves.				
Task 2: Performs rapid evaluation				
2.1 Checks blood pressure, pulse, respiration, temperature 2.2 Check level of consciousness, anxiety 2.3 Checks colour of skin 2.4 If shock is suspected, immediately starts treatment for shock 2.5 Checks for calf muscle tenderness, immediately refers				
Task 3: Taking history and physical examination				
3.1Takes history: - -fever with or without chills and rigors - -details of delivery whether any history of pre-labour rupture of membranes, any episiotomy, lacerations - -history of diabetes - bleeding per vagina or foul smelling discharge - -burning micturition, frequency - -details of breast feeding				
3.2 Does physical examination General physical examination (covered under rapid assessment) *Breast examination* - Examines for redness/engorgement - Cracking of nipples - Wedge shaped red area				

Abdominal examination -Lower abdomen tenderness -Measures size of the uterus -Checks for uterine tenderness *Inspection of the perineum* - Whether the lochia is foul smelling - Bleeding - If episiotomy or suture, whether inflammation or pus *Vaginal examination* - *Tenderness or swelling in the adenexa*				
3.3 Investigates: Urine for RBCs and pus cells				
Task 4: Manages complications				
4.1 Manages cases of endometritis as per protocol - gives paracetamol 500 mg for fever and pain - gives ampicillin 2gm IV plus gentamcycin 5mg/kg body wt. IV plus metronidazole 500 mg IV - Refer				
4.2 Manages wound infections - Refers to referral hospital				
4.3 Manages breast problems *Cracked nipple* • Applies breast milk on the nipple and leave open to dry • Gives analgesics such as paracetamol 500 mg by mouth as needed. • Reassesses after two feeds and if not better, teaches mother to express milk and feed *Breast engorgement* • Breast feed to relieve the breast of engorgement *Relief measures before feeding in breast engorgement* • Applies warm compresses to the breasts just before breast feeding, or encourage the woman to take a warm shower • Massages the woman's neck and back • Helps the woman to express some milk manually before breast feeding and wet the nipple area to help the baby latch on properly and easily • Feeds to relieve discomfort *Relief measures after feeding in breast engorgement* • Support breasts with a binder or brassiere • Apply cold compress to the breasts between feedings to reduce swelling and pain • Give paracetamol 500mg by mouth as needed • Reassesses after two feeds and if not better teaches mother how to express milk and feed				

• Follows up in three days *Mastitis* • Gives Cloxacillin 500 mg every 6 hours for 5 – 7 days • Advises to continue breast feeding • Gives paracetamol 500 mg by mouth as needed • If not better or evidence of abscess, refers • Counsels on breast feeding ▪ Tells the importance of emptying the breasts by feeding the baby as much as possible ▪ Advises on feeding from both breasts irrespective of engorgement ▪ Advises on relief measures in case of cracked nipple ▪ Advises on relief measures prior to and after breast feeding as mentioned above ▪ Helps to position the baby and latching on to nipple				
4.4 Manages cases of urinary tract infection - Tests urine for RBCs and pus cells - Treats with antibiotics as above - If not better, refers for further treatment.				
4.5 Manages cases of deep vein thrombosis as per protocol - Refers all cases - Ensures bed rest - Advises to keep feet elevated - Gives on dose of Gentamycin 5 mg/kg body weight IV or IM and Cloxacillin 500 mg orally - Advises to continue breast feeding				

Module evaluation

Module: Management of puerperal complications

Please indicate your opinion of the course components using the following rating scale:

5. Strongly Agree
4. Agree
3. No opinion
2. Disagree
1. Strongly disagree

Course component	Rating
1.The discussions helped me to clarify elements related to basic care.	
2.The exercises were useful for learning about puerperal complications	
3.The role plays on interpersonal communication skills were helpful.	
4.The case studies were useful for practising clinical decision making.	
5.The time for skill practice in a simulated setting was sufficient.	
6.The supervised client practice within the limitations of time was sufficient.	
7.I am confident about managing puerperal complications.	

PUERPERAL FEVER

Fever (temperature 38°C or more) occurring more than 24 hours after delivery

Causes

- Uterine infection or metritis (either due to pre-labour pre-mature rupture of membranes or due to poor infection prevention practices during labour and childbirth)
- Breast infection
- Urinary tract infection
- Causes unrelated to pregnancy such as Dengue, hepatitis, etc.

General management

- Encourage bed rest
- Ensure adequate hydration by mouth or IV
- Use a fan or tepid sponge to help decrease temperature
- Give paracetamol 500-1000 every 6 hrs
- If **shock is suspected,** immediately begin treatment as per protocol

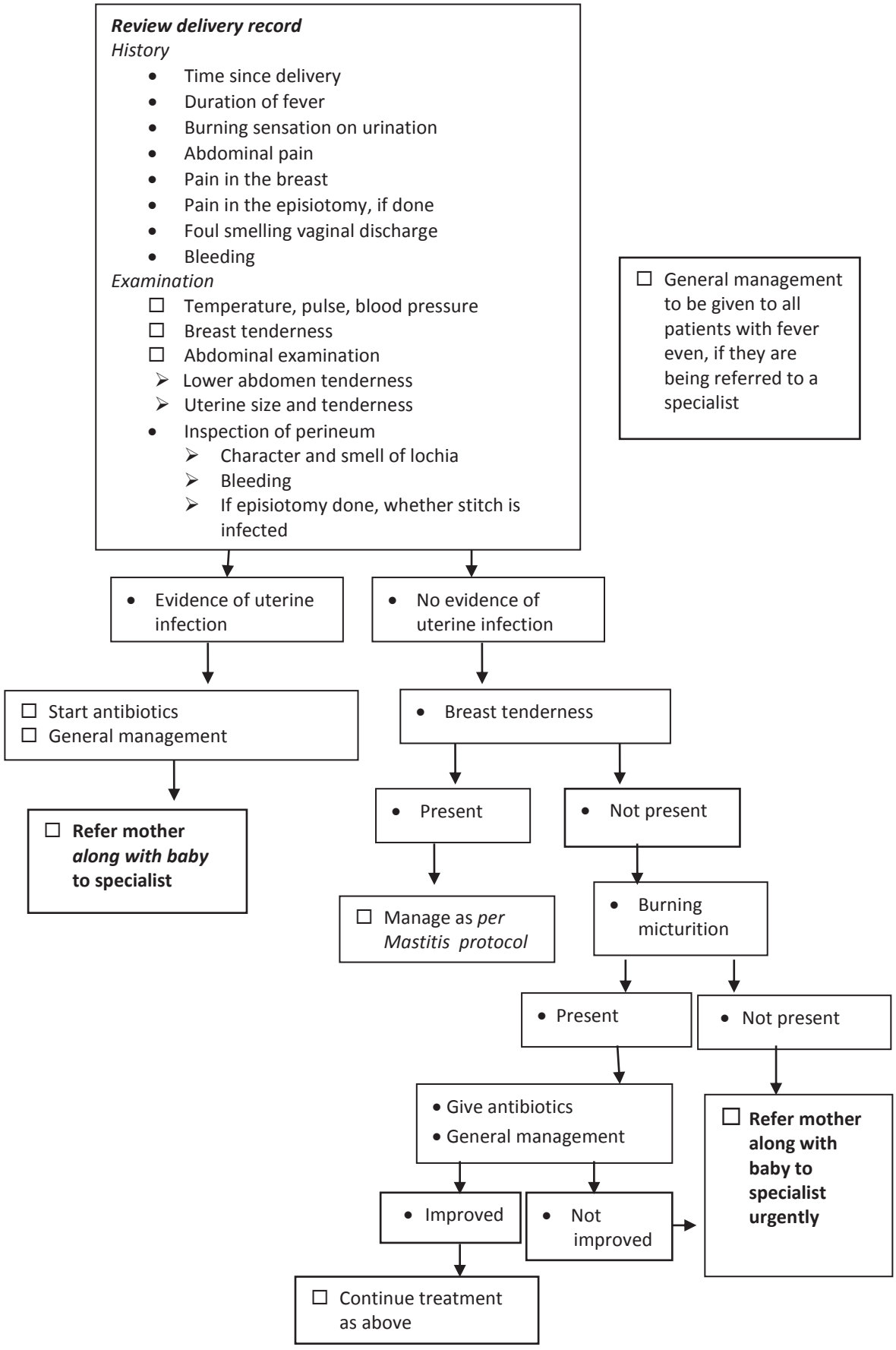
Evidence of uterine infection

- ✓ Fever (38°C or more)
- ✓ Tachycardia (pulse >110/min)
- ✓ Lower abdominal pain
- ✓ Tender uterus
- ✓ Purulent, foul smelling lochia
- ✓ May have bleeding
- ✓ May be in shock

Antibiotics for uterine infection

- Ampicillin 2g IV **plus**
- Gentamycin 5mg/kg body wt./ IV 24 hrs
- Metronidazole 500m g IV

PUERPERAL FEVER



MASTITIS

Painful breast in the postpartum period can be quite distressing for the mother. If not evaluated and treated may interfere with breast feeding

Causes of painful breast

- Breast engorgement

  Breast engorgement is an exaggeration of the lymphatic and venous engorgement that occurs before lactation. It is not the result of over distension of the breast with milk. Occurs around the first 3-4 post-partum day.
- Breast infection – Mastitis or abscess
- Nipple soreness or crack

  This occurs when the baby is not well attached to the breasts during feeding

Diagnosis of Breast engorgement

- Breast pain and tenderness 3-5 days after delivery
- Both breasts are swollen, shiny and patchy red
- Temperature <38^{o}C
- Baby not feeding

Diagnosis of Breast Infection/Abscess

- Part of breast painful, red and swollen
- Temperature >38^{o}C
- **Suspect abscess** if there is a fluctuant swelling in breast

Management of cracked nipple

- **Apply breast milk on the nipple and leave open to dry.**
- **Analgesics**

Management of breast engorgement

Relief measures before feeding in breast engorgement

- Apply warm compresses to the breasts just before breast feeding, or encourage the woman to take a warm shower
- Massage the woman's neck and back
- Have the woman to express some milk manually before breast feeding and wet the nipple area to help the baby latch on properly and easily
- Feed to relieve discomfort

Relief measures after feeding in breast engorgement

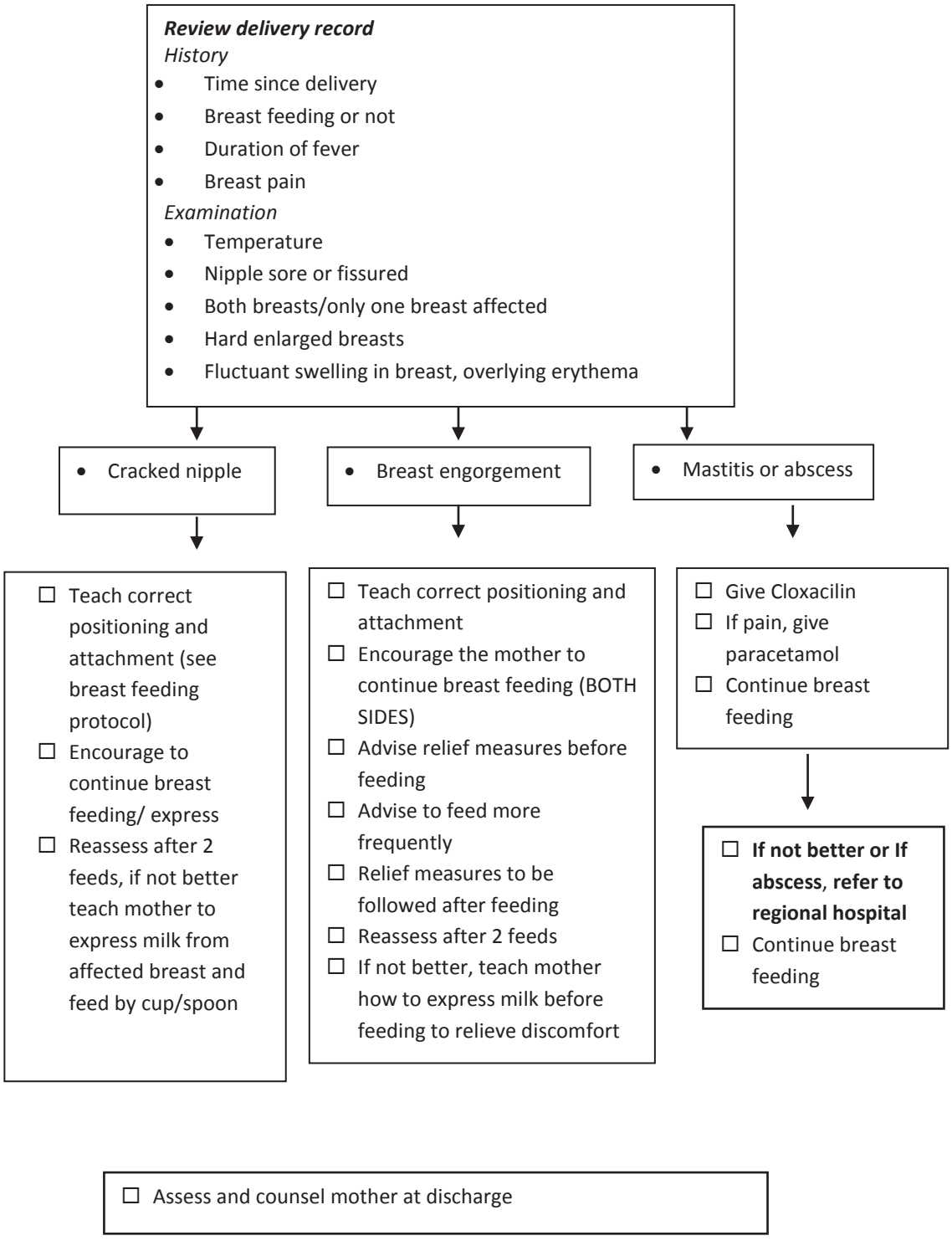
- Support breasts with a binder or brassiere
- Apply cold compress to the breasts between feedings to reduce swelling and pain
- Give paracetamol 500mg by mouth as needed
- Follow up in three days

Antibiotics

- Cloxacillin 500 mg every 6 hours for 5 – 7 days

- Advice during ANC about breast examination and care of breast. Applying crème or oil and pulling out nipple if inverted
- Initiating breast feeding immediately after birth is good for prevention of breast engorgement

MASTITIS


Review delivery record
History
Time since delivery
Breast feeding or not
Duration of fever
Breast pain
Examination
Temperature
Nipple sore or fissured
Both breasts/only one breast affected
Hard enlarged breasts
Fluctuant swelling in breast, overlying erythema
Cracked nipple
Breast engorgement
Mastitis or abscess
☐ Teach correct positioning and attachment (see breast feeding protocol)
☐ Encourage to continue breast feeding/ express
☐ Reassess after 2 feeds, if not better teach mother to express milk from affected breast and feed by cup/spoon
☐ Teach correct positioning and attachment
☐ Encourage the mother to continue breast feeding (BOTH SIDES)
☐ Advise relief measures before feeding
☐ Advise to feed more frequently
☐ Relief measures to be followed after feeding
☐ Reassess after 2 feeds
☐ If not better, teach mother how to express milk before feeding to relieve discomfort
☐ Give Cloxacilin
☐ If pain, give paracetamol
☐ Continue breast feeding
☐ If not better or If abscess, refer to regional hospital
☐ Continue breast feeding
☐ Assess and counsel mother at discharge

DEEP VEIN THROMBOSIS

Clinical features

- Pain and swelling of the legs, **usually 3-4 days after delivery**
- Calf tenderness
- High temperature
- Measure both legs to compare affected leg thrombophlebitis with non-affected one. Both legs may be affected.

Risk factors for deep vein thrombosis

- Obesity
- Anaemia
- Operative deliveries
- Prolonged bed rest/prolonged immobilization
- Smoking

Antibiotics

Inj.Gentamycin 5mg/kg body weight IV or IM daily
Inj.Cloxacillin 500 mg 6 hourly orally for 5 days

DEEP VEIN THROMBOSIS

Review ANC and delivery records

History

- Duration since delivery
- Pain in leg
- Local area hotness
- Local area swelling
- Fever

Examination

- General condition
- Temperature, pulse, respiration
- Leg swelling and measure
- Tenderness in calf or thigh

↓

☐ Suspect DVT

↓

☐ **REFER to hospital**

☐ While referring:

- ❖ Ensure bed rest
- ❖ Keep feet elevated
- ❖ Antibiotics – Inj Gentamicin IV or IM single dose , Cloxacillin orally single dose

☐ Continue breast feeding

Answer Key
Module: Puerperal complications

Instructions: Write the letter of the single **best** answer to each question in the blank next to the corresponding number on the attached answer sheet.

1. The probable diagnosis for a postpartum woman who presents with lower abdominal pain, absence of bowel sounds and low grade fever/chills is
   a) pelvic abscess
   b) metritis
   c) peritonitis
   d) wound cellulitis

2. Breast pain and tenderness 3 to 5 days after childbirth is usually due to
   a) breast abscess
   b) mastitis
   c) breast engorgement
   d) all of the above

3. A reddened, wedge-shaped area on the breast is a typical sign of
   a) breast abscess
   b) mastitis
   c) breast engorgement
   d) none of the above

4. Lower abdominal pain and uterine tenderness, together with foul-smelling lochia, are characteristic of
   a) pelvic abscess
   b) metritis
   c) peritonitis
   d) appendicitis

5. Bloody or serous discharge from a perineal wound could be due to
   a) wound abscess
   b) wound seroma
   c) wound hematoma
   d) all of the above

6. Breast engorgement is the result of
   a) over distension of the breast with milk
   b) an exaggeration of the lymphatic and venous engorgement that occurs prior to lactation
   c) the inability of the new born to attach to the breast
   d) the inability of the new born to suck well

7. General management of the woman who develops a fever after childbirth includes
   a) bed rest
   b) adequate hydration by mouth or IV
   c) use of a fan or sponging with tepid water
   d) all of the above

8. The treatment of metritis should include
   a) IV ampicillin or IV gentamicin or IV metronidazole
   b) IV ampicillin, plus IV gentamicin and IV metronidazole
   c) a combination of oral antibiotics
   d) a broad spectrum oral antibiotic
9. A woman who experiences breast engorgement should be encouraged to
   a) breastfeed more frequently, alternating breasts at feedings
   b) breastfeed more frequently, using both breasts at each feeding
   c) breastfeed every 4 to 6 hours, alternating breasts at feedings
   d) breastfeed every 4 to 6 hours, using both breasts at each feeding

10. Relief measures for breast engorgement include
    a) application of warm compresses to the breasts just before breastfeeding
    b) the support of breasts with a binder or brassiere
    c) application of cold compresses to the breasts between feedings
    d) all of the above

12. A woman who develops a breast abscess should be advised to
    a) stop breastfeeding until the abscess resolves
    b) stop breastfeeding altogether
    c) continue breastfeeding but only from the unaffected breast
    d) continue breastfeeding from both breasts even when there is a collection of pus

Handout 1: Differential diagnosis of fever after childbirth

Presenting symptoms and other symptoms and signs typically present	Symptoms and signs sometimes present	Probable diagnosis
• Fever/chills • Lower abdominal pain • Purulent foul-smelling lochia • Tender uterus	• Light vaginal bleeding[1] • Shock	Postpartum endometritis
• Persistent spiking fever/chills • Lower abdominal pain and distension • Tender uterus	• Poor response to antibiotics • Swelling in adenexa or pouch of douglas • Pus obtained upon culdocentesis	Pelvic abscess
• Low-grade fever/chills • Lower abdominal pain • Absent bowel sounds	• Rebound tenderness • Abdominal distension • Anorexia • Nausea/vomiting	Peritonitis
• Breast pain and tenderness three to six days after giving birth	• Hard, enlarged breasts • Both breasts affected	Breast engorgement
• Breast pain and tenderness • Reddened, wedge shaped area on breast	• Inflammation preceded by engorgement • Usually only one breast affected	Mastitis
• Firm, very tender breast • Overlying erythema	• Fluctuant swelling in breast • Draining pus	Breast abscess
• Unusually tender wound with bloody or serous discharge	• Slight erythema (extending beyond edge of incision)	Wound abscess/haematoma
• Painful and tender wound • Erythema and oedema beyond edge of incision	• Hardened edges of wound • Purulent discharge • Reddened area around wound	Wound cellulitis
• Dysuria • Increased frequency and urgency of urination	• Retropubic/suprapubic pain • Abdominal pain	Cystitis
• Spiking fever/chills • Dysuria • Increased frequency and urgency of urination • Flank pain	• Retropubic/suprapubic pain • Loin pain/tenderness • Tenderness in rib cage (costovertebral angle area) • Anorexia • Nausea/vomiting	Acute pyelonephritis
• Spiking fever despite antibiotics	• Warmth and redness of affected leg	Deep vein thrombosis

• Swelling in affected leg • Calf muscle tenderness		
• Abrupt onset of pleuritic chest pain • Shortness of breath • Tachypnea • Hypoxia • Tachycardia	• Dry cough • Cough with bloody sputum • Swollen leg or arm • Dizziness or syncope	Pulmonary embolism

1- Light bleeding: takes longer than five minutes for a clean pad or cloth to be soaked

Source: WHO MCPC 2017 (selected sections of the table)

Case study 1: Fever after childbirth

Directions

Read and analyse 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 case study. When all groups have finished, the case studies and the answers each group has developed will be discussed.

Case study

Mrs. Cecilia is a 35-year-old para two. She gave birth at home 48 hours ago. Her pregnancy was term and her birth attendant was a traditional birth attendant. Since the labour was progressing slowly and the TBA did pelvic examination several times. The new born breathed spontaneously and appears healthy. Mrs. Cecilia's husband has brought her to the health center today because she has had fever and chills for the past 24 hours.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

1. What will you include in your initial assessment of Mrs. Cecilia, and why?
   - Mrs. Cecilia and her husband should be greeted respectfully and with kindness.
   - They should be told what is going to be done and listened to carefully. In addition, their questions should be answered in a calm and reassuring manner.
   - A rapid assessment should be done to determine the degree of illness: Mrs. Cecilia's temperature, pulse, respiration rate and blood pressure should be taken and she should be asked whether she has felt weak and lethargic or whether she has had frequent, painful urination, abdominal pain or foul-smelling vaginal discharge. Determine whether she is from a malarial area.
   - The following information should also be obtained about the birth: when the membranes ruptured, problems delivering the placenta, whether it was complete and whether there was excessive bleeding following the birth.
   - Because herbs were inserted into Mrs. Cecilia's vagina during labour, tetanus vaccination status should be checked.

2. What particular aspects of Mrs. Cecilia's physical examination will help you make a diagnosis or identify her problems/needs, and why?
   - Mrs. Cecilia's abdomen should be checked for tenderness and her vulva should be checked for purulent discharge (lower abdominal pain, tender uterus, and purulent, foul-smelling lochia are symptoms and signs of metritis). Her legs should be checked for calf muscle tenderness, which may indicate deep vein thrombosis.

- Mrs. Cecilia's perineum, vagina and cervix should be examined carefully for tears, particularly since labour was prolonged and because foreign substances were inserted into the vagina.

3. What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. Cecilia, and why?
   - None at this point

Diagnosis (Identification of Problems/Needs)

You have completed your assessment of Mrs. Cecilia and your main findings include the following:

Mrs. Cecilia's temperature is 39.8º C, her pulse rate is 136 beats/minute, her blood pressure is 100/70 mm Hg and her respiration rate is 24 breaths/minute.
She is pale and lethargic and slightly confused.
She has lower abdominal pain, her uterus is soft and tender, and she has foul-smelling vaginal discharge.
It is not known whether the placenta was complete.
Mrs. Cecilia is fully immunized against tetanus.

4. Based on these findings, what is Mrs. Cecilia's diagnosis, and why?
   - Mrs. C.'s symptoms and signs (e.g., fever, together with signs of shock [rapid pulse, confusion], and lower abdominal pain, uterine tenderness, and foul-smelling vaginal discharge) are consistent with metritis.

Care provision (Planning and Intervention)

5. Based on your diagnosis, what is your plan of care for Mrs. Cecilia, and why?
   - Mrs. C. should be treated for shock immediately:
   - ✓ Position her on her side.
   - ✓ Ensure that her airway is open.
   - ✓ Give her oxygen at 6–8 L/minute by mask or cannula.
   - ✓ Keep her warm.
   - ✓ Elevate her legs.
   - ✓ Monitor her pulse, blood pressure, respiration and temperature.
   - ✓ Start an IV using a large bore needle for rapid infusion of fluids (1 L of normal saline or Ringer's lactate in 15–20 minutes).
   - ✓ Monitor her intake and output (an indwelling catheter should be inserted to monitor urinary output).

   - Blood should be drawn for hemoglobin and cross-matching and blood for transfusion should be made available, if necessary.
   - The following combination of antibiotics should be given: ampicillin 2 g IV every 6 hours; plus gentamicin 5 mg/kg of body weight IV every 24 hours; plus metronidazole 500 mg IV every 8 hours.
   - If retained placental fragments are suspected, a digital exploration of the uterus should be performed to remove clots and large pieces of tissue. If necessary, ovum forceps or a large curette should be used.
   - Uterine involution and lochia should be monitored for improvement.
   - Because Mrs. C.'s childbirth was unhygienic, a booster of tetanus toxoid 0.5 mL IM should be given.
   - The steps taken to manage the complication should be explained to Mrs. C., she should be encouraged to express her concerns, listened to carefully, and provided emotional support and reassurance.

Evaluation

Thirty-six hours after initiation of treatment, you find the following:

6. Mrs. Cecilia's temperature is 38º C, her pulse rate is 96 beats/minute, her blood pressure is 110/70 mm Hg and her respiration rate is 20 breaths/minute. She is less pale and no longer confused.
7. Based on these findings, what is your continuing plan of care for Mrs. Cecilia, and why.

- IV antibiotics should be continued until Mrs. C. has been fever-free for 48 hours. Oral antibiotics should not be necessary after stopping the IV antibiotics.
- Her vital signs, intake and output, and uterine involution should continue to be monitored.
- IV fluids should be continued to maintain hydration until Mrs. C. is well enough to take adequate fluid and nourishment by mouth.
- The steps taken for continuing management of the complication should be explained to Mrs. C. and her husband, they should be encouraged to express their concerns, listened to carefully, and provided continuing emotional support and reassurance.
- Arrangements should be made to talk with the TBA who attended the birth, and provide community education about clean birth practices.

Case study: Fever after childbirth

Directions

Read and analyse 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 case study. When all groups have finished, the case studies and the answers each group has developed will be discussed.

Case study

Mrs. Betsy is 22 years old. She gave birth to a full-term new born 3 days ago at the health center. It was a breech presentation and she had an episiotomy. She was counselled about danger signs before leaving the health center, including the need to seek care early if any danger signs occur. Mrs. Betsy has come back today complaining that her perineal wound has become increasingly tender during the past 12 hours. She also says that she feels hot and unwell.

Assessment (History, Physical Examination, Screening Procedures/Laboratory Tests)

1. What will you include in your assessment of Mrs. Betsy, and why?

- Mrs. Betsy should be greeted respectfully and with kindness.
- She should be told what is going to be done and listened to carefully. 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: Mrs. Betsy's temperature, pulse, respiration rate and blood pressure should be taken and she should also be asked if she has had other symptoms, such as: abdominal pain and/or tenderness or foul-smelling lochia.

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

- Mrs. Betsy's perineal wound should be examined for pain and tenderness, discharge, abscess formation and cellulitis (wound tenderness, bloody or serous discharge, and slight erythema beyond the edge of the incision may be present with a wound abscess, wound seroma or wound hematoma; whereas, pain and tenderness, erythema or oedema beyond the edge of the incision, purulent discharge, and a reddened area around the wound are signs of wound cellulitis). If purulent discharge is seen, determine whether it is coming from the wound or from above the wound (vagina, uterus).
- An abdominal examination should also be done and lochia checked to detect other signs characteristic of postpartum fever (abdominal pain and tenderness, and purulent foul-smelling lochia).

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

- None at this stage

Diagnosis (Identification of Problems/Needs)

You have completed your assessment of Mrs. Betsy and your main findings include the following:

Mrs. Betsy's temperature is 38º C, her pulse rate is 88 beats/minute, her blood pressure is 120/80 mm Hg and her respiration rate is 20 breaths/minute.
Her perineal wound is tender, with pus draining from the center. The wound is not oedematous but there is slight erythema present extending beyond the edge of the incision.
She has no abdominal pain or tenderness. Her lochia is red, normal in amount, and does not have an offensive odour.

4. Based on these findings, what is Mrs. Betsy's diagnosis, and why?

- Mrs. Betsy's symptoms and signs (e.g., wound tenderness, pus discharge, erythema, fever) are consistent with wound abscess.

Care provision (Planning and Intervention)

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

- Because there is pus draining from the wound, it should be opened and drained. The infected skin and subcutaneous sutures should be removed and the wound debrided and a damp dressing placed in it. Antibiotics are not required because there is no wound cellulitis.

- The steps taken to manage the complication should be explained to Mrs. Betsy, she should be encouraged to express her concerns, listened to carefully, and provided emotional support and reassurance.

- Mrs. Betsy should be counselled about the need for good hygiene, to change her perineal pad/cloth at least three times a day, and to wear clean clothes.

- She should also be encouraged to rest at home and to drink as much fluid as possible.

- Mrs. Betsy should be asked to return the next day for follow up and to have the perineal dressing changed.

Evaluation

Mrs. Betsy returns to the health center the next day. Her temperature is 37.6º C. Her perineal wound is slightly less tender and there is less discharge.

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

- The wound would be dressed with a damp dressing.
- The steps taken for continuing management of the complication should be explained to Mrs. Betsy, she should be encouraged to express her concerns, listened to carefully, and provided continuing emotional support and reassurance.

- Mrs. Betsy should be followed up on a daily basis until the wound has healed satisfactorily.

Case study 3: Fever after childbirth

Directions

Read and analyse 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 case study. When all groups have finished, the case studies and the answers each group has developed will be discussed.

Case study

Mrs. Daphne is 17 years old. She gave birth to her first new born 3 weeks ago at the health center. Her birth was uncomplicated and the new born was healthy and of normal birth weight. You last saw Mrs. Daphne 2 days after the birth, when she and her new born 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 initial assessment of Mrs. Daphne, and why?

- Mrs. Daphne should be greeted respectfully and with kindness.
- She should be told what is going to be done and listened to carefully. 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; Mrs. Daphne'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.

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

- Mrs. Daphne's breasts should be checked for pain and tenderness, swelling and inflammation, and cracked nipples.

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

None at this stage.

Diagnosis (Identification of Problems/Needs)

You have completed your assessment of Mrs. Daphne 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.
Mrs. Daphne reports that for the first week or so after birth, her new born 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. Mrs. Daphne had breastfed the new born less than an hour before you examined her.

4. Based on these findings, what is Mrs. Daphne's diagnosis, and why?

- Mrs. Daphne'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)

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

- Mrs. Daphne should be treated with cloxacillin 500 mg by mouth four 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 mother's body, newborn facing breast with nose opposite nipple) and attachment (i.e., more areola visible above than below the mouth, mouth open wide, lower lip turned outward, chin touching breast).
- Mrs. Daphne should be provided reassurance and encouragement to continue breastfeeding, at least eight times in a 24-hour period. She should also be encouraged to stop giving her newborn water and counselled about exclusive breastfeeding.
- A breast binder or brassiere should be worn to support her breasts and cold compresses should be applied between feedings to reduce swelling and pain.
- Paracetamol 500 mg by mouth should be given, as needed.
- Mrs. Daphne should be asked to return for follow up in 3 days.

Evaluation

Three days later Mrs. Daphne reports that she is feeling better and has stopped taking her medication. Her temperature is 37.6º C, 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 six 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 Mrs. Daphne, and why?

- Mrs. Daphne should be counselled about the importance of completing the full 10-day course of antibiotics (3 days of antibiotic therapy is insufficient to resolve infection).
- Breastfeeding technique should be observed again to check positioning and attachment, and further reassurance and encouragement should be provided to Mrs. Daphne to continue breastfeeding at least eight times in 24 hours.
- Mrs. Daphne should be followed up 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.

Role play: Counselling clients with mastitis

Directions

The trainer will select three participants to perform the following roles: skilled provider, woman suffering with mastitis and mother-in-law. Three participants participating in the role play should take a few minutes to prepare for the activity by reading the background information provided below. The remaining participants, who will observe the role play, should at the same time read the background information.

The purpose of the role play is to provide an opportunity for participants to appreciate the importance of interpersonal communication counselling skills when providing care for a woman suffering from mastitis.

Participant roles

Provider: The provider is an experienced midwife who has good interpersonal communication skills.

Patient: Mrs Daphne (see case study 3)

Mother-in-law: Mrs Eunice

Situation (Same as case study 3)

Mrs. Daphne is 17 years old. She gave birth to her first new born 3 weeks ago at the health center. Her birth was uncomplicated and the new born was healthy and of normal birth weight. You last saw Mrs. Daphne 2 days after the birth, when she and her new born were found to be doing well. She has come to the health center today because she has breast pain and tenderness and feels unwell.

Focus of the role play

The focus of the role play is the interpersonal interaction between the midwife and Mrs. Daphne and her mother-in-law, and the midwife's ability to demonstrate respect and kindness and provide emotional support and reassurance as she explains Mrs. Daphne's problem.

Discussion questions

The trainer should use the following questions to facilitate discussion after the role play:

1. How did the midwife explain Mrs. Daphne's problem and its management?
2. Did she demonstrate correct technique of breastfeeding?
3. How did the midwife demonstrate respect and kindness during her/his interaction with Mrs. Daphne and her mother-in-law?

Answers

The following answers should be used by the teacher to guide discussion after the role play:

1. The midwife should congratulate Mrs. Daphne for her decision to breastfeed the child while at the same time being sympathetic towards her for her problem. The midwife speaks to her in a calm and reassuring manner.
2. The midwife asks Daphne how she positions the baby while breast feeding and whether the areola is inside the mouth of the baby and finds out that while she is positioning the baby correctly, attachment is not correct, as only the nipple goes inside the baby's mouth.
    - The midwife gently explains to the mother the importance of correct latching and demonstrates.
    - Prior to feeding: tells the mother to have the woman express some milk manually before breastfeeding and applying it to the nipples to help better latching of the baby. She also requests the mother-in-law to support her. She reassures the mother that though initially there may be a bit pain, as the breast milk flow improves, the pain will be relieved. In addition to the above, explains to apply warm compresses to the breasts before feeding. Requests the mother-in-law to massage the woman's neck and back.
    - After feeding: to support breasts with a binder or brassiere, apply cold compresses between feeds
    - Advises to take paracetamol 500 mg as needed.
    - Advises to take cloxacillin 500 mg every 6 hours.

3. The midwife should listen and respond gently to queries raised by Mrs. Daphne. Reassures her should listen and express understanding and acceptance of Mr. Daphne's feelings about his wife's situation. For example, nonverbal behaviours, such as a pat on the shoulder and a look of concern (depending on the culture), could be enormously helpful in providing emotional support and reassurance for Mr. Daphne.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