CLINICAL TRAINING *for* REPRODUCTIVE HEALTH *in* EMERGENCIES

Emergency Obstetric Care

TRAINER GUIDE

RAISE
Reproductive Health Access, Information and Services in Emergencies

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SKILLS PRACTISE SESSIONS: LEARNING GUIDES AND CHECKLISTS

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ACRONYMS

AMDD	Averting Maternal Death and Disability Program
BCG	Tuberculosis vaccine
C	Centigrade
CBT	Competency-based training
cc	Cubic centimetres
cm	Centimetre
CNS	Central nervous system
CPD	Cephalopelvic disproportion
dL	Decilitre
dpm	Drops per minute
EmOC	Emergency obstetric care
ETT	Endotracheal tube
FH	Foetal heart rate
g	Gram
HELLP	Haemolysis elevated liver enzymes and low platelets
Hb	Haemoglobin
Hg	Mercury
HIV	Human immunodeficiency virus
IM	Intramuscular
IP	Infection prevention
IU	International units
IUD	Intrauterine device
IUGR	Intrauterine growth retardation
IV	Intravenous
Kg	Kilogram
LAM	Lactational amenorrhoea method
L	Litre
mcg	Microgram
MCPC	Managing Complications in Pregnancy and Childbirth reference manual
mg	Milligram
mL	Millilitre
mm	Millimetre
MVA	Manual vacuum aspiration
PMTCT	Prevention of mother to child transmission (of HIV)
POC	Products of conception
PPH	Postpartum haemorrhage
OPV	Oral polio vaccine
RAISE	Reproductive Health Access, Information and Services in Emergencies
RH	Reproductive health
SVD	Spontaneous vaginal delivery
TBA	Traditional birth attendant
WHO	World Health Organisation

INTRODUCTION

The rights of displaced people to reproductive health (RH) were recognised at the International Conference on Population and Development in 1994. Since then RH service provision has progressed, but substantial gaps remain in services, institutional capacity, policy and funding. It has been shown that provision of emergency obstetric care, clinical family planning methods, care for survivors of gender-based violence and management of sexually transmitted infections (STIs) is lacking in most conflict affected settings.

One of the key barriers to the provision of comprehensive RH services is the lack of skilled providers. In order to address this, RAISE has developed a comprehensive training package, including training centres and course manuals. The clinical training teams provide theoretical and practical training to RH service providers at the training centres, as well as on-site supervision at the participants' workplace and on-going technical assistance. Providing clinical training to humanitarian agency and ministry of health staff from a range of conflict settings, the RAISE training team aims to improve the quality of care of RH services in conflict settings.

The resources in the Clinical Training for Reproductive Health in Emergencies series are based on existing materials and have been updated and adapted for use in emergency settings. All manuals have been pre-tested at the RAISE Training Centre at Eastleigh Maternity Home in Nairobi. Many procedures and protocols remain unchanged from non-emergency settings. However, in some instances it is necessary to adapt a protocol to recognise the particular challenges faced in emergency settings.

The Emergency Obstetric Care learning resource package[1] comprises materials and supervised clinical practice. The materials are:

- **trainer guide**
- **participant guide**
- **reference material:**
  - *IMPAC manual*
  - *Managing Complications in Pregnancy and Childbirth: A Guide for Midwives and Doctors*
  - *Managing Newborn Problems: A Guide for Doctors, Nurses, and Midwives.*
- **protocols: a summary of the reference material.**

[1] The learning resource package does not provide detailed information on normal childbirth and routine newborn care, but focuses on the management of complications that occur during pregnancy, delivery and the immediate postpartum period.

INTRODUCTION *to this* TRAINING COURSE

OVERVIEW

This clinical training course will be conducted in a way that is different from traditional training courses. First of all, it is based on the assumption that people participate in training courses because they:

- are **interested** in the topic
- wish to **improve** their knowledge or skills, and thus their job performance
- desire to be **actively involved** in course activities.

For these reasons, all of the course materials focus on the participant. For example, the course content and activities are intended to promote learning, and the participant is expected to be actively involved in all aspects of that learning.

Second, in this training course, the **clinical trainer** and the **participant** are provided with a similar set of educational materials. The clinical trainer by virtue of his/her previous training and experiences works with the participants as an expert on the topic and guides the learning activities. In addition, the **clinical trainer** helps create a comfortable learning environment and promotes those activities that assist the participant in acquiring the new knowledge, attitudes and skills.

Finally, the training approach used in this course stresses the importance of the cost-effective use of resources and application of relevant educational technologies including humane training techniques. The latter encompasses the use of anatomic models, such as the childbirth simulator, to minimise client risk and facilitate learning.

LEARNING APPROACH

Mastery learning

The mastery learning approach assumes that all participants can master (learn) the required knowledge, attitudes or skills provided sufficient time is allowed and appropriate learning methods are used. The goal of mastery learning is that 100% of the participants will "master" the knowledge and skills on which the learning is based. Mastery learning is used extensively in in-service training where the number of participants, who may be practising clinicians, is often low. Although the principles of mastery learning can be applied in pre-service education, the larger number of participants presents some challenges.

Although some participants are able to acquire new knowledge or new skills immediately, others may require additional time or alternative learning methods before they are able to demonstrate mastery. Not only do people vary in their abilities to absorb new material, but also individuals learn best in different ways—through written, spoken or visual means. Effective learning strategies, such as mastery learning, take these differences into account and use a variety of teaching methods.

The mastery learning approach also enables the participant to have a self-directed learning experience. This is achieved by having the trainer serve as facilitator and by changing the concept of testing and how test results are used. Moreover, the philosophy underlying the mastery learning approach is one of continual assessment of learning in which the trainer regularly informs participants of their progress in learning new information and skills.

With the mastery learning approach, assessment of learning is:

- competency-based, which means assessment is keyed to the learning objectives and emphasises acquiring the essential skills and attitudinal concepts needed to perform a job, not just to acquiring new knowledge
- dynamic, because it enables participants to receive continual feedback on how successful they are in meeting the course objectives

- less stressful, because from the outset participants, both individually and as a group, know what they are expected to learn, know where to find the information and have ample opportunity for discussion with the trainer.

Mastery learning is based on principles of adult learning. This means that learning is participatory, relevant and practical. It builds on what the participant already knows or has experienced and provides opportunities for practising skills. Key features of mastery learning are as follows:

- behaviour modelling
- competency-based
- humanistic learning techniques.

Behaviour modelling

Social learning theory states that when conditions are ideal, a person learns most rapidly and effectively from watching someone perform (model) a skill or activity. For modelling to be successful, however, the trainer must clearly demonstrate the skill or activity so that participants have a clear picture of the performance expected of them.

Behaviour modelling, or observational learning, takes place in three stages. In the first stage, **skill acquisition**, the participant sees others perform the procedure and acquires a mental picture of the required steps. Once the mental image is acquired, the participant attempts to perform the procedure, usually with supervision. Next, the participant practises until **skill competency** is achieved, and he/she feels confident performing the procedure. The final stage, **skill proficiency**, occurs with repeated practise over time.

Skill acquisition	Knows the steps and their sequence (if necessary) to perform the required skill or activity but **needs assistance**
Skill competency	Knows the steps and their sequence (if necessary) and **can perform** the required skill
Skill proficiency	Knows the steps and their sequence (if necessary) and **effectively performs** the required skill or activity

Competency-based training

Competency-based training (CBT) is learning by doing. It focuses on the specific knowledge, attitudes and skills needed to carry out the procedure or activity. How the participant performs (i.e., a combination of knowledge, attitudes and, most important, skills) is emphasised rather than just the information learned. Competency in the new skill or activity is assessed objectively by evaluating overall performance.

To successfully accomplish CBT, the clinical skill or activity to be taught must be broken down into its essential steps. Each step is then analysed to determine the most efficient and safe way to perform and learn it. The process is called standardisation. Once a procedure, such as active management of the third stage of labour, has been standardised, competency-based learning guides and evaluation checklists can be developed to make learning the necessary steps or tasks easier and evaluating the participant's performance more objective.

An essential component of CBT is coaching, in which the classroom or clinical trainer first explains a skill or activity and then demonstrates it using an anatomic model or other training aid, such as a video. Once the procedure has been demonstrated and discussed, the trainer then observes and interacts with participants to guide them in learning the skill or activity, monitoring their progress and helping them overcome problems.

The coaching process ensures that the participant receives feedback regarding performance:

- **before practise** – the trainer and participants meet briefly before each practise session to review the skill/activity, including the steps/tasks that will be emphasised during the session
- **during practise** – the trainer observes, coaches and provides feedback to the participant as he/she performs the steps/tasks outlined in the learning guide
- **after practise** – immediately after practise, the trainer uses the learning guide to discuss the strengths of the participant's performance and to offer specific suggestions for improvement.

Humanistic training techniques

The use of humanistic techniques also contributes to better clinical learning. A major component of humanistic training is the use of anatomic models, which closely simulate the human body, and other learning aids. Initially working with models rather than with clients allows participants to learn and practise new skills in a simulated setting.

This reduces stress for the participant as well as risk of injury and discomfort to the client. Thus, effective use of models (humanistic approach) is an important factor in improving the quality of clinical training and, ultimately, service provision.

Before a participant performs a clinical procedure with a client, two learning activities should occur:

- the clinical trainer should demonstrate the required skills and client interactions several times using an anatomic model, role-plays or simulations
- under the guidance of the trainer, the participant should practise the required skills and client interactions using the model, role-plays or simulations and actual instruments in a setting that is as similar as possible to the real situation.

Only when skill competency has been demonstrated should participants have their first contact with a client. This often presents challenges in a pre-service education setting when there are large numbers of participants. Before any participant provides services to a client, however, it is important that the participant demonstrate skill competency using models, role-plays or simulations, especially for core skills.

When mastery learning, which is based on adult learning principles and behaviour modelling, is integrated with CBT, the result is a powerful and extremely effective method for providing clinical training. And when humanistic training techniques, such as using anatomic models and other learning aids, are incorporated, training time and costs can be significantly reduced.

LEARNING METHODS

A variety of learning methods, which complement the learning approach described in the previous section, are included in the learning resource package. A description of each learning method is provided below.

Illustrated lectures

Lectures should be used to present information about specific topics. The lecture content should be based on, but not necessarily limited to, the information in the *Managing Complications in Pregnancy and Childbirth* reference manual. Participants should read relevant sections of the reference manual (and other resource materials, if and when used) before each lecture.

During lectures, the trainer should direct questions to participants and also encourage them to ask questions at any point during the lecture. Another strategy that encourages interaction involves stopping at predetermined points during the lecture to discuss issues and information of particular importance.

Group activities

Group activities provide opportunities for participants to interact with each other and learn together. The main group activities cover three important topics: clinical decision-making, interpersonal communication and infection prevention (IP). The group activities associated with these topics are important because they provide a foundation for learning the skills required for clinical decision-making, interpersonal communication and IP. All of these skills are essential for providing emergency obstetric care.

Case studies

The purpose of the case studies included in the learning resource package is to help participants develop and practise clinical decision-making skills. The case studies can be completed in small groups or individually, in the classroom, at the clinical site or as homework assignments. The case studies follow a clinical decision-making framework (see *Teaching Clinical Decision-Making* in *Tips for Trainers* section.) Each case study has a key that contains the expected responses. The trainer should be thoroughly familiar with these responses before introducing the case studies to participants. Although the key contains "likely" answers, other answers provided by participants during the discussion may be equally acceptable. The technical content of the case studies is taken from the *Managing Complications in Pregnancy and Childbirth* reference manual. The relevant sections of the manual are indicated at the end of the case study keys.

Role-plays

The purpose of the role-plays included in the learning resource package is to help participants develop and practise interpersonal communication skills. Each role-play requires the participation of two or three participants, while the remaining participants are asked to observe the role-play. Following completion of the role-play, the trainer uses the questions provided to guide discussion.

Each role-play has a key that contains the likely answers to the discussion questions. The trainer should be familiar with the answer key before using the role-plays. Although the key contains "likely" answers, other answers provided by participants during the discussion may be equally acceptable.

Learning guides and checklists

The learning guides and checklists used in this course are designed to help the participant learn to provide EmOC services. The participant guide contains learning guides, whilst the trainer's guide contains both learning guides and checklists. There are 22 learning guides and 22 checklists in the learning resource package:

1. Learning guide and checklist for adult resuscitation
2. Learning guide and checklist for conducting childbirth
3. Learning guide and checklist for breech delivery
4. Learning guide and checklist for episiotomy and repair
5. Learning guide and checklist for repair of cervical tears
6. Learning guide and checklist for vacuum extraction
7. Learning guide and checklist for post-abortion care (mva)
8. Learning guide and checklist for post-abortion care (misoprostol)
9. Learning guide and checklist for post-abortion family planning counselling
10. Learning guide and checklist for postpartum assessment
11. Learning guide and checklist for postpartum family planning
12. Learning guide and checklist for manual removal of placenta
13. Learning guide and checklist for bi-manual compression of the uterus
14. Learning guide and checklist for compression of the abdominal aorta
15. Learning guide and checklist for caesarean section
16. Learning guide and checklist for emergency laparotomy
17. Learning guide and checklist for salpingectomy for ectopic pregnancy
18. Learning guide and checklist for laparotomy and repair of ruptured uterus
19. Learning guide and checklist for laparotomy and subtotal hysterectomy for removal of ruptured uterus
20. Learning guide and checklist for newborn examination
21. Learning guide and checklist for newborn resuscitation
22. Learning guide and checklist for endotracheal intubation

Each learning guide contains the steps or tasks performed by the provider for the specific procedure. These tasks correspond to the information presented in relevant chapters of the resource materials. This facilitates participant review of essential information.

The participant is not expected to perform all of the steps or tasks correctly the first time he/she practises them. Instead the learning guides are intended to:

- help the participant in learning the correct steps and the order in which they should be performed **(skill acquisition)**
- measure progressive learning in small steps as the participant gains confidence and skill **(skill competency)**.

Before using the learning guides for EmOC procedures, the clinical trainer will review each procedure with the participants using the relevant learning materials. In addition, participants will be able to witness each EmOC procedure during demonstration sessions with the appropriate model and/or to observe the activity being performed in the clinic with a client.

Used consistently, the learning guides and checklists for practise enable each participant to chart his/her progress and to identify areas for improvement. Furthermore, the learning guides are designed to facilitate communication (coaching and feedback) between the participant and clinical trainer. When using the learning guides, it is important that the participant and clinical trainer work together as a team. For example, **before** the participant attempts a skill or activity (e.g., manual vacuum aspiration) the first time, the clinical trainer should briefly review the steps involved and discuss the expected outcome. The trainer should ask the participant if he/she feels comfortable continuing. In addition, immediately **after** the skill or activity has been completed, the clinical trainer should debrief with the participant. The purpose of the debriefing is to provide **positive feedback** about the participant's progress and to define the areas (knowledge, attitude or practice) where improvement is needed in later practise sessions.

Using the learning guides

The learning guides for EmOC procedures are designed to be used primarily during the early phases of learning (i.e., skill acquisition) when the participant is practising with models.

The **Learning Guide for Post-abortion Family Planning Counselling** and **Learning Guide for Postpartum Family Planning** should be used at first during practise (simulated) counselling sessions using volunteers or with clients in real situations.

In the beginning, the participant can use the learning guides to follow the steps as the clinical trainer demonstrates the procedures with a training model or role-plays counselling a woman. Later, during the classroom practise sessions, they serve as step-by-step guides for the participant as he/she performs the skill using the models or counsels a volunteer "client."

Because the learning guides are used to help in developing skills, it is important that the rating (scoring) be done carefully and as objectively as possible. The participant's performance of each step is rated on a three-point scale as follows:

Needs improvement	Step or task not performed correctly or out of sequence (if necessary) or is omitted
Competently performed	Step or task performed correctly in proper sequence (if necessary) but participant does not progress from step to step efficiently
Proficiently performed	Step or task efficiently and precisely performed in the proper sequence (if necessary).

Using the checklists for practise

The checklists for EmOC procedures are based on the information provided in the learning guides. As the participant progresses through the course and gains experience, dependence on the detailed learning guides decreases and the checklists may be used in their place. The checklists focus only on the key steps in the **entire** procedure and can be used by the participant when providing services in a clinical situation to rate his/her own performance. These checklists that the participant uses for practise are the same as the checklists that the clinical trainer will use to evaluate the participant's performance at the end of the course. The rating scale used is described below:

Satisfactory	Performs the step or task according to the standard procedure or guidelines
Unsatisfactory	Unable to perform the step or task according to the standard procedure or guidelines
Not observed	Step or task not performed by participant during evaluation by trainer.

Skills practise sessions

Skills practise sessions provide participants with opportunities to observe and practise clinical skills, usually in a simulated setting. The outline for each skills practise session includes the purpose of the particular session, instructions for the trainer, and the resources needed to conduct the practise session, such as models, supplies, equipment, learning guides and checklists. Before conducting a skills practise session, the trainer should review the session and ensure that he/she can perform the relevant skill or activity proficiently. The trainer should also ensure that the necessary resources are available and that an appropriate site has been reserved. Although the ideal site for conducting skills practise sessions may be a learning resource centre or clinical laboratory, a classroom may also be used, provided that the models and other resources for the session can be conveniently placed for demonstration and practise.

The first step in a skills practise session requires that participants review the relevant **learning guide**, which contains the individual steps or tasks, in sequence (if necessary), required to perform a skill or activity in a standardised way. The learning guides are designed to help learn the correct steps and the sequence in which they should be performed (skill acquisition) and measure progressive learning in small steps as the participant gains confidence and skill (skill competency).

Next, the trainer demonstrates the steps/tasks, several times if necessary, for the particular skill or activity and then has participants work in pairs or small groups to practise the steps/tasks and observe each other's performance, using the relevant learning guide. The trainer should be available throughout the session to observe the performance of participants and provide guidance. Participants should be able to perform all of the steps/tasks in the learning guide before the trainer assesses skill competency, in the simulated setting, using the relevant **checklist**. Supervised practise should then be undertaken at a clinical site before the trainer assesses skill competency with clients, using the same checklist.

The time required to practise and achieve competency may vary from hours to weeks or months, depending on the complexity of the skill, the individual abilities of participants and access to appropriate models and equipment. Therefore, numerous practise sessions will usually be required to ensure achievement of competency before moving into the clinical skills practise area.

Clinical simulations

A clinical simulation is an activity in which the participant is presented with a carefully planned, realistic re-creation of an actual clinical situation. The participant interacts with persons and things in the environment, applies previous knowledge and skills to respond to a problem, and receives feedback about those responses without having to be concerned about real-life consequences. The purpose of using clinical simulations is to develop participants' clinical decision-making skills.

The clinical simulations included in the learning resource package, therefore, provide participants with the opportunity to develop the skills they need to address complex, rare or life-threatening situations **before** moving into the clinical skills practise area. The clinical simulations may, in fact, be the **only** opportunity participants have to experience some rare situations and therefore may also be the only way that a trainer can assess participants' abilities to manage such situations.

The simulations in this package combine elements of case studies, role-plays and skills practise using anatomic models (if available). The situations they present were selected because they are clinically important, require active participation by the participants, and include clinical decision-making and problem-solving skills. The simulations are structured so that they accurately reflect how clinical situations develop and progress in real life. Participants are provided with only a limited amount of information initially. Once they have analysed this information and have identified the need for additional information, this information is provided. Participants may also perform any procedures or other skills as needed if the appropriate models and equipment are available. Based on the data they collect, participants make decisions regarding diagnoses, treatment and further information needed. The trainer asks the participants questions about what they are doing, why a particular choice was made, what the other alternatives might be, what might happen if circumstances or findings were to change, and so forth. In other words, the trainer explores the participants' decision-making process, depth of knowledge, and understanding, and then provides feedback and suggestions for improvement.

The simulation should be conducted in as realistic a setting as possible, meaning that the models, equipment and supplies needed for managing the situation should be available to the participant. Because many of the situations addressed in simulations are clinically complex, providing the models and other equipment often requires creativity and ingenuity.

Participants will need time and repeated practise to achieve competency in the management of the complex situations presented in the simulations. They should be provided with as many opportunities to participate in simulations as possible. The same simulation can be used repeatedly until the situation it presents is mastered. It can also be adapted to address different causes for the problem it presents, different treatment options or different outcomes, to provide participants with as wide a variety of experiences as possible. When a simulation is used for assessment, one standard version should be used with all participants to ensure the consistency of assessment standards and allow comparison of the performance of individual participants.

Emergency drills

Emergency drills provide participants with opportunities to observe and take part in an emergency rapid response system. Unscheduled emergency drills should be a part of each service provision unit that potentially encounters emergencies. Frequent drills help ensure that each member of the emergency team knows his/her role and is able to respond **rapidly**. By the end of the training, participants should be able to conduct drills in their own facilities.

Drills can be conducted several times throughout training, and involve trainers and participants. The steps involved in setting up and conducting a drill are described below.

First drill

Trainers decide on a scenario, such as one in which a woman suffers an immediate postpartum haemorrhage. In the first drill, trainers play all roles as in a demonstration. A participant may play the role of client. Trainers should practise their roles before conducting the drill. The roles are as follows:

Role 1: charge person

- conducts rapid initial assessment
- stabilises client (massages uterus, gives oxytocin, gives directions to others on team)
- assists doctor or midwife when he/she arrives.

Role 2: runner

- telephones or runs to inform doctor or midwife
- returns to bedside and assists as needed (e.g., takes vital signs, takes specimens to lab, gathers equipment)
- follows additional instructions of the charge person.

Role 3: supplier

- checks emergency tray at beginning of each shift
- brings emergency tray to bedside during emergency
- gives needed supplies/medications to doctor/midwife
- replenishes supplies/medications after use.

Role 4: assistant

- cares for newborn
- assists with crowd control
- escorts family members away from bed; keeps client and family informed of situation.

At a pre-designated time, a small bell is rung. The participant selected to play the role of client lies down on a table or bed; she has a newborn anatomic model. Another participant may act as the client's family member. The charge person (Role 1) goes directly to the bedside and begins the rapid initial assessment. The runner (Role 2) telephones or runs to inform the doctor or midwife and returns to the bedside; the charge person should tell the runner to take vital signs. The supplier (Role 3) brings the emergency tray and assists with giving oxytocin, starting an intravenous (IV), etc. The assistant (Role 4) takes the newborn and tells the family what is happening. All of this occurs simultaneously, as though it were a real situation. The charge person massages the woman's uterus and reports whether it is contracted; the runner takes the pulse, blood pressure and respiration and reports to the charge person; the assistant gives oxytocin if directed. Upon arrival of the doctor or midwife, the charge person gives him/her a report of the client's status and follows further directions until the client is stable. After the emergency, the supplies are replenished, and equipment is disposed of using correct IP practises.

Subsequent drills

At each subsequent drill, participants assume the four designated roles. At the beginning of the day, participants are assigned a role, and when the bell rings signalling an emergency, these roles are played. Different scenarios can be used for each drill.

The emergency drills focus on rapidity of response and coordinated functioning of roles. Drills should occur at unannounced and unexpected times during clinical training as well as during routine clinical work, even when training is not occurring, in order to maintain a unit's capacity to respond to emergencies **rapidly and effectively**.

COMPONENTS *of the* EMERGENCY OBSTETRIC CARE LEARNING RESOURCE PACKAGE

This clinical training course is based on the following components:

- a **reference manual** and additional reference materials containing the need-to-know information
- a **participant guide** containing validated questionnaires, learning guides and skills checklists, case studies, role-plays, and clinical simulations
- a **trainer guide**, which includes answer keys for questionnaires, case studies and role-plays, and detailed information for conducting the course
- competency-based performance evaluation.

The reference manual recommended for this course is *Managing Complications in Pregnancy and Childbirth: A Guide for Midwives and Doctors* (MCPC) of the World Health Organisation (WHO) and Jhpiego. The manual describes a symptom-based approach to the management of life-threatening obstetric complications and emphasises rapid assessment and decision-making. The symptoms reflect the major causes of maternal death and disability. For each symptom (e.g., vaginal bleeding in early pregnancy) there is a statement of general, initial management. Diagnosis tables then link the presenting symptom and other symptoms and signs typically present to a probable diagnosis. Simplified management protocols for the specific diagnoses then follow. The manual also includes the clinical principles underlying the management of complications (e.g., operative care principles) and the procedures that may be required to manage the complications (e.g., vacuum extraction).

Part of the same series, published by WHO in 2003, *Managing Newborn Problems: A Guide for Doctors, Nurses, and Midwives* forms the basis on the information on newborn care provided in this course.

The additional reference materials recommended for the course include the manual *Infection Prevention: A Reference Booklet for Health Care Providers* and its supplement *Infection Prevention Practices in Emergency Obstetric Care* (EngenderHealth). These manuals provide information covering the principles and practises of IP at the worksite. The Averting Maternal Death and Disability (AMDD) workbook, *(Almost) Everything You Want to Know about Using the UN Process Indicators of Emergency Obstetric Services*, provides information for management of the emergency obstetric team and services. The AMDD chart book, *Improving Emergency Obstetric Care through Criterion-Based Audit*, covers information on undertaking an audit. The reference manual for family planning is *Family Planning: A Global Handbook for Providers*.

USING THE EMERGENCY OBSTETRIC CARE LEARNING RESOURCE PACKAGE

In designing the training materials for this course, particular attention has been paid to making them "user friendly" and to permitting the course participants and clinical trainer the widest possible latitude in adapting the training to the participants' (group and individual) learning needs. For example, at the beginning of each course an assessment is made of each participant's knowledge. The results of this assessment are then used jointly by the participants and the advanced or master trainer to adapt the course content as needed so that the training focuses on acquisition of **new** information and skills.

A second feature relates to the use of the **reference manual** and participant guide. The reference manual and the additional reference materials are designed to provide all of the essential information needed to conduct the course in a logical manner. Because they serve as the "text" for the participants and the "reference source" for the trainer, special handouts or supplemental materials are not needed. In addition, because the manual and additional reference materials **only** contain information that is consistent with the course goals and objectives, they become an integral part of all classroom activities, such as giving an illustrated lecture or leading a discussion.

The **participant guide**, on the other hand, serves a dual function. First, and foremost, it is the road map that guides the participant through each phase of the course. It contains the course syllabus and course schedule, as well as all supplemental printed materials (pre-course questionnaire, individual and group assessment matrix, learning guides, case studies and role-plays) needed during the course.

The **trainer guide** contains the same material as the participant guide as well as material for the trainer. This includes the course outline, pre-course questionnaire and answer key, mid-course questionnaire and answer key, answer keys for case studies, role-plays and other exercises, and competency-based skills checklists.

In keeping with the training philosophy on which this course is based, all training activities will be conducted in an interactive, participatory manner. To accomplish this, the role of the trainer continually changes throughout the course. For example, the trainer is an **instructor** when presenting a classroom demonstration, a **facilitator** when conducting small group discussions or using role-plays, a **coach** when helping participants practise a procedure, and an **evaluator** when objectively assessing performance.

In summary, the CBT approach used in this course incorporates a number of key features. **First**, it is based on adult learning principles, which means that it is interactive, relevant and practical. Moreover, it requires that the trainer facilitate the learning experience rather than serve in the more traditional role of an instructor or lecturer. **Second**, it involves use of behaviour modelling to facilitate learning a standardised way of performing a skill or activity. **Third**, it is competency-based. This means that evaluation is based on **how well** the participant performs the procedure or activity, not just on **how much** has been learned. **Fourth**, where possible, it relies heavily on the use of anatomic models and other training aids (i.e., it is humanistic) to enable participants to practise repeatedly the standardised way of performing a skill or activity **before** working with clients. Thus, by the time the trainer evaluates each participant's performance, using a checklist, **every** participant should be able to perform **every** skill or activity competently. **This is the ultimate measure of training.**

TRAINING IN EMERGENCY OBSTETRIC CARE

Although most pregnancies and births are uneventful, approximately 15% of all pregnant women develop a potentially life-threatening complication that calls for skilled care and some will require a major obstetrical intervention to survive. The main causes of maternal death and disability are complications arising from haemorrhage, unsafe abortion, eclampsia, sepsis and obstructed labour. This training course is, therefore, designed to train doctors, midwives and/or nurses with midwifery skills who, as team members, will provide basic and comprehensive EmOC at health centres and hospitals to avert maternal death and disability.

The course follows a symptom-based approach to the management of life-threatening obstetric emergencies, as described in the reference manual recommended for the course (see *Components of the Emergency Obstetric Care Learning Resource Package* in *Overview*). The main topics in this training course and the reference manual (MCPC) are arranged by **symptom** (e.g., vaginal bleeding in early pregnancy is how someone with unsafe abortion will present; convulsions is how a client with eclampsia presents; shock is how someone with severe postpartum haemorrhage presents). This course emphasises rapid assessment and decision-making, as well as clinical action steps based on clinical assessment with limited reliance on laboratory or other tests. It is suitable for hospitals and health centres in low resource settings.

Moreover, the training course emphasises recognition of and respect for the right of women to life, health, privacy and dignity.

Finally, the setting up and effective day-to-day management of EmOC services at a health centre or hospital are included as an integral part of the course.

COURSE DESIGN

The course builds on each participant's past knowledge and takes advantage of his/her high motivation to accomplish the learning tasks in the minimum time. Training emphasises **doing**, not just knowing, and uses **competency-based evaluation** of performance.

Specific characteristics of this course are as follows:

- during the morning of the first day, participants demonstrate their knowledge of EmOC by completing a written **Pre-Course Questionnaire**
- classroom and clinical sessions focus on key aspects of EmOC
- progress in knowledge-based learning is measured during the course using a standardised written assessment **(Mid-Course Questionnaire)**
- clinical skills training builds on the participant's previous experience relevant to EmOC. For many of the skills, participants practise first with anatomic models, using learning guides that list the key steps in performing the skills/procedures for managing obstetric emergencies. In this way, they learn the standardised skills more quickly
- progress in learning new skills is documented using the clinical skills learning guides
- a clinical trainer uses competency-based skills checklists to evaluate each participant's performance
- clinical decision-making is learned and evaluated through case studies and simulated exercises and during clinical skills practise with clients
- appropriate interpersonal skills are learned through behaviour modelling, role-play and evaluation during clinical skills practise with clients.

Successful completion of the course is based on mastery of the knowledge and skills components, as well as satisfactory overall performance in providing care for women who experience obstetric emergencies.

EVALUATION

This clinical training course is designed to produce healthcare providers (i.e., doctors, midwives and/or nurses with midwifery skills) who are qualified to provide EmOC, as team members, at health centres and hospitals. Qualification is a statement by the training institution(s) that the participant has met the requirements of the course in knowledge, skills and practice. Qualification does not imply certification. Only an authorised organisation or agency can certify personnel.

Qualification is based on the participant's achievement in three areas:

- **knowledge:** a score of at least 85% on the **Mid-Course Questionnaire**
- **skills:** satisfactory performance of clinical skills for managing obstetric emergencies
- **practice:** demonstrated ability to provide care in the clinical setting for women who experience obstetric emergencies.

The participant and the trainer share responsibility for the participant becoming qualified.

The evaluation methods used in the course are described briefly below:

- **Mid-Course Questionnaire.** Knowledge will be assessed at the end of the second week of the course. A score of 85% or more correct indicates knowledge-based mastery of the material presented during classroom sessions. For those participants scoring less than 85% on their first attempt, the clinical trainer should review the results with the participant individually and guide him/her on using the reference manual(s) to learn the required information. Participants scoring less than 85% may take the Mid-Course Questionnaire again at any time during the remainder of the course.
- **Clinical skills.** Evaluation of clinical skills will occur in three settings—during the first three weeks of the course, with models in a simulated setting and with clients at the clinical training site; and during the six week to three-month self-directed practicum, at the time of the mentoring visit at the participant's hospital. In each setting, the clinical trainer will use skills checklists to evaluate each participant as they perform the skills and procedures needed to manage obstetric emergencies and interact with clients. Case studies and clinical simulations will be used to assess problem-solving and decision-making skills. Evaluation of the interpersonal communication skills of each participant may take place at any point during this period through observation of participants during role-plays.

  Participants should be competent in performing the steps/tasks for a particular skill or procedure in a simulated setting before undertaking supervised practise at a clinical site. Although it is desirable that all of the skills/procedures included in the training course are learned and assessed in this manner, it may not be possible. For example, because obstetric emergencies are not common, opportunities to practise particular skills with clients may be limited; therefore, practise and assessment of skill competency should take place in a simulated setting.

- **Clinical skills practise.** It is the clinical trainer's responsibility to observe each participant's overall performance in providing EmOC during the group-based course and during the self-directed practicum. This includes observing the participant's attitude—a critical component of quality service provision—towards women who experience obstetric emergencies and towards other members of the EmOC team. By doing this, the clinical trainer assesses how the participant uses what he/she has learned.

  Further evaluation is provided during the six week to three-month self-directed practicum (see below) and is important for several reasons. First, it not only provides the participant direct feedback on his/her performance, but also provides an opportunity to discuss any problems or constraints related to the provision of EmOC (e.g., lack of instruments, drugs and other supplies). Second, and equally important, it provides the clinical service/training centre, via the clinical trainer, key information on the adequacy of the training and its appropriateness to local conditions.

COURSE SYLLABUS

Course description

This clinical training course is designed to prepare participants to manage obstetric emergencies and work effectively as members of an EmOC team. The course begins with a three week block at a designated training site and focuses on the development, application and evaluation of knowledge and skills; the first week takes place in the classroom and the second and third weeks in designated clinical sites, which should be as close to the classroom as possible. The first three weeks are followed immediately by a six week to three-month self-directed practicum at the participant's worksite, during which the clinical trainers for the course provide at least one follow-up visit for mentoring and further evaluation. See page 18 for participant guidelines for the self-directed practicum.

Course goals

- influence in a positive way the attitudes of the participant towards teamwork and his/her abilities to manage and provide emergency obstetric services
- provide the participant with the knowledge and clinical skills needed to respond appropriately to obstetric emergencies
- provide the participant with the decision-making skills needed to respond appropriately to obstetric emergencies
- provide the participant with the interpersonal communication skills needed to respect the right of women to life, health, privacy and dignity.

Participant learning objectives

By the end of the training course, the participant will be able to:

1. Describe basic and comprehensive EmOC and the team approach to the provision of care in relation to reducing maternal mortality
2. Describe the ethical issues related to EmOC, including feeling a sense of urgency, accountability for one's actions, respect for human life, and recognition and respect for the right of women to life, health, privacy and dignity
3. Use interpersonal communication techniques that facilitate the development of a caring and trusting relationship with the woman when providing EmOC
4. Use recommended IP practices for all aspects of EmOC
5. Describe the process of rapid initial assessment and management of a woman who presents with a problem
6. Identify the presenting symptoms and signs of shock and describe immediate and specific management
7. Describe the principles and procedure of blood transfusion, including recognition and management of transfusion reactions
8. Perform adult resuscitation
9. Identify the presenting symptoms and signs, determine the probable diagnosis and use simplified management protocols for vaginal bleeding in early and later pregnancy
10. Perform MVA for incomplete abortion
11. Identify the presenting symptoms and signs, determine the probable diagnosis and use simplified management protocols for pregnancy-induced hypertension
12. Identify and manage cord prolapse
13. Provide care during labour, childbirth and the postpartum period
14. Demonstrate use of the partograph to monitor progress in labour, recognise unsatisfactory progress in a timely manner and respond appropriately

15. Demonstrate clean and safe childbirth, including active management of the third stage of labour and examination of the placenta and birth canal after the birth
16. Perform and repair an episiotomy
17. Identify and repair cervical tears
18. Perform a breech delivery
19. Perform a vacuum extraction
20. Identify the presenting symptoms and signs, determine the probable diagnosis and use simplified management protocols for vaginal bleeding after childbirth
21. Perform bi-manual compression of the uterus
22. Perform abdominal aortic compression
23. Perform manual removal of the placenta
24. Identify the presenting symptoms and signs, determine the probable diagnosis and use simplified management protocols for fever during and after childbirth
25. Describe normal newborn care
26. Perform basic newborn resuscitation using a self-inflating bag and mask
27. Describe anaesthesia and pain management associated with obstetric emergencies
28. Describe pre- and post-operative care for women who require obstetric surgery
29. Perform endotracheal intubation*
30. Perform a Caesarean section*
31. Perform a laparotomy for ectopic pregnancy and ruptured uterus*
32. Perform a postpartum hysterectomy*
33. Describe the procedure for performing a craniotomy*
34. Describe the process for conducting a maternal death review and explain how the results should be used
35. Describe the steps involved in setting up EmOC services and managing them on a day-to-day basis.

* Applies only to staff able to perform surgery

Training/learning methods

- illustrated lectures and group discussions
- case studies
- role-plays
- simulated practise with anatomic models
- simulations for clinical decision-making
- guided clinical activities (providing care and performing procedures for women who experience obstetric emergencies).

Learning materials

The learning materials for the course are as follows:

- reference manuals:
  - *Managing Complications in Pregnancy and Childbirth: A Guide for Midwives and Doctors*
  - *Managing Newborn Problems: A Guide for Doctors, Nurses, and Midwives*
  - *Infection Prevention: A Reference Booklet for Health Care Providers* and its supplement *Infection Prevention Practises in Emergency Obstetric Care*.
- other resources:
  - *(Almost) Everything You Want to Know about Using the UN Process Indicators of Emergency Obstetric Services* (AMDD Workbook)
  - *Improving Emergency Obstetric Care through Criterion-Based Audit* (AMDD Chart book)
  - *Family Planning: A Global Handbook for Providers.*
- instruments and equipment:
  - vacuum extractor
  - self-inflating bag and mask (newborn and adult sizes)
  - adult laryngoscope and endotracheal tubes
  - surgical needles, suture materials and foam blocks
  - childbirth kits
  - MVA instruments
  - vaginal speculum
  - gloves (including elbow-length), plastic or rubber aprons and eye shields
  - containers and solutions for IP practices
  - equipment for starting an IV infusion (needles, syringes, cannulae, strapping, tourniquet, swabs, spirit, cotton wool, gloves)
  - equipment for bladder catheterisation (cotton wool, kidney dish or bowl, catheter, gloves)
  - sphygmomanometer and stethoscope
  - oxygen cylinder, gauge
  - single-toothed tenaculum or vulsellum forceps

- partograph forms
- poster-size laminated partograph
- examination light and examination table
- local anaesthetic
- syringes and vials
- ring or sponge forceps
- receptacle for placenta
- suction equipment
- clock
- adhesive tape
- reflex hammer (or similar device)
- blanket and towels.

- anatomic models:
  - childbirth simulator and placenta/cord/ammion model
  - vinyl or cloth pelvic model
  - foetal model (with hard skull)
  - newborn resuscitation mode
  - model for endotracheal intubation.

Participant selection criteria

Participants for this course must be:

- practising clinicians (doctors, midwives and/or nurses with midwifery skills) who work at a facility where EmOC is being provided or planned
- actively involved in the provision of labour and childbirth care at the beginning of the course and committed to continuing their involvement on completion of the course, including the provision of EmOC
- selected from health facilities capable of providing consistent institutional support for EmOC (i.e., supplies, equipment, supervision, linkages with referral facilities)
- supported by their supervisors or managers to achieve improved job performance after completing the course. In particular, participants should be prepared to communicate with supervisors or managers about the course and seek endorsement for training, encouragement for attendance and participation, and involvement in the transfer of new knowledge and skills to their job.

Course duration

The course is composed of 15 classroom sessions (one week), followed by two weeks of supervised clinical skills practise and a six week to three-month self-directed practicum. It is important to note that course duration may need to be revised depending on participants' experience and progress in learning new knowledge and skills. For example, if participants do not develop skills competency by the end of the course, it may be necessary to extend supervised clinical skills practise and/or the self-directed practicum. Alternatively, it may also be necessary to extend the classroom component of the course.

PARTICIPANT GUIDELINES FOR SELF-DIRECTED PRACTICUM

The purpose of the six week to three-month self-directed practicum is to provide participants with an opportunity to apply the knowledge and skills learned during the first five weeks of the EmOC training course, at their worksites.

During the self-directed practicum, trainers will visit participants' worksites towards the end of the first and third months of the practicum to provide individual and team guidance, support and evaluation. Additional visits will be scheduled, if necessary, based on the individual and team needs of participants. The dates for mentoring visits will be agreed before the practicum begins.

PARTICIPANT RESPONSIBILITIES

During the self-directed practicum, participants will be expected to **apply their knowledge and skills** while providing care during pregnancy, labour and childbirth, with particular emphasis on EmOC. The clinical skills include:

- management of shock
- adult resuscitation
- post-abortion care clinical skills
- post-abortion care family planning skills
- clean and safe childbirth
- episiotomy and repair
- repair of cervical tears
- breech delivery
- vacuum extraction

- bi-manual compression of the uterus
- compression of the abdominal aorta
- manual removal of placenta
- newborn resuscitation
- postpartum physical examination and care
- newborn examination
- endotracheal intubation*
- Caesarean section*
- salpingectomy (ectopic pregnancy)*
- laparotomy (ruptured uterus)*
- postpartum hysterectomy*.

* Applies only to staff able to perform surgery

Because obstetric emergencies are not common, opportunities to practise the skills listed above may be limited. Each time a participant has an opportunity to practise a skill, however, the relevant learning guide should be used. In addition, the participant must record the experience in his/her Clinical Experience Log Book, including the client's unit/hospital number, presenting symptom(s), diagnosis, treatment and outcome.

Participants should, in particular, seek learning opportunities that will help meet the specific learning needs noted at the end of the two week clinical skills practise period that preceded the self-directed practicum.

In conjunction with skills practise, participants will be expected to:

- demonstrate accountability for their actions
- demonstrate recognition of and respect for the right of women to life, health, privacy and dignity
- use appropriate interpersonal communication skills when providing care, with particular emphasis on EmOC
- apply recommended IP practices.

TEAM RESPONSIBILITIES

As team members, participants will be responsible for **implementing the Action Plan** developed at the end of the two week clinical practice period. At a minimum, this should include:

- conducting emergency drills
- ensuring readiness of casualty, labour room and operating room for obstetric emergencies
- ensuring consistent availability of equipment, supplies and drugs for obstetric emergencies
- ensuring IP practices are in place
- conducting maternal death reviews or audits.

Team members should meet each morning at labour ward rounds to discuss client needs and identify learning opportunities with respect to providing EmOC. In addition, team members should meet twice weekly (e.g., Mondays and Fridays) to discuss the following:

Start of week meetings:

- plan for the week
- emergency drills
- readiness of all areas of the hospital for obstetric emergencies
- availability of equipment, supplies and drugs
- maternal death review or audit.

End of week meetings:

- clinical cases requiring EmOC: presenting symptom(s), diagnosis, treatment and outcome
- factors that facilitated clinical skills development
- factors that made clinical skills development difficult, overcoming difficulties
- individual and team strengths with respect to clinical skills practise
- aspects of individual and team work that need to be strengthened and how to accomplish this.

DOCUMENTING ACTIVITIES

Participants will be expected to use their Clinical Experience Log Book and their Action Plan Worksheets to document the activities undertaken during the self-directed practicum.

Clinical experience log book

Participants must record activities/experience in the relevant section of their Clinical Experience Log Book on a daily basis. This will include information on clients for whom EmOC has been provided, notes on perceptions of their individual progress and notes on team meetings/progress.

Action plan worksheets

Participants will annotate their action plans with the dates the steps were accomplished or make revisions to any aspects of the overall plan. During mentoring visits and subsequent supervisory visits, the trainer/supervisor will assess the degree to which these steps have been achieved.

MENTORING GUIDELINES *for* TRAINERS

Trainers are expected to visit participants at their respective worksites during the six week to three-month self-directed practicum to provide individual and team guidance and to support and evaluate participants' knowledge and skills. The visit should take place six to twelve weeks after the end of the initial training. Additional visits should be scheduled, if necessary, based on the individual and team needs of participants. Trainers should develop a schedule of visits before participants return to their worksites.

Individual guidance, support and evaluation

Trainers should use the following methods to guide, support and evaluate each participant during mentoring visits:

- individual discussions
- observation of clinical practice
- case studies
- clinical simulations
- knowledge assessment questionnaire.

Individual discussions

Trainers should meet with each participant to:

- review the clinical experience log book
- discuss clients for whom the participant has provided EmOC, including presenting symptom(s), diagnosis, treatment, outcome
- discuss whether individual learning needs are being met
- determine the best way to meet learning needs during the remainder of the practicum (first mentoring visit) and, if necessary, beyond completion of the practicum (second mentoring visit)
- discuss factors that have facilitated clinical practice and factors that have made it difficult, including how to overcome difficulties
- discuss other issues, as identified by the participant.

Observation of clinical practice

Trainers should spend time with participants in the clinical area (i.e., accident and emergency, antenatal, labour and childbirth, postpartum wards, operating room) to observe application of knowledge and skills, with particular emphasis on EmOC.
The clinical skills include:

- management of shock
- adult resuscitation
- post-abortion care clinical skills
- post-abortion care family planning skills
- clean and safe childbirth
- episiotomy and repair
- repair of cervical tears
- breech delivery
- vacuum extraction
- bi-manual compression of the uterus
- compression of the abdominal aorta
- manual removal of placenta
- newborn resuscitation
- postpartum physical examination and care
- newborn examination
- endotracheal intubation*
- Caesarean section*
- salpingectomy (ectopic pregnancy)*
- laparotomy (ruptured uterus)*
- postpartum hysterectomy.*

* Staff able to perform surgery only

Because obstetric emergencies are not common, opportunities to observe participants practising the skills listed above may be limited. It may, therefore, be necessary to observe participants practising specific

skills with models. The skills to be practised with models will depend on the learning needs of the participant and the need for the trainer to evaluate specific skills.

When in the clinical area, trainers should also observe whether participants:

- demonstrate accountability for their actions
- demonstrate recognition of and respect for the rights of women to life, health, privacy and dignity
- use appropriate interpersonal communication skills when providing care, with particular emphasis on EmOC
- apply recommended IP practices.

Case studies and clinical simulations

The same case studies and clinical simulations used during the first three weeks of the training course can be used again to enable trainers to evaluate participants' decision-making skills.

Participants should work on the case studies individually. The trainer should then discuss the outcome of the case study with the participant, using the relevant case study answer key as a guide. Depending on the individual learning needs of a participant, case studies and clinical simulations found in this manual.

Knowledge assessment questionnaire

Trainers should have participants complete the Knowledge Assessment Questionnaire individually. Immediately after completion, trainers should mark the questionnaire and discuss the results with the participant to identify ongoing learning needs.

Team guidance, support and evaluation

Trainers should discuss with the EmOC team (i.e., the clinicians and RH manager involved in the self-directed practicum) to review and discuss the implementation of the team's Action Plan. This should involve:

- attending labour ward rounds with team members
- attending team meetings
- reviewing action plan worksheets
- observing activities in progress and/or the results of activities implemented to strengthen EmOC, as follows:
  - emergency drills
  - readiness of all areas of the hospital for obstetric emergencies
  - availability of equipment, supplies and drugs
  - maternal death review or audit.

KNOWLEDGE QUESTIONNAIRES

How the results will be used

The main objective of the **Pre-Course Knowledge Questionnaire** is to assist both the **trainer** and the **participant** as they begin their work together in the course by assessing what the participants, individually and as a group, know about the course topics. This allows the trainer to identify topics that may need additional emphasis during the course. Providing the results of the pre-course assessment to the participants enables them to focus on their individual learning needs. In addition, the questions alert participants to the content that will be presented in the course.

The questions are presented in the true-false format. A special form, the **Individual and Group Assessment Matrix**, is provided to record the scores of all course participants. Using this form, the trainer and participants can quickly chart the number of correct answers for each of the questions. By examining the data in the matrix, the group members can easily determine their collective strengths and weaknesses and jointly plan with the trainer how to best use the course time to achieve the desired learning objectives.

For the trainer, the questionnaire results will identify particular topics that may need additional emphasis during the learning sessions. Conversely, for those categories where 85% or more of participants answer the questions correctly, the trainer may elect to use some of the allotted time for other purposes.

Using the questionnaire

This knowledge assessment is designed to help participants monitor their progress during the course. By the end of the course, all participants are expected to achieve a score of 85% or better.

The questionnaire should be given at the time in the course when all subject areas have been presented. A score of 85% or more indicates knowledge-based mastery of the material presented in the reference manual(s). For those scoring less than 85% on their first attempt, the clinical trainer should review the results with the participant individually and guide him/her on using the reference manual(s) to learn the required information. Participants scoring less than 85% can retake the questionnaire at any time during the remainder of the course.

Repeat testing should be done only after the participant has had sufficient time to study the reference manual(s).

Pre-course Knowledge Questionnaire

Instructions:

In the space provided, print a capital **T** if the statement is **TRUE** or a capital **F** if the statement is **FALSE**.

MANAGEMENT OF SHOCK: RAPID INITIAL ASSESSMENT		
1.	Rapid initial assessment should be carried out on all women of childbearing age who present with a problem.	
2.	A woman who suffers shock as a result of an obstetric emergency may have a fast, weak pulse.	
3.	A woman who has an unruptured ectopic pregnancy usually presents with collapse and weakness.	
4.	A pregnant woman who has severe anaemia typically presents with difficulty in breathing and wheezing.	
BLEEDING DURING PREGNANCY AND LABOUR		
5.	Management of inevitable abortion when the pregnancy is greater than 16 weeks usually involves administration of ergometrine or misoprostol.	
6.	Manual vacuum aspiration (MVA) is an effective method for treatment of incomplete abortion if the uterine size is not greater than eight weeks.	
7.	Assessment of a woman who presents with vaginal bleeding after 22 weeks of pregnancy should be limited to abdominal examination.	
BLEEDING AFTER CHILDBIRTH		
8.	Postpartum haemorrhage is defined as sudden bleeding after childbirth.	
9.	If bleeding is heavy in the case of abruptio placentae and the cervix is fully dilated, delivery should be assisted by vacuum extraction.	
10.	Continuous slow bleeding or sudden bleeding after childbirth requires early and aggressive intervention.	
11.	Absent foetal movements and foetal heart sounds, together with intra-abdominal and/or vaginal bleeding and severe abdominal pain, suggest ruptured uterus.	
MANAGEMENT OF THIRD STAGE OF LABOUR		
12.	Active management of the third stage of labour should be practised only on women who have a history of postpartum haemorrhage.	
13.	If a retained placenta is undelivered after 30 minutes of oxytocin administration and controlled cord traction and the uterus is contracted, controlled cord traction and fundal pressure should be attempted.	
14.	If the cervix is dilated in the case of delayed (secondary) postpartum haemorrhage, dilatation and curettage should be performed to evacuate the uterus.	
HEADACHES, BLURRED VISION, CONVULSIONS, LOSS OF CONSCIOUSNESS OR ELEVATED BLOOD PRESSURE		
15.	Hypertension in pregnancy can be associated with protein in the urine.	
16.	The presenting signs and symptoms of eclampsia include convulsions, diastolic blood pressure of 90mm Hg or more after 20 weeks gestation and proteinuria of 2+ or more.	
17.	A pregnant woman who is convulsing should be protected from injury by moving objects away from her.	
18.	The management of mild pre-eclampsia should include sedatives and tranquillisers.	
19.	The drug of choice for preventing and treating convulsions in severe pre-eclampsia and eclampsia is diazepam.	
PARTOGRAPH		
20.	Cervical dilatation plotted to the right of the alert line on the partograph indicates unsatisfactory progress of labour.	

Pre-course Knowledge Questionnaire (cont'd)

NORMAL LABOUR AND CHILDBIRTH: OBSTETRIC SURGERY		
21.	Findings diagnostic of cephalopelvic disproportion are secondary arrest of descent of the head in the presence of good contractions.	
22.	If the active phase of labour is prolonged, delivery should be by Caesarean section.	
23.	It is recommended to first perform artificial rupture of membranes (if the membranes are intact) for induction of labour, except in clients with HIV.	
24.	Conditions for vacuum extraction are foetal head at least at 0 station or not more than 2/5 above the symphysis pubis and a fully dilated cervix.	
25.	Abdominal palpation to assess descent of the foetal head is equivalent to assessing descent using the station on vaginal examination.	
26.	A head that is felt in the flank on abdominal examination indicates a shoulder presentation or transverse lie.	
27.	When the foetal head is well flexed with occiput anterior or occiput transverse (in early labour), normal childbirth should be anticipated.	
28.	If labour is prolonged in the case of a breech presentation, a Caesarean section should be performed	
29.	In the case of a single large foetus, delivery should be by Caesarean section.	
30.	A transverse uterine scar in a previous pregnancy is an indication for elective Caesarean section.	
31.	If pre-labour rupture of membranes occurs before 37 weeks gestation and there are no signs of infection, labour should be induced.	
32.	Meconium staining of amniotic fluid is seen frequently as the foetus matures and by itself is not an indicator of foetal distress.	
FEVER DURING AND AFTER CHILDBIRTH		
33.	Loin pain and/or tenderness may be present in acute pyelonephritis.	
34.	Breast pain and tenderness three to five days after childbirth are usually due to breast engorgement.	
35.	Lower abdominal pain and uterine tenderness, together with foul-smelling lochia, are characteristic of metritis.	
NEWBORN RESUSCITATION		
36.	When using a bag and mask to resuscitate a newborn, the newborn's neck must be slightly extended to open the airway.	

Pre-course Knowledge Questionnaire – ANSWER KEY

Instructions:
In the space provided, print a capital **T** if the statement is **TRUE** or a capital **F** if the statement is **FALSE**.

MANAGEMENT OF SHOCK: RAPID INITIAL ASSESSMENT		
1.	Rapid initial assessment should be carried out on all women of childbearing age who present with a problem.	TRUE
2.	A woman who suffers shock as a result of an obstetric emergency may have a fast, weak pulse.	TRUE
3.	A woman who has an unruptured ectopic pregnancy usually presents with collapse and weakness.	FALSE
4.	A pregnant woman who has severe anaemia typically presents with difficulty in breathing and wheezing.	FALSE
BLEEDING DURING PREGNANCY AND LABOUR		
5.	Management of inevitable abortion when the pregnancy is greater than 16 weeks usually involves administration of ergometrine or misoprostol.	FALSE
6.	Manual vacuum aspiration (MVA) is an effective method for treatment of incomplete abortion if the uterine size is not greater than eight weeks.	FALSE
7.	Assessment of a woman who presents with vaginal bleeding after 22 weeks of pregnancy should be limited to abdominal examination.	FALSE
BLEEDING AFTER CHILDBIRTH		
8.	Postpartum haemorrhage is defined as sudden bleeding after childbirth.	FALSE
9.	If bleeding is heavy in the case of abruptio placentae and the cervix is fully dilated, delivery should be assisted by vacuum extraction.	TRUE
10.	Continuous slow bleeding or sudden bleeding after childbirth requires early and aggressive intervention.	TRUE
11.	Absent foetal movements and foetal heart sounds, together with intra-abdominal and/or vaginal bleeding and severe abdominal pain, suggest ruptured uterus.	TRUE
MANAGEMENT OF THIRD STAGE OF LABOUR		
12.	Active management of the third stage of labour should be practised only on women who have a history of postpartum haemorrhage.	FALSE
13.	If a retained placenta is undelivered after 30 minutes of oxytocin administration and controlled cord traction and the uterus is contracted, controlled cord traction and fundal pressure should be attempted.	FALSE
14.	If the cervix is dilated in the case of delayed (secondary) postpartum haemorrhage, dilatation and curettage should be performed to evacuate the uterus.	FALSE
HEADACHES, BLURRED VISION, CONVULSIONS, LOSS OF CONSCIOUSNESS OR ELEVATED BLOOD PRESSURE		
15.	Hypertension in pregnancy can be associated with protein in the urine.	TRUE
16.	The presenting signs and symptoms of eclampsia include convulsions, diastolic blood pressure of 90mm Hg or more after 20 weeks gestation and proteinuria of 2+ or more.	TRUE
17.	A pregnant woman who is convulsing should be protected from injury by moving objects away from her.	TRUE
18.	The management of mild pre-eclampsia should include sedatives and tranquillisers.	FALSE
19.	The drug of choice for preventing and treating convulsions in severe pre-eclampsia and eclampsia is diazepam.	FALSE
PARTOGRAPH		
20.	Cervical dilatation plotted to the right of the alert line on the partograph indicates unsatisfactory progress of labour.	TRUE

Pre-course Knowledge Questionnaire – Answer Key (cont'd)

NORMAL LABOUR AND CHILDBIRTH: OBSTETRIC SURGERY		
21.	Findings diagnostic of cephalopelvic disproportion are secondary arrest of descent of the head in the presence of good contractions.	TRUE
22.	If the active phase of labour is prolonged, delivery should be by Caesarean section.	FALSE
23.	It is recommended to first perform artificial rupture of membranes (if the membranes are intact) for induction of labour, except in clients with HIV.	TRUE
24.	Conditions for vacuum extraction are foetal head at least at 0 station or not more than 2/5 above the symphysis pubis and a fully dilated cervix.	TRUE
25.	Abdominal palpation to assess descent of the foetal head is equivalent to assessing descent using the station on vaginal examination.	TRUE
26.	A head that is felt in the flank on abdominal examination indicates a shoulder presentation or transverse lie.	TRUE
27.	When the foetal head is well flexed with occiput anterior or occiput transverse (in early labour), normal childbirth should be anticipated.	TRUE
28.	If labour is prolonged in the case of a breech presentation, a Caesarean section should be performed.	TRUE
29.	In the case of a single large foetus, delivery should be by Caesarean section.	FALSE
30.	A transverse uterine scar in a previous pregnancy is an indication for elective Caesarean section.	FALSE
31.	If pre-labour rupture of membranes occurs before 37 weeks gestation and there are no signs of infection, labour should be induced.	FALSE
32.	Meconium staining of amniotic fluid is seen frequently as the foetus matures and by itself is not an indicator of foetal distress.	TRUE
FEVER DURING AND AFTER CHILDBIRTH		
33.	Loin pain and/or tenderness may be present in acute pyelonephritis.	TRUE
34.	Breast pain and tenderness three to five days after childbirth is usually due to breast engorgement.	TRUE
35.	Lower abdominal pain and uterine tenderness, together with foul-smelling lochia, are characteristic of metritis.	TRUE
NEWBORN RESUSCITATION		
36.	When using a bag and mask to resuscitate a newborn, the newborn's neck must be slightly extended to open the airway.	TRUE

Pre-Course Individual and Group Assessment Matrix

Correct – ✓ Incorrect – ✗

Dates: Clinical trainer(s):

CATEGORIES	QUESTION NUMBER	CORRECT ANSWERS (PARTICIPANTS)														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MANAGEMENT OF SHOCK: RAPID INITIAL ASSESSMENT	1															
	2															
	3															
	4															
BLEEDING DURING PREGNANCY AND LABOUR	5															
	6															
	7															
BLEEDING AFTER CHILDBIRTH	8															
	9															
	10															
	11															
MANAGEMENT OF THIRD STAGE LABOUR	12															
	13															
	14															
HEADACHES, BLURRED VISION, CONVULSIONS, LOSS OF CONSCIOUSNESS OR ELEVATED BLOOD PRESSURE	15															
	16															
	17															
	18															
	19															

Pre-Course Individual and Group Assessment Matrix (cont'd)

CATEGORIES	QUESTION NUMBER	CORRECT ANSWERS (PARTICIPANTS)														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
PARTOGRAPH	20															
NORMAL LABOUR AND CHILDBIRTH: OBSTETRIC SURGERY	21															
	22															
	23															
	24															
	25															
	26															
	27															
	28															
	29															
	30															
	31															
	32															
FEVER DURING AND AFTER CHILDBIRTH	33															
	34															
	35															
NEWBORN RESUSCITATION	36															
PERCENTAGE																

Mid-Course Knowledge Questionnaire

MANAGEMENT OF SHOCK; RAPID INITIAL ASESSMENT

1. 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

2. 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

BLEEDING DURING PREGNANCY AND LABOUR

3. The immediate management of ectopic pregnancy involves
   A. Cross-matching blood and arranging for immediate laparotomy
   B. Making sure that blood is available for transfusion before surgery is performed
   C. Observing the woman for signs of improvement
   D. All of the above

4. When performing a manual vacuum aspiration (MVA), the vacuum will be lost if
   A. The syringe is rotated from side to side with the cannula inside the uterine cavity
   B. The cannula is withdrawn too far
   C. The pinch valve is released while the cannula is in the uterine cavity
   D. All of the above

5. 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

6. The results of a bedside clotting test suggest coagulopathy if
   A. Bleeding fails to stop within seven minutes from a 1mm incision made on the inner aspect of the forearm
   B. A clot fails to form within seven minutes when calcium gluconate is added to a 3mL test tube of blood
   C. A clot forms within seven minutes
   D. A clot fails to form after seven minutes or a soft clot forms that breaks down easily

7. For each unit of blood transfused, the woman should be monitored
   A. Before starting the transfusion and for four hours following completion
   B. Before starting the transfusion, at the onset of the transfusion and at least every hour during the transfusion
   C. Every 15 minutes during the transfusion
   D. During the transfusion but not after the transfusion

BLEEDING AFTER CHILDBIRTH

8. Immediate postpartum haemorrhage can be due to
   A. Atonic uterus
   B. Trauma to the genital tract
   C. Retained placenta
   D. All of the above

BLEEDING AFTER CHILDBIRTH (cont'd)

9. 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

10. 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

11. 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. When performing abdominal aortic compression to control postpartum haemorrhage, 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

HEADACHES, BLURRED VISION, CONVULSIONS, LOSS OF CONSCIOUSNESS OR ELEVATED BLOOD PRESSURE

13. Diastolic blood pressure 90mm 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

14. Elevated blood pressure and proteinuria in pregnancy define
   A. Pre-eclampsia
   B. Chronic hypertension
   C. Pyelonephritis
   D. None of the above

15. In a client 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

16. The loading dose of magnesium sulphate 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

HEADACHES, BLURRED VISION, CONVULSIONS, LOSS OF CONSCIOUSNESS OR ELEVATED BLOOD PRESSURE (cont'd)

17. An anti-hypertensive drug should be given for hypertension in severe pre-eclampsia or eclampsia if diastolic blood pressure is
    A. Above 90mm Hg or more
    B. Between 100 and 110mm Hg
    C. 110mm Hg or more
    D. 120mm Hg or more

PARTOGRAPH

18. Unsatisfactory progress of labour should be suspected if
    A. The latent phase is longer than eight hours
    B. Cervical dilatation 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 delivery
    D. All of the above

19. A partograph records
    A. Dilatation and effacement from 4cm until 10cm
    B. Dilatation and effacement from 3cm until 10cm
    C. Descent of foetal head and dilatation from 4cm until 10cm
    D. All of the above

LABOUR AND CHILDBIRTH; OBSTETRIC SURGERY

20. When the foetus is alive in the case of obstructed labour and the cervix is fully dilated and the head is at 0 station or below
    A. Deliver with a symphisiotomy
    B. Delivery should be by vacuum extraction
    C. Forceps delivery should be attempted
    D. Labour should be augmented with oxytocin

21. Oxytocin infusion should not be used
    A. To augment labour
    B. In multigravida
    C. In multiple pregnancy
    D. In obstructed labour

22. Pudendal block is always necessary for
    A. Breech delivery
    B. Episiotomy repair
    C. Manual removal of placenta
    D. None of the above

23. The vacuum cup should be placed
    A. Above the flexion point, 1cm anterior to the posterior fontanelle
    B. Below the flexion point, 1cm anterior to the posterior fontanelle
    C. Over the flexion point, 1cm anterior to the posterior fontanelle
    D. Over the flexion point, 2cm anterior to the posterior fontanelle

24. In occiput posterior position
    A. Vacuum extraction should not be performed
    B. Vaginal delivery cannot occur
    C. The expulsive phase may be prolonged
    D. The woman should not give birth in a squatting position

LABOUR AND CHILDBIRTH; OBSTETRIC SURGERY (cont'd)

25. If there are signs of obstruction or the foetal heart rate is abnormal in an occiput posterior position
    A. Delivery should be by Caesarean section
    B. The membranes should be ruptured
    C. Labour should be augmented using oxytocin
    D. Spontaneous maternal pushing should be encouraged

26. In face presentations when the chin is in the anterior position and the cervix is fully dilated
    A. Delivery should be by Caesarean section
    B. Normal childbirth should be anticipated
    C. Delivery should be by vacuum extraction
    D. None of the above

27. The presence of meconium is common with breech labour and is
    A. Always a sign of foetal distress
    B. Not a sign of foetal distress if the foetal heart rate is normal
    C. An indication for Caesarean section
    D. An indication for breech extraction

28. 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

29. 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

30. In the case of a scarred uterus, when labour crosses the alert line on the partograph during a trial of labour and slow progress is found to be due to inefficient uterine contractions
    A. Immediate Casarean section should be performed
    B. No intervention is necessary, but progress should continue to be monitored using the partograph
    C. The membranes should be ruptured and labour augmented with oxytocin
    D. The membranes should be ruptured but oxytocin should not be given

31. If foetal distress occurs during labour
    A. Oxytocin should be stopped if it is being administered
    B. The rate of oxytocin should be increased if it is being administered
    C. The rate of oxytocin should be decreased if it is being administered
    D. None of the above

32. If a maternal cause for an abnormal foetal heart rate is not identified and the foetal heart rate remains abnormal throughout at least three contractions
    A. A Caesarean section should be performed
    B. Delivery should be by vacuum extraction
    C. Labour should be augmented with oxytocin
    D. A vaginal examination should be done to check for explanatory signs

LABOUR AND CHILDBIRTH; OBSTETRIC SURGERY (cont'd)

33. If the cord prolapses in the first stage of labour and is pulsating
    - A. If available, salbutamol 0.5mg should be given by slow IV over two minutes
    - 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 Caesarean section should be performed immediately
    - D. All of the above

FEVER DURING AND AFTER CHILDBIRTH

34. When a woman has mastitis, she should
    - A. Discontinue breastfeeding from the affected breast only
    - B. Apply hot compresses to the breasts for 10 minutes three times each day
    - C. Support her breasts with a binder or brassiere
    - D. Avoid using antibiotics

35. Amnionitis should be diagnosed when a woman presents with
    - A. Fever and foul-smelling vaginal discharge in the first 22 weeks of pregnancy
    - B. Fever and foul-smelling watery vaginal discharge after 22 weeks of pregnancy
    - C. Maternal tachycardia
    - D. Fever and elevated white blood cell count in a woman after 22 weeks of pregnancy

36. Although mefloquine may be used in all three trimesters of pregnancy, its use should be carefully considered in
    - A. The first trimester of pregnancy
    - B. The second trimester of pregnancy
    - C. The third trimester of pregnancy
    - D. Immediately following pregnancy

37. When treating acute pyelonephritis in pregnancy
    - A. Shock is rare and should be considered a sign of another life-threatening infection
    - B. Antibiotic treatment should not be started until urine culture results are available
    - C. Clinical response is usually seen within 48 to 72 hours
    - D. Intravenous antibiotics should be given for a total of seven days

38. 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

39. Before draining a pelvic abscess
    - A. A combination of IV antibiotics should be given
    - B. A combination of oral antibiotics should be given
    - C. A broad spectrum oral antibiotic should be given
    - D. A broad spectrum IV antibiotic should be given

40. 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 four to six hours, alternating breasts at feedings
    - D. Breastfeed every four to six hours, using both breasts at each feeding

FEVER DURING AND AFTER CHILDBIRTH (cont'd)

41. If an asymptomatic ovarian cyst of more than 10cm is detected in the first trimester of pregnancy
    A. An emergency laparotomy should be performed
    B. It should be observed for growth and complications
    C. Surgery should be scheduled for the second trimester
    D. Surgery should be scheduled after childbirth

42. Management of heart failure due to anaemia almost always involves
    A. Transfusion with packed cells
    B. Transfusion with packed cells or sedimented cells
    C. Transfusion with any available blood product
    D. None of the above

43. Treatment of severe anaemia for pregnant women living in an area where hookworm is highly endemic should involve
    A. A single anthelmintic treatment in the first trimester of pregnancy
    B. A single anthelmintic treatment in the second trimester of pregnancy
    C. A single anthelmintic treatment in the third trimester of pregnancy
    D. Repeat of anthelmintic treatment 12 weeks after the first dose

44. When loss of foetal movement has occurred, the option of expectant versus active management should be
    A. Discussed with the woman and her family
    B. The decision of the specialist doctor
    C. The decision of the skilled provider
    D. None of the above

45. To prevent endometritis following Caesarean section
    A. Give a full course of antibiotics for seven days
    B. The drug of choice is metronidazol
    C. The drug should be started 24 hours before the surgery
    D. None of the above

NEWBORN RESUSCITATION

46. Care after successful resuscitation of a newborn should include prevention of heat loss by
    A. Placing the newborn in skin-to-skin contact on the mother's chest and covering the newborn's body and head
    B. Wrapping the newborn firmly in a warm blanket
    C. Wrapping the newborn loosely in a warm blanket
    D. Bathing the newborn in warm water

Mid-Course Knowledge Questionnaire – ANSWER KEY

MANAGEMENT OF SHOCK; RAPID INITIAL ASESSMENT

1. Rapid initial assessment should be carried out
   D. On all women of childbearing age who present with a problem

2. A woman who suffers shock as a result of an obstetric emergency may have
   D. All of the above

BLEEDING DURING PREGNANCY AND LABOUR

3. The immediate management of ectopic pregnancy involves
   A. Cross-matching blood and arranging for immediate laparotomy

4. When performing a manual vacuum aspiration (MVA), the vacuum will be lost if
   B. The cannula is withdrawn too far

5. The MVA procedure is complete when
   C. Red or pink foam, but no more tissue, is visible in the cannula

6. The results of a bedside clotting test suggest coagulopathy if
   D. A clot fails to form after seven minutes or a soft clot forms that breaks down easily

7. For each unit of blood transfused, the woman should be monitored
   B. Before starting the transfusion, at the onset of the transfusion and at least every hour during the transfusion

BLEEDING AFTER CHILDBIRTH

8. Immediate postpartum haemorrhage can be due to
   D. All of the above

9. 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

10. If the uterus is inverted following childbirth
    D. All of the above

11. If manual removal of the placenta is performed
    D. Place one hand in the uterus and one hand on the abdomen to provide counter traction on the uterine fundus

12. When performing abdominal aortic compression to control postpartum haemorrhage, the point of compression is
    D. Just above and slightly to the left of the umbilicus

HEADACHES, BLURRED VISION, CONVULSIONS, LOSS OF CONSCIOUSNESS OR ELEVATED BLOOD PRESSURE

13. Diastolic blood pressure 90mm Hg or more before 20 weeks of gestation is symptomatic of
    B. Chronic hypertension

14. Elevated blood pressure and proteinuria in pregnancy define
    A. Pre-eclampsia

15. In a client with hypertension and proteinuria, severe headache is a symptom of
    C. Severe pre-eclampsia

HEADACHES, BLURRED VISION, CONVULSIONS, LOSS OF CONSCIOUSNESS OR ELEVATED BLOOD PRESSURE (cont'd)

16. The loading dose of magnesium sulphate is given via
    A. IV over 5 minutes, followed by deep IM injection into each buttock

17. An anti-hypertensive drug should be given for hypertension in severe pre-eclampsia or eclampsia if diastolic blood pressure is
    C. 110mm Hg or more

PARTOGRAPH

18. Unsatisfactory progress of labour should be suspected if
    D. All of the above

19. A partograph records
    C. Descent of foetal head and dilatation from 4cm until 10cm

LABOUR AND CHILDBIRTH; OBSTETRIC SURGERY

20. When the foetus is alive in the case of obstructed labour and the cervix is fully dilated and the head is at 0 station or below
    B. Delivery should be by vacuum extraction

21. Oxytocin infusion should not be used
    D. In obstructed labour

22. Pudendal block is always necessary for
    D. None of the above

23. The vacuum cup should be placed
    C. Over the flexion point, 1cm anterior to the posterior fontanelle

24. In occiput posterior position
    C. The expulsive phase may be prolonged

25. If there are signs of obstruction or the foetal heart rate is abnormal in an occiput posterior position
    A. Delivery should be by Caesarean section

26. In face presentations when the chin is in the anterior position and the cervix is fully dilated
    B. Normal childbirth should be anticipated

27. The presence of meconium is common with breech labour and is
    B. Not a sign of foetal distress if the foetal heart rate is normal

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    C. The membranes should be ruptured and labour augmented with oxytocin

31. If foetal distress occurs during labour
    A. Oxytocin should be stopped if it is being administered

LABOUR AND CHILDBIRTH; OBSTETRIC SURGERY (cont'd)

32. If a maternal cause for an abnormal foetal heart rate is not identified and the foetal heart rate remains abnormal throughout at least three contractions
    D. A vaginal examination should be done to check for explanatory signs

33. If the cord prolapses in the first stage of labour and is pulsating
    D. All of the above

FEVER DURING AND AFTER CHILDBIRTH

34. When a woman has mastitis, she should
    C. Support her breasts with a binder or brassiere

35. Amnionitis should be diagnosed when a woman presents with
    B. Fever and foul-smelling watery vaginal discharge after 22 weeks of pregnancy

36. Although mefloquine may be used in all three trimesters of pregnancy, its use should be carefully considered in
    A. The first trimester of pregnancy

37. When treating acute pyelonephritis in pregnancy
    C. Clinical response is usually seen within 48 to 72 hours

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    B. Mastitis

39. Before draining a pelvic abscess
    A. A combination of IV antibiotics should be given

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    B. Breastfeed more frequently, using both breasts at each feeding

41. If an asymptomatic ovarian cyst of more than 10cm is detected in the first trimester of pregnancy
    B. It should be observed for growth and complications

42. Management of heart failure due to anaemia almost always involves
    B. Transfusion with packed cells or sedimented cells

43. Treatment of severe anaemia for pregnant women living in an area where hookworm is highly endemic should involve
    D. Repeat of anthelmintic treatment 12 weeks after the first dose

44. When loss of foetal movement has occurred, the option of expectant versus active management should be
    A. Discussed with the woman and her family

45. To prevent endometritis following Caesarean section
    D. None of the above

NEWBORN RESUSCITATION

46. Care after successful resuscitation of a newborn should include prevention of heat loss by
    A. Placing the newborn in skin-to-skin contact on the mother's chest and covering the newborn's body and head

Mid-Course Individual and Group Assessment Matrix

Correct – ✓ Incorrect – ✗

Dates: Clinical trainer(s):

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	17													
PARTOGRAPH	18													
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LABOUR AND CHILDBIRTH: OBSTETRIC SURGERY	20													
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	22													

Mid-Course Individual and Group Assessment Matrix (cont'd)

CATEGORIES	QUESTION NUMBER	CORRECT ANSWERS (PARTICIPANTS)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
LABOUR AND CHILDBIRTH: OBSTETRIC SURGERY(cont'd)	23													
	24													
	25													
	26													
	27													
	28													
	29													
	30													
	31													
	32													
	33													
FEVER DURING AND AFTER CHILDBIRTH	34													
	35													
	36													
	37													
	38													
	39													
	40													
	41													
	42													
	43													
	44													
	45													
NEWBORN RESUSCITATION	46													
PERCENTAGE														

SKILLS PRACTISE SESSIONS: LEARNING GUIDES AND CHECKLISTS

1

SKILLS PRACTISE SESSION: ADULT RESUSCITATION

Purpose

The purpose of this activity is to enable participants to practise adult resuscitation related to obstetric emergencies and achieve competency in the skills required.

Instructions

This activity should be conducted in a simulated setting with a fellow participant role-playing as a client.

Resources

The following equipment or representations thereof:

- equipment for starting an IV infusion
- needles and syringes
- equipment for bladder catheterisation
- sphygmomanometer and stethoscope
- self-inflating bag and mask, oxygen cylinder, gauge
- endotracheal tube
- new examination or high-level disinfected surgical gloves.

Participants should review the Learning Guide for Adult Resuscitation before beginning the activity.	Learning Guide for Adult Resuscitation
The trainer should demonstrate the steps/tasks in the procedure of adult resuscitation for participants. Under the guidance of the trainer, participants should then work in pairs to practise the steps/tasks and observe each other's performance, using the Learning Guide for Adult Resuscitation.	Learning Guide for Adult Resuscitation
Participants should be able to perform the steps/tasks in the Learning Guide for Adult Resuscitation before skill competency is assessed by the trainer in the simulated setting, using the Checklist for Adult Resuscitation.	Checklist for Adult Resuscitation
Finally, following supervised practise at a clinical site, the trainer should assess the skill competency of each participant, using the Checklist for Adult Resuscitation.[2]	Checklist for Adult Resuscitation

[2] If clients are not available at clinical sites for participants to practise adult resuscitation in relation to obstetric emergencies, the skills should be taught, practised and assessed in a simulated setting.

1. LEARNING GUIDE FOR ADULT RESUSCITATION

(To be completed by **Participants**)

Rate the performance of each step or task observed using the following rating scale (Write 1, 2 or 3 as the case may be in the box provided):

1. **Needs improvement:** Step or task not performed correctly or out of sequence (if necessary) or is omitted
2. **Competently performed:** Step or task performed correctly in proper sequence (if necessary) but participant does not progress from step to step efficiently
3. **Proficiently performed:** Step or task efficiently and precisely performed in the proper sequence (if necessary)

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK	CASES				
	1	2	3	4	5
GENERAL MANAGEMENT					
1. SHOUT FOR HELP to urgently mobilise available personnel.					
2. Greet the woman respectfully and with kindness.					
3. If the woman is conscious and responsive, explain to the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.					
4. Provide continual emotional support and reassurance, as feasible.					
IMMEDIATE MANAGEMENT					
1. Check the woman's vital signs: ■ temperature ■ pulse ■ blood pressure ■ respiration.					
2. Turn the woman onto her side and ensure that her airway is open. If the woman is not breathing, begin resuscitation measures.					
3. Give oxygen at 6–8L per minute by facemask or nasal cannula.					
4. Cover the woman with a blanket to ensure warmth.					
5. Elevate the woman's legs—if possible, by raising the foot of the bed.					
BLOOD COLLECTION AND FLUID REPLACEMENT					
1. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a sterile cloth or air dry.					
2. Put new examination or high-level disinfected surgical gloves on both hands.					
3. Connect IV tubing to a 1L container of normal saline or Ringer's lactate.					
4. Run fluid through tubing.					
5. Select a suitable site for infusion (e.g., back of hand or forearm).					
6. Place a tourniquet around the woman's upper arm.					
7. Put new examination or high-level disinfected surgical gloves on both hands.					
8. Clean skin at site selected for infusion.					
9. Insert 16- or 18-gauge needle or cannula into the vein.					
10. Draw blood for haemoglobin, cross-matching and bedside clotting test.					
11. Detach syringe from needle or cannula.					
12. Connect IV tubing to needle or cannula.					

1. LEARNING GUIDE FOR ADULT RESUSCITATION (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
13. Secure the needle or cannula with tape.					
14. Adjust IV tubing to run fluid at a rate sufficiently rapid to infuse 1L in 15–20 minutes.					
15. Place the blood drawn into a labelled test tube for haemoglobin and cross-matching.					
16. Place 2mL of blood into a small glass test tube (approximately 10mm x 75mm) to do a bedside clotting test: ■ hold the test tube in your closed fist to keep it warm ■ after four minutes, tip the tube slowly to see if a clot is forming ■ tip it again every minute until the blood clots and the tube can be turned upside down ■ if a clot fails to form or a soft clot forms that breaks down easily, coagulopathy is possible.					
17. If the woman is not breathing or is not breathing well, perform endotracheal intubation and ventilate with an Ambu bag.					
18. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
19. Dispose of gloves in plastic bag.					
20. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a sterile cloth or air dry.					
BLADDER CATHETERISATION					
1. Put new examination or high-level disinfected surgical gloves on both hands.					
2. Clean the external genitalia.					
3. Insert catheter into the urethral orifice and allow urine to drain into a clean receptacle, and measure and record amount.					
4. Secure catheter and attach it to urine drainage bag.					
5. Dispose of gloves, in a leakproof container or plastic bag.					
6. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.					
REASSESSMENT AND FURTHER MANAGEMENT					
1. Reassess the woman's response to IV fluids within 30 minutes for signs of improvement: ■ stabilising pulse (90 beats per minute or less) ■ increasing systolic blood pressure (100mm Hg or more) ■ improving mental status (less confusion or anxiety) ■ increasing urine output (30mL/hour or more).					
2. If the woman's condition improves: ■ adjust the rate of IV infusion to 1L in six hours ■ continue management for underlying cause of shock.					
3. If the woman's condition fails to improve: ■ infuse normal saline rapidly until her condition improves ■ continue oxygen at 6–8L/minute ■ continue to monitor vital signs every 15 minutes and intake and output every hour ■ arrange for additional laboratory tests.					
4. Check for bleeding. If heavy bleeding is seen, take steps to stop the bleeding and transfuse blood, if necessary.					
5. Perform the necessary history, physical examination and tests to determine cause of shock if not already known.					

1. CHECKLIST FOR ADULT RESUSCITATION

(To be used by the **Participant** for practise and by the **Trainer** at the end of the course)
Place a "✓" in case box if step/task is performed **satisfactorily**, an "✗" if it is **not** performed satisfactorily, or **N/O** if not observed.
Satisfactory: Performs the step or task according to the standard procedure or guidelines
Unsatisfactory: Unable to perform the step or task according to the standard procedure or guidelines
Not observed: Step or task not performed by participant during evaluation by trainer

Participant: _____ Date observed: _____

(Many of the following steps/tasks should be performed simultaneously.)

STEP/TASK	CASES				
	1	2	3	4	5
GENERAL MANAGEMENT					
1. Shout for help.					
2. Greet woman respectfully and with kindness.					
3. Provide continual emotional support and reassurance, as feasible.					
IMMEDIATE MANAGEMENT					
1. Check the woman's vital signs.					
2. Ensure that her airway is open.					
3. Give oxygen at 6–8L/minute by facemask or nasal cannula.					
4. Ensure that she is warm.					
5. Elevate the woman's legs.					
BLOOD COLLECTION, FLUID REPLACEMENT AND BLADDER CATHETERISATION					
1. Use antiseptic handrub or wash hands thoroughly and put on new examination or high-level disinfected surgical gloves.					
2. Draw blood for haemoglobin, cross-matching and bedside clotting test before beginning IV infusion.					
3. Infuse IV fluid at the rate of 1L in 15–20 minutes.					
4. Do a bedside clotting test.					
5. If the woman is not breathing, or is not breathing well, perform endotracheal intubation and ventilate with a self-inflating bag.					
6. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
7. Use antiseptic handrub or wash hands thoroughly and put on new examination or high-level disinfected surgical gloves.					
8. Catheterise the bladder.					
9. Remove gloves and discard them in a leakproof container or plastic bag.					
10. Use antiseptic handrub or wash hands thoroughly.					
REASSESSMENT AND FURTHER MANAGEMENT					
1. Reassess the woman's response to IV fluids and adjust rate accordingly.					
2. Continue to monitor vital signs every 15 minutes and intake and output every hour.					
3. Check for bleeding and transfuse blood if necessary.					
4. Perform history, physical examination and tests to determine cause of shock.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

2

SKILLS PRACTISE SESSION: CONDUCTING CHILDBIRTH

Purpose

The purpose of this activity is to enable participants to practise conducting childbirth, including active management of the third stage and examination of placenta and to achieve competency in the skills required.

Instructions

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

Resources

The following equipment or representations thereof:

- childbirth simulator and placenta/cord/amnion model
- foetal model (with hard skull)
- plastic or rubber apron
- high-level disinfected or sterile surgical gloves
- childbirth kit
- receptacle for placenta.

Participants should review the Learning Guide for Conducting Childbirth, before beginning the activity.

Learning Guide for Conducting a Childbirth

The trainer should demonstrate the steps/tasks in the procedure for conducting a normal childbirth, including active management of the third stage and examination of placenta, for participants. Under the guidance of the trainer, participants should then work in pairs to practise the steps/tasks and observe each other's performance, using the Learning Guide for Conducting Childbirth.

Learning Guide for Conducting a Childbirth

Participants should be able to perform the steps/tasks in the Learning Guide for Conducting Childbirth before skill competency is assessed by the trainer in the simulated setting, using the Checklist for Conducting Childbirth.

Checklist for Conducting a Childbirth

Finally, following supervised practise at a clinical site, the trainer should assess the skill competency of each participant, using the Checklist for Conducting Childbirth.[3]

Checklist for Conducting a Childbirth

[3] If clients are not available at clinical sites for participants to practise conducting a childbirth, the skills should be taught, practised and assessed in a simulated setting.

2. LEARNING GUIDE FOR CONDUCTING CHILDBIRTH

(To be completed by **Participants**)

Rate the performance of each step or task observed using the following rating scale (Write 1, 2 or 3 as the case may be in the box provided):

1. **Needs improvement:** Step or task not performed correctly or out of sequence (if necessary) or is omitted
2. **Competently performed:** Step or task performed correctly in proper sequence (if necessary) but participant does not progress from step to step efficiently
3. **Proficiently performed:** Step or task efficiently and precisely performed in the proper sequence (if necessary)

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY					
1. Prepare the necessary equipment.					
2. Allow the woman to push spontaneously.					
3. Allow the woman to adopt the position of choice.					
4. Explain to the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.					
5. Provide continual emotional support and reassurance, as feasible.					
CONDUCTING THE CHILDBIRTH					
1. Put on a clean plastic or rubber apron, rubber boots and eye goggles.					
2. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a sterile cloth or air dry.					
3. Put high-level disinfected or sterile surgical gloves on both hands.					
4. Clean the perineum with a cloth or compress, wet with antiseptic solution or soap and water, wiping from front to back.					
5. Place one sterile drape from the delivery pack under the woman's buttocks, one over her abdomen and use the third drape to receive the newborn.					
Delivery of the head					
1. Place fingers of one hand on the advancing head to sustain flexion and control birth of the head.					
2. Use the other hand to support the perineum with a pad, cloth, or compress.					
3. As the perineum distends, decide whether an episiotomy is necessary (e.g., if the perineum is very tight). If needed, provide perineal infiltration with lidocaine and perform an episiotomy (see **Learning Guide for Episiotomy and Repair**).					
4. Maintain firm but gentle pressure on the head to encourage flexion.					
5. Ask the woman to gently blow out each breath in order to avoid pushing.					
6. After crowning, allow the head to gradually extend under your hand.					
7. Using a clean cloth, wipe the mucus (and membranes if needed) from the baby's mouth and nose.					
8. Gently feel around the newborn's neck for the cord: ■ if the cord is around the neck but loose, slip it over the baby's head ■ if the cord is loose but cannot reach over the head, slacken the cord so that it can slip backwards over the shoulders as the shoulders are born ■ if the cord is tightly wound around the neck, clamp the cord with two artery forceps, placed 3cm apart, and cut the cord between the two clamps.					
9. Allow restitution and external rotation of the head to occur.					

2. LEARNING GUIDE FOR CONDUCTING CHILDBIRTH (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
Delivery of the shoulders					
1. Place one hand on either side of the newborn's head, over the ears.					
2. Apply gentle downward traction to allow the anterior shoulder to slip beneath the symphysis pubis.					
3. When the axillary crease is seen, guide the head and trunk in an upward curve to allow the posterior shoulder to escape over the perineum.					
4. Grasp the newborn around the chest to aid the birth of the trunk and lift the newborn towards the woman's abdomen.					
5. Note the time of birth.					
Immediate care of the newborn					
1. Dry the newborn quickly and thoroughly with a clean, dry towel/cloth immediately after birth.					
2. Wipe the newborn's eyes with a clean piece of cloth.					
3. Place the newborn in skin-to-skin contact on the mother's abdomen and cover with a clean, dry towel/cloth.					
4. Observe the newborn's breathing while completing steps 1 and 2: ■ if the newborn is not breathing, begin resuscitation measures (see the appropriate **Learning Guide for Newborn Resuscitation**) ■ if the newborn is breathing normally, continue with the following care.					
Clamping and cutting the cord					
1. Place two clamps on the cord with enough room between them to allow for easy cutting of the cord.					
2. Cut the cord, using sterile scissors under cover of a gauze swab to prevent blood spurting.					
3. Tie the cord tightly 2.5cm from the newborn's abdomen.					
4. Leave the newborn in skin-to-skin contact on the mother's abdomen or chest, covered by a clean, dry towel/cloth.					
5. Palpate the mother's abdomen to rule out the presence of another baby.					
6. Give 10IU oxytocin intramuscularly.					
7. If oxytocin is not available, give a single oral dose of misoprostol 600mcg					
ACTIVE MANAGEMENT OF THE THIRD STAGE					
Getting ready					
1. Explain to the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.					
2. Provide continual emotional support and reassurance, as feasible.					
3. Ask an assistant to place a sterile receptacle (e.g., kidney basin) against the woman's perineum.					
Delivering and examining the placenta					
1. Clamp the cord close to the perineum with forceps.					
2. Wait for the uterus to contract.					
3. Use one hand to grasp the forceps with the clamped end of the cord.					
4. Place the other hand just above the level of the symphysis pubis, on top of the drape covering the woman's abdomen, with the palm facing towards the mother's umbilicus and gently apply counter-traction in an upward direction.					
5. At the same time, firmly apply traction to the cord, in a downward direction, using the hand that is grasping the forceps.					

2. LEARNING GUIDE FOR CONDUCTING CHILDBIRTH (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
6. Apply steady tension by pulling the cord firmly and maintaining pressure (jerky movements and force must be avoided): ■ if the manoeuvre is not successful within 30–40 seconds, stop pulling, wait for the next contraction and repeat.					
7. When the placenta is visible at the vaginal opening, hold it in both hands.					
8. Use a gentle upward and downward movement or twisting action to deliver the membranes.					
9. Hold the placenta in the palms of the hands, with maternal side facing upward.					
10. Immediately and gently massage the uterus through the woman's abdomen until it is well contracted.					
11. Check whether all of the lobules are present and fit together					
12. Now hold the cord with one hand and allow the placenta and membranes to hang down.					
13. Insert the other hand inside the membranes, with fingers spread out.					
14. Inspect the membranes for completeness.					
15. Note the position of insertion of the cord.					
16. Inspect the cut end of the cord for the presence of two arteries and one vein.					
17. Place the placenta in the receptacle (e.g., kidney basin) provided.					
18. Show the mother how to massage her uterus to maintain contractions.					
Examining the birth canal					
1. Ask assistant to direct a strong light onto the perineum.					
2. Gently separate the labia and inspect the lower vagina for lacerations/tears.					
3. Inspect the perineum for lacerations/tears, start at the cervix.					
4. Repair episiotomy (if one was performed) (see **Learning Guide for Episiotomy and Repair**).					
5. Wash the vulva and perineum gently with warm water or an antiseptic solution and dry with a clean, soft cloth.					
6. Place a clean cloth or pad on the woman's perineum.					
7. Remove soiled bedding, make the woman comfortable, and cover her with a blanket.					
8. Before removing gloves, place soiled linen in 0.5% chlorine solution for 10 minutes for decontamination.					
POST-BIRTH TASKS					
1. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag and dispose of the placenta by incineration (or place in a leakproof container for burial), after consulting with the woman about cultural practices.					
2. Place all instruments in 0.5% chlorine solution for 10 minutes for decontamination.					
3. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.					
4. Record all findings on woman's record.					

2. CHECKLIST FOR CONDUCTING CHILDBIRTH

(To be used by the **Participant** for practise and by the **Trainer** at the end of the course)
Place a "✓" in case box if step/task is performed **satisfactorily**, an "✗" if it is **not** performed satisfactorily, or **N/O** if not observed.
Satisfactory: Performs the step or task according to the standard procedure or guidelines
Unsatisfactory: Unable to perform the step or task according to the standard procedure or guidelines
Not observed: Step or task not performed by participant during evaluation by trainer

Participant: _____ Date observed: _____

(Many of the following steps/tasks should be performed simultaneously.)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY					
1. Prepare the necessary equipment.					
2. Allow the woman to push spontaneously.					
3. Allow the woman to adopt the position of choice.					
4. Explain to the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.					
5. Provide continual emotional support and reassurance, as feasible.					
CONDUCTING THE CHILDBIRTH					
1. Put on personal protective equipment.					
2. Use antiseptic handrub or wash hands thoroughly and put on high-level disinfected or sterile surgical gloves.					
3. Clean the perineum with antiseptic solution.					
4. As the perineum distends, decide whether an episiotomy is necessary and perform as necessary.					
5. After crowning, allow the head to gradually extend and feel around the newborn's neck for the cord: ■ if found, slacken the cord and slip overhead or allow the shoulders to pass through, or clamp and cut the cord.					
6. Allow restitution and external rotation of the head to occur.					
7. Apply gentle downward traction on the head to allow the anterior shoulder to slip beneath the symphysis pubis.					
8. Guide the head and trunk in an upward curve to allow the posterior shoulder to escape over the perineum.					
9. Grasp the newborn around the chest to aid the birth of the trunk and lift it towards the woman's abdomen.					
10. Note the time of birth.					
11. Dry the newborn quickly and thoroughly with a clean, dry towel/cloth immediately after birth.					
12. Wipe the newborn's eyes with a clean piece of cloth.					
13. Place the newborn in skin-to-skin contact on the mother's abdomen and cover with a clean, dry towel/cloth.					

2. CHECKLIST FOR CONDUCTING CHILDBIRTH (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
14. Observe the newborn's breathing (see **Learning Guide for Newborn Resuscitation**).					
15. Clamp and cut, or tie and cut, cord.					
16. Perform active management of the third stage of labour: Palpate the mother's abdomen to rule out presence of another baby and give 10 units of oxytocin intramuscularly					
17. If oxytocin is not available, give a single oral dose of misoprostol 600mcg					
18. Apply gentle but firm traction to the cord during a contraction, while at the same time applying counter-traction to the uterus.					
19. If the placenta is not delivered with the first contraction, wait for the next contraction and repeat controlled cord traction with counter-traction to the uterus.					
20. Hold the placenta in both hands, when it is visible.					
21. Use a gentle upward and downward movement or twisting action to deliver the membranes.					
22. Examine the placenta and membranes for completeness and abnormalities.					
23. Check that the uterus is well contracted.					
24. Massage uterus if it is not contracted.					
25. Inspect the lower vagina and perineum for lacerations/tears and repair, if necessary.					
26. Repair episiotomy, if one was performed.					
27. Wash and dry, and place clean cloth or pad on the perineum.					
28. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
29. Place all instruments in 0.5% chlorine solution for decontamination.					
30. Remove gloves and discard them in a leakproof container or plastic bag.					
31. Use antiseptic handrub or wash hands thoroughly.					
32. Record all findings on woman's record.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

EXERCISE:
USING THE PARTOGRAPH

Purpose

The purpose of this exercise is to enable participants to practise using the partograph to manage labour.

Instructions

The trainer should review the partograph form with participants before beginning the exercise.

Each participant should be given three blank partograph forms.

Case 1: The trainer should read each step to the class, plot the information on the poster-size laminated partograph and ask the questions included in each of the steps. At the same time, participants should plot the information on one of their partograph forms.

Case 2: The trainer should read each step to the class and have participants plot the information on another of their partograph forms. The questions included in each step should be asked as they arise.

Case 3: The trainer should read each step to the class and have participants plot the information on the third of their partograph forms. The questions should then be asked when the partograph is completed.

Throughout the exercise, the trainer should ensure that participants have completed their partograph forms correctly.

The trainer should provide participants with the three completed partograph forms from the Answer Key and have them compare these with the partograph forms they have completed. The trainer should discuss and resolve any differences between the partographs completed by participants and those in the Answer Key.

Resources

The following equipment or representations thereof:

- partograph forms (three for each participant)
- poster-size laminated partograph.

Exercise:
Using the Partograph Answer Key

EXERCISE: USING THE PARTOGRAPH: CASE 1

STEP 1

Mrs. A. was admitted at 05.00 on 12.5.2000

- 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 2cm dilated.

Q: What should be recorded on the partograph?

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

STEP 2

09.00:

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

Q: What should you now record on the partograph?

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

- there are three contractions in 10 minutes, each lasting 20–40 seconds
- foetal heart rate (FH) 120
- membranes ruptured, amniotic fluid clear
- sutures of the skull bones are apposed
- blood pressure 120/70mm Hg
- temperature 36.8°C
- pulse 80 per minute
- urine output 200mL; negative protein and acetone.

Q 1: What steps should be taken?
Q 2: What advice should be given?
Q 3: What do you expect to find at 13.00?

STEP 3

Plot the following information on the partograph:

- 09.30 FH 120, Contractions 3/10 each 30 sec, Pulse 80
- 10.00 FH 136, Contractions 3/10 each 30 sec, Pulse 80
- 10.30 FH 140, Contractions 3/10 each 35 sec, Pulse 88
- 11.00 FH 130, Contractions 3/10 each 40 sec, Pulse 88, Temperature 37°C
- 11.30 FH 136, Contractions 4/10 each 40 sec, Pulse 84, Head is 2/5 up
- 12.00 FH 140, Contractions 4/10 each 40 sec, Pulse 88
- 12.30 FH 130, Contractions 4/10 each 45 sec, Pulse 88
- 13.00 FH 140, Contractions 4/10 each 45 sec, Pulse 90, Temperature 37°C
- 13.00: the foetal head is 0/5 palpable above the symphysis pubis
  - the cervix is fully dilated
  - amniotic fluid clear
  - sutures apposed
  - blood pressure 100/70mm Hg
  - urine output 150mL; negative protein and acetone.

Q 1: What steps should be taken?
Q 2: What advice should be given?
Q 3: What do you expect to happen next?

STEP 4

Record the following information on the partograph:

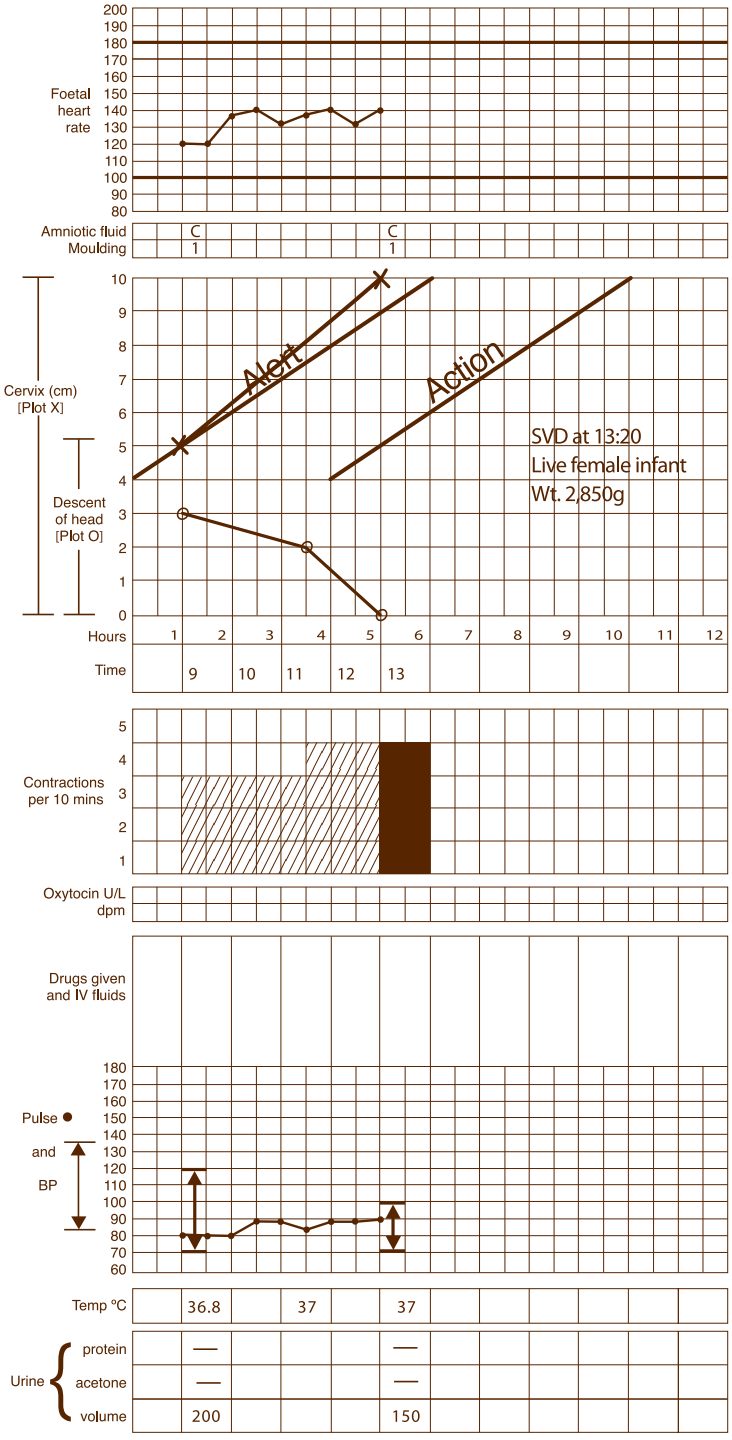
- 13.20: Spontaneous delivery of a live female infant, Weight 2,850g.

Q 1: How long was the active phase of the first stage of labour?
Q 2: How long was the second stage of labour?

ANSWER KEY: CASE 1

Name Mrs. A Gravida 3 Para 2+0 Hospital number 7886

Date of admission 12.5.2000 Time of admission 5:00 A.M. Ruptured membranes 04:00 hours



EXERCISE: USING THE PARTOGRAPH: CASE 1 (cont'd)

Step 1–see partograph
Step 2–see partograph ■ steps: inform of findings and what to expect; encourage to ask questions; provide comfort measures, hydration, nutrition ■ advice: assume position of choice; drink plenty of fluids; eat as desired ■ expect at 13.00: progress to at least 9cm dilatation.
Step 3 ■ steps: prepare for birth ■ advice: push only when urge to push ■ expect: spontaneous vaginal delivery.
Step 4 ■ 1st stage of active labour: 4 hours ■ 2nd stage of active labour: 20 minutes.

EXERCISE: USING THE PARTOGRAPH: CASE 2

STEP 1

Mrs. B. was admitted at 10.00 on 2.5.2000
- membranes intact
- gravida 1, Para 0+0
- hospital number 1443.

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 4cm dilated
- there are two contractions in 10 minutes, each lasting less than 20 seconds
- FH 140
- membranes intact
- blood pressure 100/70mm Hg
- temperature 36.2°C
- pulse 80 per minute
- urine output 400mL; negative protein and acetone.

Q 1: What is your diagnosis?
Q 2: What action will you take?

STEP 2

Plot the following information on the partograph:
- 10.30 FH 140, Contractions 2/10 each 15 sec, Pulse 90
- 11.00 FH 136, Contractions 2/10 each 15 sec, Pulse 88, Membranes intact
- 11.30 FH 140, Contractions 2/10 each 20 sec, Pulse 84
- 12.00 FH 136, Contractions 2/10 each 15 sec, Pulse 88, Temperature 36.2°C
  - ☐ the foetal head is 5/5 palpable above the symphysis pubis
  - ☐ the cervix is 4cm dilated, membranes intact.

Q 1: What is your diagnosis?
Q 2: What action will you take?

STEP 3

Plot the following information on the partograph:
- 12.30 FH 136, Contractions 1/10 each 15 sec, Pulse 90
- 13.00 FH 140, Contractions 1/10 each 15 sec, Pulse 88
- 13.30 FH 130, Contractions 1/10 each 20 sec, Pulse 88
- 14.00 FH 140, Contractions 2/10 each 20 sec, Pulse 90, Temperature 36.8°C , Blood pressure 100/70
  - ☐ the foetal head is 5/5 palpable above the symphysis pubis
  - ☐ urine output 300mL; negative protein and acetone
  - ☐ membranes ruptured.

Q 1: What is your diagnosis?
Q 2: What will you do?

Plot the following information on the partograph:
- ☐ the cervix is 4cm dilated, sutures apposed
- ☐ labour augmented with oxytocin 2.5 units in 500mL IV fluid at 10 drops per minute (dpm).

EXERCISE: USING THE PARTOGRAPH: CASE 2 (cont'd)

STEP 4

Plot the following information on the partograph:

- 14.30:
  - two contractions in 10 minutes each lasting 30 seconds
  - infusion rate increased to 20dpm
  - FH 140, Pulse 88.
- 15.00:
  - three contractions in 10 minutes each lasting 30 seconds
  - infusion rate increased to 30dpm
  - FH 140, Pulse 90.
- 15.30:
  - three contractions in 10 minutes each lasting 30 seconds
  - infusion rate increased to 40dpm
  - FH 140, Pulse 88.
- 16.00:
  - the foetal head is 2/5 palpable above the symphysis pubis
  - the cervix is 6cm dilated; sutures apposed
  - three contractions in 10 minutes each lasting 30 seconds
  - infusion rate increased to 50dpm
  - FH 144, Pulse 92.
- 16.30:
  - FH 140, Contractions 3/10 each 45 sec, Pulse 90.

Q: What steps would you take?

STEP 5

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

STEP 6

Plot the following information on the partograph:

- 19.00:
  - the foetal head is 0/5 palpable above the symphysis pubis
  - FH 144, Contractions 4/10 each 50 sec, Pulse 90
  - the cervix is fully dilated.

STEP 7

Record the following information on the partograph:

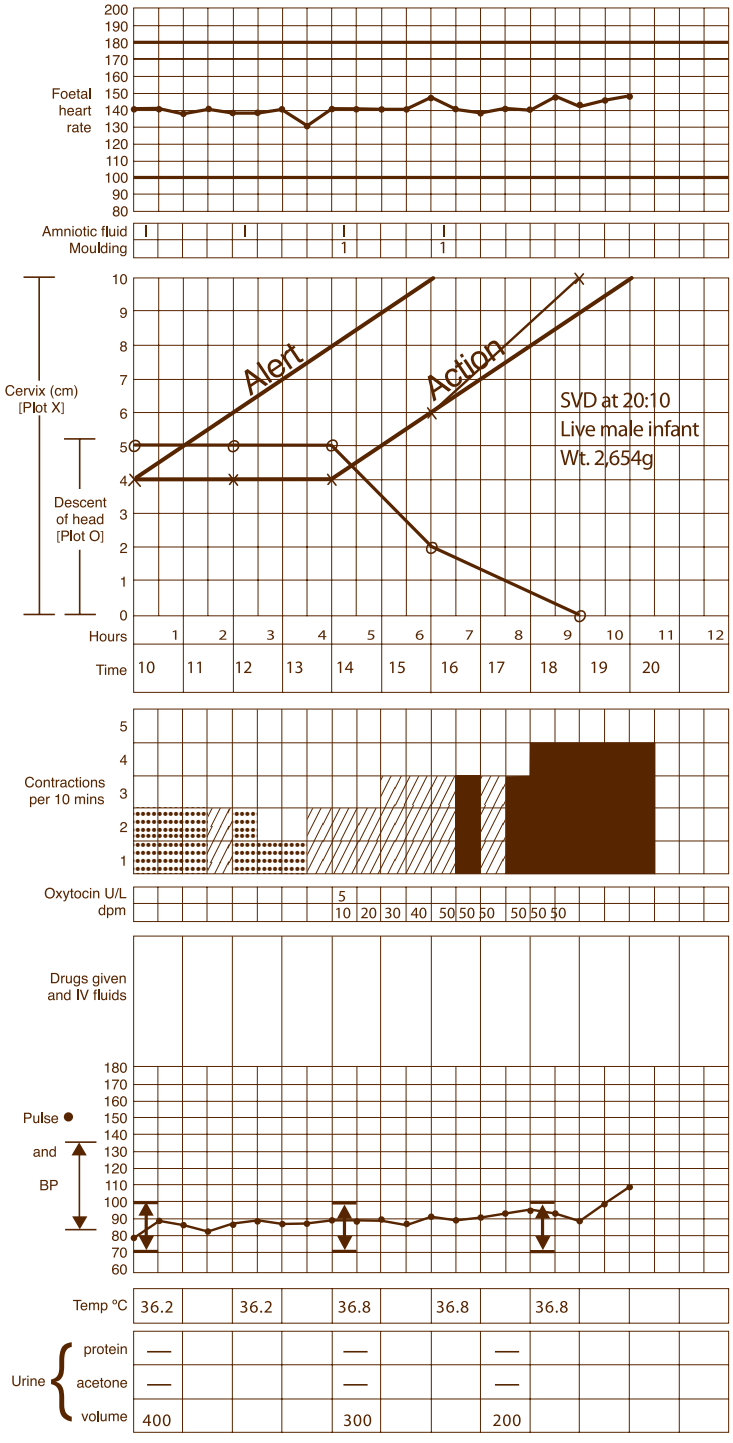
- 19.30:
  - FH 142, Contractions 4/10 each 50 sec, Pulse 100
- 20.00:
  - FH 146, Contractions 4/10 each 50 sec, Pulse 110
- 20.10:
  - spontaneous delivery of a live male infant, Weight 2,654g.

Q 1: How long was the active phase of the first stage of labour?
Q 2: How long was the second stage of labour?
Q 3: Why was labour augmented?

ANSWER KEY: CASE 2

Name Mrs. B Gravida 1 Para 0+0 Hospital number 1443

Date of admission 2.5.2000 Time of admission 10:00 A.M. Ruptured membranes 14:00 hours



EXERCISE: USING THE PARTOGRAPH: CASE 2 (cont'd)

Step 1 ■ diagnosis: active labour ■ action: inform Mrs. B. and family about findings and what to expect; give continual opportunity to ask questions; encourage ambulation and to drink and eat as wanted.
Step 2 ■ diagnosis: prolonged active phase (cervical dilatation plotted to the right of the alert line on the partograph) ■ action: the facilitator should take the opportunity to open a discussion about using oxytocin for augmenting labour based on the clinical setting. For instance, is the woman being cared for at a health post that is four hours away from a hospital or health centre where an oxytocin drip can be started? Or if she is being cared for in a hospital or health centre, can other measures be used (such as hydration, ambulation) before oxytocin is started?
Step 3 ■ diagnosis: prolonged active phase; less than three contractions per 10 minutes lasting greater than 40 seconds; good maternal and foetal condition ■ action: augment labour with oxytocin and artificial rupture of membranes; inform of findings and what to expect; reassure; answer questions; encourage drink and assume position of choice.
Step 4 ■ steps: continue to augment, provide comfort (psychological and physical); encourage drink and nutrition.
Step 5—see partograph
Step 6—see partograph
Step 7 ■ 1st stage of active labour: 9hrs ■ 2nd stage of active labour: 1 hour 10 minutes ■ why augment: less than three contractions per 10 minutes lasting greater than 40 seconds (lack of progress).

EXERCISE: USING THE PARTOGRAPH: CASE 3

STEP 1

- Mrs. C. was admitted at 10.00 on 12.5.2000
- membranes ruptured 09.00
- gravida 4, Para 3+0
- hospital number 6639.

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

- the foetal head is 3/5 palpable above the symphysis pubis
- the cervix is 4cm dilated
- there are three contractions in 10 minutes, each lasting 30 seconds
- FH 140
- amniotic fluid clear
- sutures apposed
- blood pressure 120/70mm Hg
- temperature 36.8°C
- pulse 80 per minute
- urine output 200mL; negative protein and acetone.

STEP 2

Plot the following information on the partograph:

- 10.30 FH 130, Contractions 3/10 each 35 sec, Pulse 80
- 11.00 FH 136, Contractions 3/10 each 40 sec, Pulse 90
- 11.30 FH 140, Contractions 3/10 each 40 sec, Pulse 88
- 12.00 FH 140, Contractions 3/10 each 40 sec, Pulse 90, Temperature 37°C, Head 3/5 up
- 12.30 FH 130, Contractions 3/10 each 40 sec, Pulse 90
- 13.00 FH 130, Contractions 3/10 each 40 sec, Pulse 88
- 13.30 FH 120, Contractions 3/10 each 40 sec, Pulse 88
- 14.00 FH 130, Contractions 4/10 each 45 sec, Pulse 90, Temperature 37°C, Blood pressure 100/70
  - ☐ the foetal head is 3/5 palpable above the symphysis pubis
  - ☐ the cervix is 6cm dilated, amniotic fluid clear
  - ☐ sutures overlapped but reducible.

STEP 3

- 14.30 FH 120, Contractions 4/10 each 40 sec, Pulse 90, Liquor clear
- 15.00 FH 120, Contractions 4/10 each 40 sec, Pulse 88, Blood stained
- 15.30 FH 100, Contractions 4/10 each 45 sec, Pulse 100
- 16.00 FH 90, Contractions 4/10 each 50 sec, Pulse 100, Temperature 37°C
- 16.30 FH 90, Contractions 4/10 each 50 sec, Pulse 110, Head 3/5 up, Meconium liquor
  - ☐ the foetal head is 3/5 palpable above the symphysis pubis
  - ☐ the cervix is 6cm dilated
  - ☐ amniotic fluid meconium stained
  - ☐ sutures overlapped and not reducible
  - ☐ urine output 100mL; protein negative, acetone 1+.

STEP 4

Record the following information on the partograph:

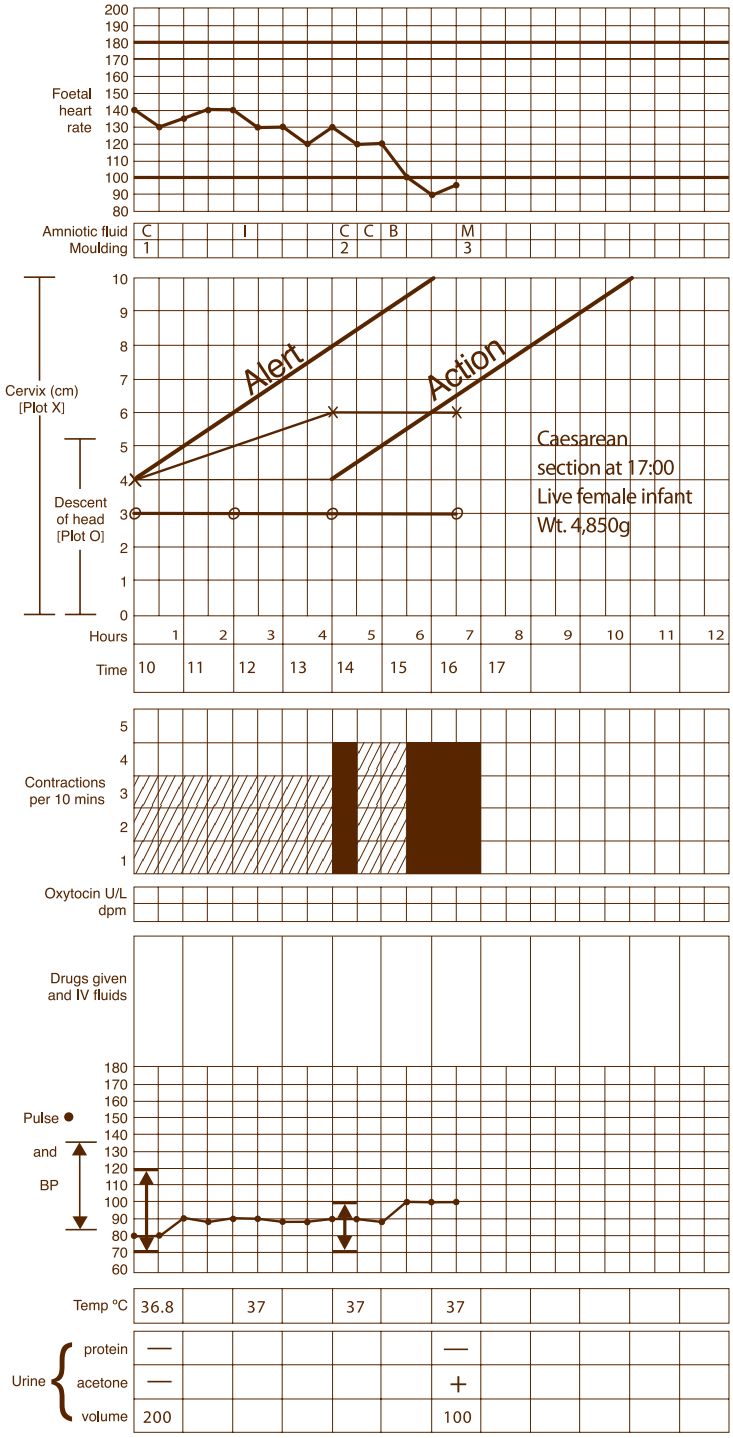
- Caesarean section at 17.00, live female infant with poor respiratory effort, Weight 4,850g.

Q 1: What is the final diagnosis?
Q 2: What action was indicated at 14.00? Why?
Q 3: What action was indicated at 16.00? Why?
Q 4: At 16.30, a decision was taken to do a Caesarean section, and this was done. Was this a correct action?
Q 5: What problems may be expected in the newborn?

ANSWER KEY: CASE 3

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

Date of admission 12.5.2000 Time of admission 10:00 A.M. Ruptured membranes 09:00 hours



EXERCISE: USING THE PARTOGRAPH: CASE 3 (cont'd)

Step 1—see partograph
Step 2—see partograph
Step 3—see partograph
Step 4—see partograph ■ final diagnosis: obstructed labour ■ action at 14.00: continue emotional and physical support, including hydration; continue attentive monitoring of maternal and foetal condition. Why? Woman and family may become discouraged with lack of progress and emotionally and physically exhausted; have crossed alert line ■ perform Caesarean section because the client is already in secondary arrest of dilatation and descent despite at least three contractions per 10 minutes lasting greater than 40 seconds ■ yes, was correct action because foetal condition was deteriorating, lack of progress despite at least three contractions per 10 minutes lasting greater than 40 seconds, acetone in urine, rising maternal pulse. However, action was delayed longer than was best for mother and baby ■ problems expected in newborn—asphyxia, meconium aspiration.

3

SKILLS PRACTISE SESSION: BREECH DELIVERY

Purpose

The purpose of this activity is to enable participants to practise breech delivery and achieve competency in the skills required.

Instructions

This activity should be conducted in a simulated setting, using the appropriate model.

Resources

The following equipment or representations thereof:

- childbirth simulator and placenta/cord/amnion model
- high-level disinfected or sterile surgical gloves
- personal protective equipment.

Participants should review the Learning Guide for Breech Delivery before beginning the activity.

Learning Guide for Breech Delivery

The trainer should demonstrate the steps/tasks in the procedure of breech delivery for participants. Under the guidance of the trainer, participants should then work in pairs to practise the steps/tasks and observe each other's performance, using the Learning Guide for Breech Delivery.

Learning Guide for Breech Delivery

Participants should be able to perform the steps/tasks in the Learning Guide for Breech Delivery before skill competency is assessed by the trainer in the simulated setting, using the Checklist for Breech Delivery.

Checklist for Breech Delivery

Finally, following supervised practise at a clinical site, the trainer should assess the skill competency of each participant, using the Checklist for Breech Delivery.[4]

Checklist for Breech Delivery

[4] If clients are not available at clinical sites for participants to practise breech delivery, the skills should be taught, practised and assessed in a simulated setting.

3. LEARNING GUIDE FOR BREECH DELIVERY

(To be completed by **Participants**)

Rate the performance of each step or task observed using the following rating scale (Write 1, 2 or 3 as the case may be in the box provided):

1. **Needs improvement:** Step or task not performed correctly or out of sequence (if necessary) or is omitted
2. **Competently performed:** Step or task performed correctly in proper sequence (if necessary) but participant does not progress from step to step efficiently
3. **Proficiently performed:** Step or task efficiently and precisely performed in the proper sequence (if necessary)

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY					
1. Prepare the necessary equipment.					
2. Explain to the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.					
3. Provide continual emotional support and reassurance, as feasible.					
4. Review to ensure that the following conditions for breech delivery are present: ■ complete or frank breech ■ adequate clinical pelvimetry, especially that sacral promontory is not tipped ■ foetus is not too large ■ no previous Caesarean section for cephalopelvic disproportion ■ flexed head.					
5. Put on personal protective equipment.					
6. Start an IV infusion.					
PRE-PROCEDURE TASKS					
1. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a sterile cloth or air dry.					
2. Put high-level disinfected or sterile surgical gloves on both hands.					
3. Clean the vulva with antiseptic solution.					
4. Catheterise the bladder, if necessary.					
BREECH DELIVERY					
Delivery of the buttocks and legs					
1. When the buttocks have entered the vagina and the cervix is fully dilated, tell the woman she can bear down with contractions.					
2. As the perineum distends, decide whether an episiotomy is necessary (e.g., if the perineum is very tight). If needed, provide perineal infiltration with lidocaine and perform an episiotomy (see **Learning Guide for Episiotomy and Repair**).					
3. Let the buttocks deliver until the lower back and then the shoulder blades are seen.					
4. Gently hold the buttocks in one hand, but do not pull.					
5. 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.					
6. Hold the newborn by the hips, but do not pull.					

3. LEARNING GUIDE FOR BREECH DELIVERY (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
Delivery of the arms					
1. If the arms are felt on the chest, allow them to disengage spontaneously: ■ 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, place one or two fingers in the elbow and bend the arm, bringing the hand down over the newborn's face.					
2. If the arms are stretched above the head or folded around the neck, use Lovset's manoeuvre: ■ hold the newborn by the hips and turn half a circle, keeping the back uppermost ■ apply downward traction at the same time so that the posterior arm becomes anterior, and deliver the arm under the pubic arch 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 newborn 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.					
3. If the newborn's body cannot be turned to deliver the arm that is anterior first, deliver the arm that is posterior: ■ hold and lift the newborn up by the ankles ■ move the newborn's chest towards the woman's inner leg to deliver the posterior shoulder ■ deliver the arm and hand ■ lay the newborn down by the ankles to deliver the anterior shoulder ■ deliver the arm and hand.					
Delivery of the head					
1. Deliver the head by the Mauriceau Smellie Veit manoeuvre: ■ lay newborn face down with the length of its body over your hand and arm ■ place first and third fingers of this hand on the newborn's cheekbones ■ place second finger in the newborn's mouth to pull the jaw down and flex the head ■ use the other hand to grasp the newborn's shoulders ■ with two fingers of this hand, gently flex the newborn's head towards the chest ■ at the same time apply downward pressure on the jaw to bring the newborn's head down until the hairline is visible ■ pull gently to deliver the head ■ ask an assistant to push gently above the mother's pubic bone as the head delivers ■ raise the newborn, still astride the arm, until the mouth and nose are free.					
2. Perform active management of the third stage of labour to deliver the placenta: ■ give 10 IU oxytocin intramuscularly ■ if oxytocin is not available, give a single oral dose of misoprostol 600mcg ■ control cord traction ■ massage uterus.					
3. Check the birth canal for tears following childbirth and repair, if necessary.					
4. Repair the episiotomy, if one was performed (see **Learning Guide for Episiotomy and Repair**).					
5. Provide immediate postpartum and newborn care, as required.					

3. LEARNING GUIDE FOR BREECH DELIVERY (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
POST-PROCEDURE TASKS					
1. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
2. Place all instruments in 0.5% chlorine solution for 10 minutes for decontamination.					
3. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.					
4. Record the procedure and findings on woman's record.					

3. CHECKLIST FOR BREECH DELIVERY

(To be used by the **Participant** for practise and by the **Trainer** at the end of the course)
Place a "✓" in case box if step/task is performed **satisfactorily**, an "✗" if it is **not** performed satisfactorily, or **N/O** if not observed.
Satisfactory: Performs the step or task according to the standard procedure or guidelines
Unsatisfactory: Unable to perform the step or task according to the standard procedure or guidelines
Not observed: Step or task not performed by participant during evaluation by trainer

Participant: _____ Date observed: _____

(Many of the following steps/tasks should be performed simultaneously.)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY					
1. Prepare the necessary equipment.					
2. Explain to the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.					
3. Provide continual emotional support and reassurance, as feasible.					
4. Ensure that the conditions for breech delivery are present.					
5. Put on personal protective equipment.					
PRE-PROCEDURE TASKS					
1. Use antiseptic handrub or wash hands thoroughly and put on high-level disinfected or sterile surgical gloves.					
2. Clean the vulva with antiseptic solution.					
3. Catheterise the bladder, if necessary.					
BREECH DELIVERY					
Delivery of the buttocks and legs					
1. When the buttocks have entered the vagina and the cervix is fully dilated, tell the woman she can bear down with contractions.					
2. Perform an episiotomy, if necessary.					
3. Let the buttocks deliver until the lower back and shoulder blades are seen.					
4. Gently hold the buttocks in one hand.					
5. If the legs do not deliver spontaneously, deliver one leg at a time.					
6. Hold the newborn by the hips.					
Delivery of the arms					
1. If the arms are felt on the chest, allow them to disengage spontaneously.					
2. If the arms are stretched above the head or folded around the neck, use Lovset's manoeuvre.					
3. If the newborn's body cannot be turned to deliver the arm that is anterior first, deliver the arm that is posterior.					

3. CHECKLIST FOR BREECH DELIVERY (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
Delivery of the head					
1. Deliver the head using the Mauriceau Smellie Veit manoeuvre.					
2. Complete steps for active management of the third stage of labour.					
3. Following childbirth, check the birth canal for tears and repair, if necessary. Repair the episiotomy, if one was performed.					
4. Provide immediate postpartum and newborn care, as required.					
POST-PROCEDURE TASKS					
1. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
2. Place all instruments in 0.5% chlorine solution for decontamination.					
3. Remove gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.					
4. Use antiseptic handrub or wash hands thoroughly.					
5. Record procedure and findings on woman's record.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

4

SKILLS PRACTISE SESSION: EPISIOTOMY *and* REPAIR

Purpose

The purpose of this activity is to enable participants to practise episiotomy and repair and achieve competency in the skills required.

Instructions

This activity should be conducted in a simulated setting, using the appropriate model.

Resources

The following equipment or representations thereof:

- pelvic model or foam block that would enable episiotomy and repair to be performed
- high-level disinfected or sterile surgical gloves
- personal protective equipment
- examination light
- local anaesthetic
- needles and syringes
- suture materials.

Participants should review the Learning Guide for Episiotomy and Repair before beginning the activity.

Learning Guide for Episiotomy and Repair

The trainer should demonstrate the steps/tasks in the procedure of episiotomy and repair for participants. Under the guidance of the trainer, participants should then work in pairs to practise the steps/tasks and observe each other's performance, using the Learning Guide for Episiotomy and Repair.

Learning Guide for Episiotomy and Repair

Participants should be able to perform the steps/tasks in the Learning Guide for Episiotomy and Repair before skill competency is assessed by the trainer in the simulated setting, using the Checklist for Episiotomy and Repair.

Checklist for Episiotomy and Repair

Finally, following supervised practise at a clinical site, the trainer should assess the skill competency of each participant, using the Checklist for Episiotomy and Repair.[5]

Checklist for Episiotomy and Repair

[5] If clients are not available at clinical sites for participants to practise episiotomy and repair, the skills should be taught, practised and assessed in a simulated setting.

4. LEARNING GUIDE FOR EPISIOTOMY AND REPAIR

(To be completed by **Participants**)

Rate the performance of each step or task observed using the following rating scale (Write 1, 2 or 3 as the case may be in the box provided):

1. **Needs improvement:** Step or task not performed correctly or out of sequence (if necessary) or is omitted
2. **Competently performed:** Step or task performed correctly in proper sequence (if necessary) but participant does not progress from step to step efficiently
3. **Proficiently performed:** Step or task efficiently and precisely performed in the proper sequence (if necessary)

Note: Participants should use this learning guide in conjunction with the **Learning Guide for Conducting a Childbirth**.

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY					
1. Prepare the necessary equipment.					
2. Explain to the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.					
3. Provide continual emotional support and reassurance, as feasible.					
4. Ask about allergies to antiseptics and anaesthetics.					
5. Put on personal protective equipment.					
ADMINISTERING LOCAL ANAESTHETIC ***Note:*** *As the skilled provider, you should already have protective clothing and gloves on.*					
1. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a sterile cloth or air dry.					
2. Put high-level disinfected or sterile surgical gloves on both hands.					
3. Clean the perineum with antiseptic solution.					
4. Draw 10mL of 0.5% lidocaine into a syringe.					
5. Place two fingers into the vagina along the proposed incision line.					
6. Insert the needle beneath the skin for 4–5cm following the same line and aspirate by drawing the plunger back slightly to make certain the needle is not penetrating a blood vessel.					
7. Inject the lidocaine solution into the vaginal mucosa, beneath the skin of the perineum and into the perineal muscle.					
8. Wait two minutes and then pinch the incision site with forceps. (If the woman feels the pinch, wait two more minutes and then retest.)					
PERFORMING THE EPISIOTOMY					
1. Wait to perform episiotomy until: ■ the perineum is thinned out ■ 3–4cm of the newborn's head is visible during a contraction.					
2. Insert two fingers into the vagina, palm side downward, between the newborn's head and the perineum.					
3. Insert the open blade of the scissors between the perineum and the two fingers.					
4. Make a single cut 3–4cm long in a medio-lateral direction (45º angle to the midline towards a point midway between the ischial tuberosity and the anus).					
5. Use scissors to cut 2–3cm up the middle of the posterior vagina.					

4. LEARNING GUIDE FOR EPISIOTOMY AND REPAIR (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
6. If delivery of the head does not follow immediately, apply pressure to the episiotomy site between contractions, using gauze to minimise bleeding.					
7. Control delivery of the head to avoid extension of the episiotomy.					
8. Carefully examine for extensions and other tears.					
REPAIRING THE EPISIOTOMY					
1. Ask the woman to position her buttocks towards the lower end of the bed or table.					
2. Ask an assistant to direct a strong light onto the woman's perineum.					
3. Clean the woman's perineum with antiseptic solution.					
4. If it is necessary to repeat local anaesthetic, draw 10mL of 0.5% lidocaine into a syringe.					
5. Insert the needle along one side of the vaginal incision and inject the lidocaine solution while slowly withdrawing the needle.					
6. Repeat on the other side of the vaginal incision and on each side of the perineal incision.					
7. Wait two minutes to allow the lidocaine solution to take effect.					
8. Using 0 or 1 chromic catgut suture, insert the suture needle just above (1cm) the vaginal incision.					
9. Use a continuous suture from the apex downward to repair the vaginal incision.					
10. Continue the suture to the level of the vaginal opening.					
11. At the opening of the vagina, bring together the cut edges.					
12. Bring the needle under the vaginal opening and out through the incision and tie.					
13. Use interrupted 0 or 1 chromic catgut sutures to repair the perineal muscle, working from the top of the perineal incision downward.					
14. Use interrupted or subcuticular 2/0 sutures to bring the skin edges together.					
15. Place a clean cloth or pad on the woman's perineum.					
POST-PROCEDURE TASKS					
1. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
2. Place all instruments in 0.5% chlorine solution for 10 minutes for decontamination.					
3. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.					
4. Record the procedure on woman's record.					

4. CHECKLIST FOR EPISIOTOMY AND REPAIR

(To be used by the **Participant** for practise and by the **Trainer** at the end of the course)
Place a "✓" in case box if step/task is performed **satisfactorily**, an "✗" if it is **not** performed satisfactorily, or **N/O** if not observed.
Satisfactory: Performs the step or task according to the standard procedure or guidelines
Unsatisfactory: Unable to perform the step or task according to the standard procedure or guidelines
Not observed: Step or task not performed by participant during evaluation by trainer

Participant: _____ Date observed: _____

(Many of the following steps/tasks should be performed simultaneously.)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY					
1. Prepare the necessary equipment.					
2. Explain to the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.					
3. Provide continual emotional support and reassurance, as feasible.					
4. Ask about allergies to antiseptics and anaesthetics.					
5. Put on personal protective equipment.					
PERFORMING THE EPISIOTOMY					
1. Use antiseptic handrub or wash hands thoroughly and put on high-level disinfected or sterile surgical gloves.					
2. Clean the perineum with antiseptic solution.					
3. Administer local anaesthetic.					
4. Perform episiotomy when perineum is thinned out and newborn's head is visible during a contraction.					
5. Insert two fingers into the vagina between the newborn's head and the perineum.					
6. Insert the open blade of the scissors between the perineum and the fingers. Make a single cut in a medio-lateral direction.					
7. If delivery of the head does not follow immediately, apply pressure to the episiotomy site between contractions.					
8. Control delivery of the head to avoid extension of the episiotomy.					
REPAIRING THE EPISIOTOMY					
1. Clean the woman's perineum with antiseptic solution.					
2. Repeat local anaesthetic, if necessary.					
3. Use a continuous suture from the apex downward to repair the vaginal incision.					
4. At the vaginal opening, bring the cut edges together.					
5. Bring the needle under the vaginal opening and out through the incision and tie.					
6. Use interrupted sutures to repair the perineal muscle, working from the top of the perineal incision downward and to bring the skin edges together.					
7. Place a clean cloth or pad on the woman's perineum.					

4. CHECKLIST FOR EPISIOTOMY AND REPAIR (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
POST-PROCEDURE TASKS					
1. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
2. Place all instruments in 0.5% chlorine solution for decontamination.					
3. Remove gloves and discard them in a leakproof container or plastic bag.					
4. Use antiseptic handrub or wash hands thoroughly.					
5. Record procedure on woman's record.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

5

SKILLS PRACTISE SESSION: REPAIR *of* CERVICAL TEARS

Purpose

The purpose of this activity is to enable participants to practise repair of cervical tears and achieve competency in the skills required.

Instructions

This activity should be conducted in a simulated setting, using the appropriate model.

Resources

The following equipment or representations thereof:

- foam block to simulate a vagina and cervix
- high-level disinfected or sterile surgical gloves
- personal protective equipment
- examination light
- vaginal speculum
- ring or sponge forceps
- suture materials.

Participants should review the Learning Guide for Repair of Cervical Tears before beginning the activity.

Learning Guide for Repair of Cervical Tears

The trainer should demonstrate the steps/tasks in the procedure of repair of cervical tears for participants. Under the guidance of the trainer, participants should then work in pairs to practise the steps/tasks and observe each other's performance, using the Learning Guide for Repair of Cervical Tears.

Learning Guide for Repair of Cervical Tears

Participants should be able to perform the steps/tasks in the Learning Guide for Repair of Cervical Tears before skill competency is assessed by the trainer in the simulated setting, using the Checklist for Repair of Cervical Tears.

Checklist for Repair of Cervical Tears

Finally, following supervised practise at a clinical site, the trainer should assess the skill competency of each participant, using the Checklist for Repair of Cervical Tears.[6]

Checklist for Repair of Cervical Tears

[6] If clients are not available at clinical sites for participants to practise repair of cervical tears, the skills should be taught, practised and assessed in a simulated setting.

5. LEARNING GUIDE FOR REPAIR OF CERVICAL TEARS

(To be completed by **Participants**)

Rate the performance of each step or task observed using the following rating scale (Write 1, 2 or 3 as the case may be in the box provided):

1. **Needs improvement:** Step or task not performed correctly or out of sequence (if necessary) or is omitted
2. **Competently performed:** Step or task performed correctly in proper sequence (if necessary) but participant does not progress from step to step efficiently
3. **Proficiently performed:** Step or task efficiently and precisely performed in the proper sequence (if necessary)

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY					
1. Prepare the necessary equipment.					
2. Explain to the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.					
3. Provide continual emotional support and reassurance, as feasible.					
4. Have the woman empty her bladder or insert a catheter, if necessary.					
5. Give anaesthesia (IV pethidine and diazepam, or ketamine), if necessary.					
6. Put on personal protective equipment.					
REPAIR OF CERVICAL TEARS					
1. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a sterile cloth or air dry.					
2. Put high-level disinfected or sterile surgical gloves on both hands.					
3. Have an assistant shine a light into the vagina.					
4. Clean the vagina and cervix with antiseptic solution.					
5. Have the assistant massage the uterus and provide fundal pressure.					
6. Insert a ring or sponge forceps into the vagina and grasp the cervix on one side of the tear.					
7. Insert a second ring or sponge forceps and grasp the cervix on other side of the tear.					
8. Gently pull in various directions to see the entire cervix, as there may be several tears.					
9. Place the handles of both forceps in one hand: ■ hold the cervix steady by gently pulling the forceps towards you.					
10. Place the first suture at the top (the apex) of the tear.					
11. Close the tear with a continuous suture: ■ be sure to include the whole thickness of the cervix each time the suture needle is inserted.					
12. If a long section of the rim of the cervix is tattered, under-run it with a continuous 0 chromic (or polyglycolic) suture.					
13. If the apex is difficult to reach and ligate: ■ grasp it with artery or ring forceps ■ leave the forceps in place for four hours ■ after four hours, open the forceps partially but do not remove ■ after another four hours, remove the forceps completely.					

5. LEARNING GUIDE FOR REPAIR OF CERVICAL TEARS (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
POST-PROCEDURE TASKS					
1. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
2. Place all instruments in 0.5% chlorine solution for 10 minutes for decontamination.					
3. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.					
4. Record the procedure on the woman's record.					

5. CHECKLIST FOR REPAIR OF CERVICAL TEARS

(To be used by the **Participant** for practise and by the **Trainer** at the end of the course)
Place a "✓" in case box if step/task is performed **satisfactorily**, an "✗" if it is **not** performed satisfactorily, or **N/O** if not observed.
Satisfactory: Performs the step or task according to the standard procedure or guidelines
Unsatisfactory: Unable to perform the step or task according to the standard procedure or guidelines
Not observed: Step or task not performed by participant during evaluation by trainer

Participant: _____ Date observed: _____

(Many of the following steps/tasks should be performed simultaneously.)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY					
1. Prepare the necessary equipment.					
2. Explain to the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.					
3. Provide continual emotional support and reassurance, as feasible.					
4. Have the woman empty her bladder or insert a catheter.					
5. Give anaesthesia, if necessary.					
6. Put on personal protective equipment.					
REPAIR OF CERVICAL TEARS					
1. Use antiseptic handrub or wash hands thoroughly and put on high-level disinfected or sterile surgical gloves.					
2. Clean the vagina and cervix with an antiseptic solution.					
3. Grasp both sides of the cervix using ring or sponge forceps (one forceps for each side of tear).					
4. Place the first suture at the top of the tear and close it with a continuous suture, including the whole thickness of the cervix each time the suture needle is inserted.					
5. If a long section of the rim of the cervix is tattered, under-run it with a continuous suture.					
6. Use ring forceps if the apex is difficult to reach and ligate.					
POST-PROCEDURE TASKS					
1. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
2. Place all instruments in 0.5% chlorine solution for decontamination.					
3. Remove gloves and discard them in a leakproof container or plastic bag.					
4. Use antiseptic handrub or wash hands thoroughly.					
5. Record procedure on woman's record.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

6

SKILLS PRACTISE SESSION: VACUUM EXTRACTION

Purpose

The purpose of this activity is to enable participants to practise vacuum extraction and achieve competency in the skills required.

Instructions

This activity should be conducted in a simulated setting, using the appropriate model.

Resources

The following equipment or representations thereof:

- childbirth simulator and placenta/cord/amnion model
- high-level disinfected or sterile surgical gloves
- personal protective equipment
- vacuum extractor.

Participants should review the Learning Guide for Vacuum Extraction before beginning the activity.	Learning Guide for Vacuum Extraction
The trainer should demonstrate the steps/task in the procedure of vacuum extraction for participants. Under the guidance of the trainer, participants should then work in pairs to practise the steps/tasks and observe each other's performance, using the Learning Guide for Vacuum Extraction.	Learning Guide for Vacuum Extraction
Participants should be able to perform the steps/tasks in the Learning Guide for Vacuum Extraction before skill competency is assessed by the trainer in the simulated setting, using the Checklist for Vacuum Extraction.	Checklist for Vacuum Extraction
Finally, following supervised practise at a clinical site, the trainer should assess the skill competency of each participant, using the Checklist for Vacuum Extraction.[7]	Checklist for Vacuum Extraction

[7] If clients are not available at clinical sites for participants to practise vacuum extraction, the skills should be taught, practised and assessed in a simulated setting.

6. LEARNING GUIDE FOR VACUUM EXTRACTION

(To be completed by **Participants**)

Rate the performance of each step or task observed using the following rating scale (Write 1, 2 or 3 as the case may be in the box provided):

1. **Needs improvement:** Step or task not performed correctly or out of sequence (if necessary) or is omitted
2. **Competently performed:** Step or task performed correctly in proper sequence (if necessary) but participant does not progress from step to step efficiently
3. **Proficiently performed:** Step or task efficiently and precisely performed in the proper sequence (if necessary)

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY					
1. Prepare the necessary equipment.					
2. Explain to the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.					
3. Provide continual emotional support and reassurance, as feasible.					
4. Review to ensure that the following conditions for vacuum extraction are present: ■ vertex presentation ■ term foetus ■ cervix fully dilated ■ head at least at 0 station or no more than 2/5 palpable above the symphysis pubis.					
5. Make sure an assistant is available.					
6. Put on personal protective equipment.					
PRE-PROCEDURE TASKS					
1. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a sterile cloth or air dry.					
2. Put high-level disinfected or sterile surgical gloves on both hands.					
3. Clean the vulva with antiseptic solution.					
4. Catheterise the bladder, if necessary.					
5. Check all connections on the vacuum extractor and test the vacuum on a gloved hand.					
VACUUM EXTRACTION					
1. Assess the position of the foetal head by feeling the sagittal suture line and the fontanelles.					
2. Identify the posterior fontanelle.					
3. Apply the largest cup that will fit, with the centre of the cup over the flexion point, 1cm anterior to the posterior fontanelle.					
4. Perform an episiotomy, if necessary, for proper placement of the cup (see **Learning Guide for Episiotomy and Repair**): ■ if episiotomy is not necessary for placement of the cup, delay until the head stretches the perineum or the perineum interferes with the axis of traction.					
5. Check the application and ensure that there is no maternal soft tissue (cervix or vagina) within the rim of the cup: ■ if necessary, release pressure and reapply cup.					

6. LEARNING GUIDE FOR VACUUM EXTRACTION (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
6. Have the assistant create a vacuum of 0.2Kg/cm^2 negative pressure with the pump and check the application of the cup.					
7. Increase the vacuum to 0.8Kg/cm^2 negative pressure and check the application of the cup.					
8. After maximum negative pressure has been applied, start 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 should be 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).					
9. With each contraction, apply traction in a line perpendicular to the plane of the cup rim: ■ place a gloved finger on the scalp next to the cup during traction to assess potential slippage and descent of the vertex.					
10. Between each contraction have assistant check: ■ foetal heart rate ■ application of the cup.					
11. With progress, and in the absence of foetal distress, continue the "guiding" pulls for a maximum of 30 minutes.					
12. When the head has been delivered, release the vacuum, remove the cup and complete the birth of the newborn.					
13. Perform active management of the third stage of labour to deliver the placenta: ■ give 10 IU oxytocin intramuscularly ■ if oxytocin is not available, give a single oral dose of misoprostol 600mcg ■ control cord traction ■ massage uterus.					
14. Check the birth canal for tears following childbirth and repair, if necessary.					
15. Repair the episiotomy, if one was performed (see **Learning Guide for Episiotomy and Repair**).					
16. Provide immediate postpartum and newborn care, as required.					
POST-PROCEDURE TASKS					
1. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
2. Place all instruments in 0.5% chlorine solution for 10 minutes for decontamination.					
3. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.					
4. Record the procedure and findings on woman's record.					

6. CHECKLIST FOR VACUUM EXTRACTION

(To be used by the **Participant** for practise and by the **Trainer** at the end of the course)
Place a "✓" in case box if step/task is performed **satisfactorily**, an "✗" if it is **not** performed satisfactorily, or **N/O** if not observed.
Satisfactory: Performs the step or task according to the standard procedure or guidelines
Unsatisfactory: Unable to perform the step or task according to the standard procedure or guidelines
Not observed: Step or task not performed by participant during evaluation by trainer

Participant: _____ Date observed: _____

(Many of the following steps/tasks should be performed simultaneously.)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY					
1. Prepare the necessary equipment.					
2. Explain to the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.					
3. Provide continual emotional support and reassurance, as feasible.					
4. Ensure that the conditions for vacuum extraction are present.					
5. Make sure an assistant is available.					
6. Put on personal protective equipment.					
PRE-PROCEDURE TASKS					
1. Use antiseptic handrub or wash hands thoroughly and put on high-level disinfected or sterile surgical gloves.					
2. Clean the vulva with antiseptic solution.					
3. Catheterise the bladder, if necessary.					
4. Check all connections on the vacuum extractor and test the vacuum.					
VACUUM EXTRACTION					
1. Assess the position of the foetal head and identify the posterior fontanelle.					
2. Apply the largest cup that will fit.					
3. Perform an episiotomy, if necessary, for placement of the cup.					
4. Check the application and ensure that there is no maternal soft tissue within the rim of the cup.					
5. Have assistant create a vacuum of negative pressure and check the application of the cup.					
6. Increase the vacuum to the maximum and then apply traction. Correct the tilt or deflexion of the head.					
7. With each contraction, apply traction in a line perpendicular to the plane of the cup rim and assess potential slippage and descent of the vertex.					
8. Between each contraction, have assistant check foetal heart rate and application of the cup.					
9. Continue the "guiding" pulls for a maximum of 30 minutes. Release the vacuum when the head has been delivered.					
10. Complete birth of newborn and delivery of placenta.					

6. CHECKLIST FOR VACUUM EXTRACTION (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
11. Following childbirth, check the birth canal for tears and repair, if necessary. Repair the episiotomy, if one was performed.					
12. Provide immediate postpartum and newborn care, as required.					
POST-PROCEDURE TASKS					
1. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
2. Place all instruments in 0.5% chlorine solution for decontamination.					
3. Remove gloves and discard them in a leakproof container or plastic bag.					
4. Use antiseptic handrub or wash hands thoroughly.					
5. Record procedure and findings on woman's record.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

7

SKILLS PRACTISE SESSION: POST-ABORTION CARE *(manual vacuum aspiration [MVA] or misoprostol)* and POST-ABORTION FAMILY PLANNING COUNSELLING

Purpose

The purpose of this activity is to enable participants to practise MVA, achieve competency in the skills required and develop skills in post-abortion family planning counselling.

Instructions

This activity should be conducted in a simulated setting, using the appropriate model.

Resources

The following equipment or representations thereof:

- pelvic model
- high-level disinfected or sterile surgical gloves
- personal protective equipment
- mva syringes and cannula
- vaginal speculum
- single-toothed tenaculum or vulsellum forceps.

Participants should review the Learning Guide for Post-abortion Care (MVA or misoprostol) before beginning the activity and the Learning Guide for Post-abortion Family Planning Counselling.

Learning Guide for Post-abortion Care (MVA or misoprostol)

Learning Guide for Post-abortion Family Planning Counselling

The trainer should demonstrate the preliminary steps (medical evaluation, explaining the procedure, pelvic examination, decision to use medical or surgical treatment), followed by the steps in the MVA procedure for participants. Under the guidance of the trainer, participants should then work in pairs to practise the steps/tasks and observe each other's performance, using the Learning Guide for Post-abortion Care (MVA or misoprostol).

Learning Guide for Post-abortion Care (MVA or misprostol)

The trainer should then demonstrate the steps/tasks in providing post-abortion family planning counselling.

Under the guidance of the trainer, participants should then work in groups of three to practise the steps/tasks and observe each other's performance; one participant should take the role of the post-abortion woman, the second should practise counselling skills and the third should observe performance using the Learning Guide for Post-abortion Family Planning Counselling. Participants should then reverse roles until each has had an opportunity to practise counselling skills.

Learning Guide for Post-abortion Family Planning Counselling

Participants should be able to perform the steps/tasks in the Learning Guide for Post-abortion Care (MVA or misoprostol) and Learning Guide for Post-abortion Family Planning Counselling before skill competency is assessed by the trainer in the simulated setting, using the Checklist for Post-abortion Care (MVA or misoprostol) and Checklist for Post-abortion Family Planning Counselling.

Checklist for Post-abortion Care (MVA or misoprostol)

Checklist for Post-abortion Family Planning Counselling

Finally, following supervised practise at a clinical site, the trainer should assess the skill competency of each participant, using the Checklist for Post-abortion Care (MVA or misoprostol) and Checklist for Post-abortion Family Planning Counselling.[8]

Checklist for Post-abortion Care (MVA or misoprostol)

Checklist for Post-abortion Family Planning Counselling

[8] If clients are not available at clinical sites for participants to practise post-abortion care in relation to obstetric emergencies, the skills should be taught, practised and assessed in a simulated setting.

7. LEARNING GUIDE FOR POST-ABORTION CARE (MVA)

(To be completed by **Participants**)

Rate the performance of each step or task observed using the following rating scale (Write 1, 2 or 3 as the case may be in the box provided):

1. **Needs improvement:** Step or task not performed correctly or out of sequence (if necessary) or is omitted
2. **Competently performed:** Step or task performed correctly in proper sequence (if necessary) but participant does not progress from step to step efficiently
3. **Proficiently performed:** Step or task efficiently and precisely performed in the proper sequence (if necessary)

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK	CASES				
	1	2	3	4	5
INITIAL ASSESSMENT					
1. Greet the woman respectfully and with kindness.					
2. Assess client for shock and other life-threatening conditions.					
3. If any complications are identified, stabilise client and transfer, if necessary.					
MEDICAL EVALUATION					
1. Obtain a reproductive health history.					
2. Perform limited physical (heart, lungs and abdomen) and pelvic examinations.					
3. Perform indicated laboratory tests.					
4. Provide the woman with information about her condition and what to expect.					
5. Discuss her reproductive goals, as appropriate.					
6. If she is considering an IUD: ■ she should be fully counselled regarding IUD use ■ the decision to insert the IUD following the MVA procedure will be dependent on the clinical situation.					
GETTING READY					
1. Explain to the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.					
2. Provide continual emotional support and reassurance, as feasible.					
3. Give paracetamol 500 mg by mouth to the woman 30 minutes before the procedure.					
4. Explain that she may feel discomfort during some of the steps of the procedure and that you will warn her in advance.					
5. Determine that the necessary equipment and supplies are present: ■ ensure the required sterile or high-level disinfected instruments are present ■ ensure the appropriate size cannula and adapters are available.					
6. Check the MVA syringe and charge it (establish vacuum).					
7. Check that client has recently emptied her bladder.					
8. Check that client has thoroughly washed and rinsed her perineal area.					
9. Put on personal protective equipment.					
10. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a sterile cloth or air dry.					
11. Put high-level disinfected or sterile surgical gloves on both hands.					
12. Arrange sterile or high-level disinfected instruments on sterile tray or in high-level disinfected container.					

7. LEARNING GUIDE FOR POST-ABORTION CARE (MVA) (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
PRE-PROCEDURE TASKS					
1. Inform client of each step in the procedure prior to performing it.					
2. Perform bi-manual pelvic examination, checking the size and position of uterus and degree of cervical dilatation.					
3. Insert the speculum and remove blood or tissue from vagina using sponge forceps and gauze.					
4. Apply antiseptic solution to cervix and vagina three times using gauze or cotton sponge.					
5. Remove any products of conception (POC) from the cervical os and check cervix for tears.					
Administering paracervical block *(when necessary)*					
1. Prepare 20mL 0.5% lidocaine solution without adrenaline					
2. Draw 10mL of 0.5% lidocaine solution into a syringe.					
3. If using a single-toothed tenaculum, inject 1mL of lidocaine solution into the anterior or posterior lip of the cervix (the 10 o'clock or 12 o'clock position is usually used).					
4. Gently grasp anterior lip of the cervix with a single-toothed tenaculum or vulsellum forceps (preferably, use ring or sponge forceps if incomplete abortion).					
5. With tenaculum or vulsellum forceps on the cervix, use slight traction and movement to help identify the area between the smooth cervical epithelium and the vaginal tissue.					
6. Insert the needle just under the epithelium and aspirate by drawing the plunger back slightly to make sure the needle is not penetrating a blood vessel.					
7. Inject about 2mL of a 0.5% lidocaine solution just under the epithelium, not deeper than 3mm, at 3, 5, 7 and 9 o'clock.					
8. Wait two minutes and then pinch the cervix with the forceps. (If the woman feels the pinch, wait two more minutes and then retest.)					
MVA PROCEDURE					
1. Gently apply traction on the cervix to straighten the cervical canal and uterine cavity.					
2. If necessary, dilate cervix using progressively larger cannula.					
3. While holding the cervix steady, push the selected cannula gently and slowly into the uterine cavity until it just touches the fundus (not more than 10cm). Then withdraw the cannula slightly away from the fundus.					
4. Attach the prepared MVA syringe to the cannula by holding the cannula in one hand and the tenaculum and syringe in the other. Make sure cannula does not move forward as the syringe is attached.					
5. Release the pinch valve(s) on the syringe to transfer the vacuum through the cannula to the uterine cavity.					
6. Evacuate any remaining contents of the uterine cavity by rotating the cannula and syringe from 10 to 2 o'clock and moving the cannula gently and slowly back and forth within the uterus.					
7. If the syringe becomes half full before the procedure is complete, detach the cannula from the syringe. Remove **only** the syringe, leaving the cannula in place.					
8. Push the plunger to empty POC into the strainer.					
9. Recharge syringe, attach to cannula and release pinch valve(s).					

7. LEARNING GUIDE FOR POST-ABORTION CARE (MVA) (cont'd)

STEP/TASK		CASES				
		1	2	3	4	5
10.	Check for signs of completion (red or pink foam, no more tissue in cannula, a "gritty" sensation and uterus contracts around the cannula). Withdraw the cannula and MVA syringe gently.					
11.	Remove cannula from the MVA syringe and push the plunger to empty POC into the strainer.					
12.	Remove tenaculum or forceps from the cervix before removing the speculum.					
13.	Perform bi-manual examination to check size and firmness of uterus.					
14.	Rinse the tissue with water or saline, if necessary.					
15.	Quickly inspect the tissue removed from the uterus to be sure the uterus is completely evacuated.					
16.	If no POC are seen, reassess situation to be sure it is not an ectopic pregnancy.					
17.	Gently insert speculum and check for bleeding.					
18.	If uterus is still soft or bleeding persists, repeat steps 3–10.					
POST-PROCEDURE TASKS						
1.	Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
2.	Place all instruments in 0.5% chlorine solution for 10 minutes for decontamination.					
3.	Attach used cannula to MVA syringe and flush both with 0.5% chlorine solution.					
4.	Detach cannula from syringe and soak them in 0.5% chlorine solution for 10 minutes for decontamination.					
5.	Empty POC into utility sink, flushable toilet, latrine or container with tight-fitting lid.					
6.	Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.					
7.	Check for bleeding and ensure that cramping has decreased before discharge.					
8.	Instruct client regarding post-abortion care and warning signs.					
9.	Tell her when to return if follow-up is needed and that she can return anytime she has concerns.					

7. CHECKLIST FOR POST-ABORTION CARE (MVA)

(To be used by the **Participant** for practise and by the **Trainer** at the end of the course)
Place a "✓" in case box if step/task is performed **satisfactorily**, an "✗" if it is **not** performed satisfactorily, or **N/O** if not observed.
Satisfactory: Performs the step or task according to the standard procedure or guidelines
Unsatisfactory: Unable to perform the step or task according to the standard procedure or guidelines
Not observed: Step or task not performed by participant during evaluation by trainer

Participant: _____ Date observed: _____

(Many of the following steps/tasks should be performed simultaneously.)

STEP/TASK	CASES				
	1	2	3	4	5
INITIAL ASSESSMENT					
1. Greet woman respectfully and with kindness.					
2. Assess client for shock or complications.					
3. If any complications are identified, stabilise client and transfer, if necessary.					
MEDICAL EVALUATION					
1. Take a reproductive history and perform physical examination and laboratory tests.					
2. Give her information about her condition.					
3. Discuss her reproductive goals.					
GETTING READY					
1. Explain to the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.					
2. Provide continual emotional support and reassurance, as feasible.					
3. Give paracetamol 500mg by mouth to the woman 30 minutes before procedure.					
4. Ask about allergies to antiseptics and anaesthetics.					
5. Determine that required sterile or high-level disinfected instruments are present.					
6. Ensure that appropriate size cannula and adapters are available. Check MVA syringe and charge it (establish vacuum).					
7. Check that client has recently emptied her bladder and washed her perineal area.					
8. Put on personal protective equipment.					
9. Use antiseptic handrub or wash hands thoroughly and put on high-level disinfected or sterile surgical gloves.					
10. Arrange sterile or high-level disinfected instruments on sterile tray or in high-level disinfected container.					
PRE-PROCEDURE TASKS					
1. Explain each step of the procedure prior to performing it.					
2. Perform bi-manual examination.					
3. Insert speculum.					
4. Apply antiseptic to cervix and vagina three times.					
5. Remove any products of conception (POC) and check for any cervical tears.					

7. CHECKLIST FOR POST-ABORTION CARE (MVA) (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
MVA PROCEDURE					
1. Put single-toothed tenaculum or vulsellum forceps on lower lip of cervix.					
2. Administer paracervical block (if necessary).					
3. Apply traction on cervix.					
4. Dilate the cervix (if needed).					
5. Insert the cannula gently through the cervix into the uterine cavity.					
6. Attach the prepared syringe to the cannula.					
7. Evacuate contents of the uterus.					
8. When signs of completion are present, withdraw cannula and MVA syringe. Empty contents of MVA syringe into a strainer.					
9. Remove tenaculum or forceps and speculum.					
10. Perform bi-manual examination.					
11. Inspect tissue removed from uterus to ensure complete evacuation.					
12. Insert speculum and check for bleeding.					
13. If uterus is still soft or bleeding persists, repeat steps 5–10.					
POST-PROCEDURE TASKS					
1. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
2. Flush MVA syringe and cannula with 0.5% chlorine solution and submerge in solution for decontamination.					
3. Remove gloves and discard them in a leakproof container or plastic bag.					
4. Use antiseptic handrub or wash hands thoroughly.					
5. Check for bleeding and ensure cramping has decreased before discharge.					
6. Instruct client regarding post-abortion care.					
7. Discuss reproductive goals and, as appropriate, provide family planning.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

8. LEARNING GUIDE FOR POST-ABORTION CARE (MISOPROSTOL)

(To be completed by **Participants**)

Rate the performance of each step or task observed using the following rating scale (Write 1, 2 or 3 as the case may be in the box provided):

1. **Needs improvement:** Step or task not performed correctly or out of sequence (if necessary) or is omitted
2. **Competently performed:** Step or task performed correctly in proper sequence (if necessary) but participant does not progress from step to step efficiently
3. **Proficiently performed:** Step or task efficiently and precisely performed in the proper sequence (if necessary)

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK	CASES				
	1	2	3	4	5
INITIAL ASSESSMENT					
1. Greet the woman respectfully and with kindness.					
2. Assess client for allergy to misoprostol or other prostaglandins, shock, ectopic pregnancy and signs of pelvic infections and or sepsis.					
3. If any of theses complications are identified, do not administer misoprostol.					
MEDICAL EVALUATION					
1. Take a reproductive health history.					
2. Perform limited physical (heart, lungs and abdomen) and pelvic examination to confirm the incomplete abortion status.					
3. The crucial clinical findings are an open cervical os and a uterine size less than 12 weeks of gestation.					
4. Give the woman information about her condition and what to expect.					
5. Discuss her reproductive goals, as appropriate.					
6. If she has an IUD in place, IUD should be removed before drug administration.					
7. Make sure she has no coagulation disorders and is not currently taking anticoagulants.					
GETTING READY					
1. Explain to the woman (and her support person) what is going to be given to her, listen to her and respond attentively to her questions and concerns.					
2. Provide continual emotional support and reassurance, as feasible.					
3. Explain that she may have some side effects.					
4. Inform client of the course of treatment which involves a follow-up visit.					
Regimen					
1. A single dose of 600mcg oral.					
Course of treatment					
1. Explain the use of misoprostol as well as possible side effects and success rate to the woman. Explain that surgical intervention may be needed to empty the uterus for some women.					
2. Explain to her that expulsion can occur over several hours to several weeks and bleeding will most likely be heavy for about three to four days followed by light bleeding or spotting for several weeks.					

8. LEARNING GUIDE FOR POST-ABORTION CARE (MISOPROSTOL) (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
3. The woman can take the misoprostol at health facility or at home. Encourage her to ask any questions or voice any concerns.					
4. Routine antibiotic coverage is not necessary and local norms regarding antibiotic use should be followed if the woman requires antibiotic coverage based on history or clinical exam.					
Follow-up visit in 7-14 days					
1. Take clinical history and conduct bi-manual exam to see if uterus is firm and well involuted.					
2. Decide surgical completion only on clinical condition of the woman.					
3. Surgical intervention not recommended prior to seven days after treatment unless medically necessary (i.e. for haemostatic or infection control)					
4. Provide contraceptive counseling and a suitable contraceptive method if desired (See **Learning Guide for Post-abortion Family Planning Counselling**).					
Effects and side effects					
1. Bleeding: advise her to seek medical help if she soaks more than two extra large sanitary pads or equivalent per hour for two consecutive hours.					
2. Cramping: give analgesia, (e.g. paracetamol).					
3. Fever and/or chills: advise her to seek medical attention if she has a fever that persists more than 24 hours after taking misoprostol.					
4. Advise her that nausea and vomiting may occur two to six hours after taking misoprostol and that this usually resolves within six hours.					
5. Advise her that she may experience diarrhoea but that it should resolve within a day.					
6. Advise her that she may experience a skin rash and that it should resolve within several hours.					

8. CHECKLIST FOR POST-ABORTION CARE (MISOPROSTOL)

(To be used by the **Participant** for practise and by the **Trainer** at the end of the course)
Place a "✓" in case box if step/task is performed **satisfactorily**, an "✗" if it is **not** performed satisfactorily, or **N/O** if not observed.
Satisfactory: Performs the step or task according to the standard procedure or guidelines
Unsatisfactory: Unable to perform the step or task according to the standard procedure or guidelines
Not observed: Step or task not performed by participant during evaluation by trainer

Participant: _____ Date observed: _____

(Many of the following steps/tasks should be performed simultaneously.)

STEP/TASK	CASES				
	1	2	3	4	5
INITIAL ASSESSMENT					
1. Greet the woman respectfully and with kindness.					
2. Assess client for shock and other life-threatening conditions.					
MEDICAL EVALUATION					
1. Take a reproductive health history and perform physical and pelvic examination.					
2. Give her information about her condition.					
3. Discuss her reproductive goals.					
GETTING READY					
1. Explain to the woman (and her support person) what is going to be given to her, listen to her and respond attentively to her questions and concerns.					
2. Provide continual emotional support and reassurance, as feasible.					
3. Ask about allergies to misoprostol or other prostaglandins.					
Regimen					
1. Give a single dose of misoprostol 600mcg oral.					
Course of treatment					
1. Explain that expulsion can occur over several hours to several weeks and bleeding will most likely be heavy for about three to four days followed by light bleeding or spotting for several weeks.					
2. Routine antibiotic is not necessary except for clinical indications.					
Follow-up visit in 7-14 days					
1. Take clinical history and do bi-manual exam to see if uterus is firm and well involuted or if surgical intervention is needed.					
2. Provide contraceptive counselling and a suitable contraceptive method if desired (See Post-abortion Family Planning Counselling Checklist).					
Effects and side effects					
1. Advise the woman to seek medical attention if she soaks more than two extra large sanitary pads or equivalent per hour for two consecutive hours.					
2. Advise the woman to seek medical attention if she a fever persists more than 24 hours after taking misoprostol.					
3. Nausea, vomiting, diarrhoea and rash often resolve in few hours. If not they are managed with routine drugs.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

9. LEARNING GUIDE FOR POST-ABORTION FAMILY PLANNING COUNSELLING

(To be completed by **Participants**)

Rate the performance of each step or task observed using the following rating scale (Write 1, 2 or 3 as the case may be in the box provided):

1. **Needs improvement:** Step or task not performed correctly or out of sequence (if necessary) or is omitted
2. **Competently performed:** Step or task performed correctly in proper sequence (if necessary) but participant does not progress from step to step efficiently
3. **Proficiently performed:** Step or task efficiently and precisely performed in the proper sequence (if necessary)

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK		CASES				
		1	2	3	4	5
INITIAL INTERVIEW						
1.	Greet the woman respectfully and with kindness.					
2.	Assess whether counselling is appropriate at this time (if not, arrange for her to be counselled at another time and be sure she understands that she can become pregnant before her next menses).					
3.	Assure necessary privacy.					
4.	Ask if she was using contraception before she became pregnant. If she was, find out if she: ■ used the method correctly ■ discontinued use ■ had any trouble using the method ■ has any concerns about the method.					
5.	Make sure that the woman does not have a medical condition that would contraindicate use of a particular method (see **Family Planning: A Global Handbook for Providers**).					
6.	Provide general information about family planning.					
7.	Provide the woman with information about the contraceptive choices available and the benefits and limitations of each: ■ show where and how each is used ■ explain how the method works and its effectiveness ■ explain possible side effects and other health problems ■ explain the common side effects.					
8.	Discuss the woman's needs, concerns and fears in a thorough and sympathetic manner.					
9.	Help the woman begin to choose an appropriate method.					
10.	Explain potential side effects and make sure that each is fully understood.					
11.	Perform further evaluation (physical examination), if indicated. (Non-medical counsellors must refer woman for further evaluation.)					
12.	Discuss what to do if the woman experiences any side effects or problems.					
13.	Provide follow-up visit instructions.					
14.	Assure woman she can return to the same clinic at any time to receive advice or medical attention.					
15.	Ask the woman to repeat instructions.					
16.	Answer the woman's questions.					

9. CHECKLIST FOR POST-ABORTION FAMILY PLANNING COUNSELLING

(To be used by the **Participant** for practise and by the **Trainer** at the end of the course)
Place a "✓" in case box if step/task is performed **satisfactorily**, an "✗" if it is **not** performed satisfactorily, or **N/O** if not observed.
Satisfactory: Performs the step or task according to the standard procedure or guidelines
Unsatisfactory: Unable to perform the step or task according to the standard procedure or guidelines
Not observed: Step or task not performed by participant during evaluation by trainer

Participant: _____ Date observed: _____

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK	CASES				
	1	2	3	4	5
INITIAL INTERVIEW					
1. Greet woman respectfully and with kindness.					
2. Assess whether counselling is appropriate at this time (if not, arrange for counselling at another time).					
3. Assure necessary privacy.					
4. Ask about her previous experience with contraception. Provide general information about family planning.					
5. Give the woman information about the contraceptive choices available and the benefits and limitations of each.					
6. Discuss woman's needs, concerns and fears. Help her begin to choose an appropriate method.					
7. Perform physical examination, if indicated. (Non-medical counsellors must refer woman for further evaluation.)					
8. Discuss what to do if the woman experiences any side effects or problems.					
9. Provide follow-up visit instructions and assure woman that she can return to the same clinic at any time.					
10. Ask the woman to repeat instructions and answer any questions.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

NOTES

8

SKILLS PRACTISE SESSION: POSTPARTUM ASSESSMENT *and* CARE, *including* POSTPARTUM FAMILY PLANNING

Purpose

The purpose of this activity is to enable participants to practise postpartum assessment and care, including providing choice of methods of family planning and achieve competency in the skills required.

Instructions

This activity should be conducted in a simulated setting, using the appropriate model.

Resources

The following equipment or representations thereof:

- pelvic model

Participants should review the Learning Guide for Postpartum Assessment before beginning the activity.

Learning Guide for postpartum assessment

Learning Guide for postpartum family planning

The trainer should demonstrate the steps/tasks in the procedure of conducting postpartum assessment and care, including post-partum family planning for participants.

Under the guidance of the trainer, participants should then work in pairs to practise the steps/tasks and observe each other's performance, using the Learning Guide for Postpartum Assessment and the Learning Guide for Postpartum family

Participants should be able to perform the steps/tasks in the Learning Guide for Postpartum Assessment and Learning Guide for Postpartum Family planning before skill competency is assessed by the trainer in the simulated setting, using the Checklist for postpartum assessment and Checklist for postpartum family planning.

Checklist for postpartum assessment

Checklist for postpartum family planning

Finally, following supervised practise at a clinical site, the trainer should assess the skill competency of each participant, using the Checklist for Postpartum Assessment and Checklist for postpartum family planning.[9]

[9] If clients are not available at clinical sites for participants to practise postpartum assessment and care, including postpartum family planning, the skills should be taught, practised and assessed in a simulated setting.

10. LEARNING GUIDE FOR POSTPARTUM ASSESSMENT

(To be completed by **Participants**)

Rate the performance of each step or task observed using the following rating scale (Write 1, 2 or 3 as the case may be in the box provided):

1. **Needs improvement:** Step or task not performed correctly or out of sequence (if necessary) or is omitted
2. **Competently performed:** Step or task performed correctly in proper sequence (if necessary) but participant does not progress from step to step efficiently
3. **Proficiently performed:** Step or task efficiently and precisely performed in the proper sequence (if necessary)

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY					
1. Prepare the client exam area and necessary equipment.					
2. Greet the woman respectfully and with kindness and introduce yourself.					
3. Offer the woman a seat.					
4. Explain to the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.					
5. Perform a Quick Check to identify any danger signs (heavy vaginal bleeding, severe headache/blurred vision, convulsions/loss of consciousness, difficulty breathing, fever, severe abdominal pain, foul-smelling discharge, signs of depression/hallucinations). If danger signs are present, stabilize and manage or refer as appropriate.					
6. Check the woman's record or ask her about her **childbirth** and record her responses: ■ date of baby's birth ■ place of birth and birth attendant ■ mode of childbirth (SVD, Caesarean section, instrumental assistance) ■ pregnancy complications (pre-eclampsia, convulsions, anaemia, infection, syphilis, malaria) ■ complications during or after birth (fever, heavy bleeding, convulsions, lacerations) ■ condition of the baby at birth.					
7. Ask the woman about current postpartum period: ■ pain, swelling or discharge from perineum ■ bleeding/lochia ■ breastfeeding (frequency, day-and-night, attachment and sucking, baby and mother satisfaction, problems) ■ problems with passing or holding urine or stool ■ neonatal complications ■ thoughts and feelings about the baby ■ existing conditions ■ other problems.					
8. Ask the woman about her previous postpartum experiences: ■ previous breastfeeding experience ■ previous physical or mental problems ■ previous PPH and puerperal sepsis.					
9. Ask the woman about family planning and record her responses: ■ desire for more children/spacing ■ methods used ■ method preference					
10. Ask the woman about social support and record her responses: ■ main support persons (e.g., husband, mother, mother-in-law) ■ availability of money for food and baby supplies ■ community and social support.					

10. LEARNING GUIDE FOR POSTPARTUM ASSESSMENT (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
PHYSICAL EXAMINATION					
1. Observe general appearance (gait, facial expression, hygiene, skin).					
2. Help the woman onto the examination table and place a pillow under her head and upper shoulders.					
3. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean cloth or air dry.					
4. Explain each step of the physical examination as you proceed and encourage the woman to ask questions.					
5. Take the woman's temperature, pulse, respiration and blood pressure and record findings.					
6. Examine the woman's head and neck (Check the woman's conjunctiva for pallor and jaundice).					
7. Examination of the chest: ■ examine breasts for engorgement, cracked nipples, local tenderness, redness or swelling, regional lymph nodes ■ examine the lungs and heart.					
8. Examine abdomen: ■ fresh scars ■ firmness and size of uterus ■ tenderness (lower abdomen) ■ other abdominal organs and abnormal masses.					
9. Examine legs: ■ localised pain, tenderness or swelling ■ calf and thigh tenderness.					
10. Put new examination or high-level disinfected gloves on both hands.					
11. Examine perineum and genitalia: ■ tears/ lesions ■ swelling ■ pus or abnormal discharges ■ regional lymph nodes.					
12. Observe lochia: ■ colour ■ odour ■ amount.					
13. Remove gloves and discard them in a leakproof container or plastic bag.					
14. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.					
MOTHER-NEWBORN OBSERVATIONS					
1. Observe interaction/bonding.					
2. Observe breastfeeding (preparation, position, supporting, duration and attachment, finishing feed, post-breastfeeding care and satisfaction).					
POST-EXAMINATION TASKS					
1. Ask the woman if she has any additional questions.					
2. Help the woman off the examination table and offer her a seat.					
3. Record all relevant findings from the physical examination on the woman's record.					

10. LEARNING GUIDE FOR POSTPARTUM ASSESSMENT (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
PROVIDING CARE/TAKING ACTION					
1. Care should be based on the findings of the assessment. Individual problems/needs will vary from client to client, however, the following interventions form the basic package of postpartum care that should be made available to all women.					
2. ■ Explain the importance of breastfeeding and encourage exclusive breastfeeding on-demand ■ Explain techniques for successful breastfeeding , with specific reference to attachment, positioning, effecting sucking, finishing the feed ■ Explain how the new mother can care for her breasts to prevent problems during breastfeeding					
3. Provide nutritional counselling and supplements as locally applicable: ■ Iron-folate ■ Vitamin A					
4. Provide immunizations and preventive therapy as locally appropriate: ■ Tetanus toxoid ■ Malaria prophylaxis (use of ITNs for self and baby if in malarial area) ■ Mebendazole (according to local policy)					
5. Counsel on prevention of infection, with particular reference to: For baby: ■ cord care ■ bathing For mother: ■ genital hygiene ■ hand hygiene					
6. Explain to the woman the importance of rest and sleep.					
7. Provide counseling about warmth: ■ Dressing and wrapping the baby ■ Keeping the room warm					
8. Counsel on mother-newborn and family relationships.					
9. Counsel on sexual relations and safer sex.					
10. Counsel on family planning, using the Learning Guide for Post Partum Family Planning.					
11. Treat for syphilis if tested positive and untreated during pregnancy.					
12. Record the relevant details of care for mother and baby.					
13. Ask the mother if she has any further questions or concerns.					

10. CHECKLIST FOR POSTPARTUM ASSESSMENT

(To be used by the **Participant** for practise and by the **Trainer** at the end of the course)
Place a "✓" in case box if step/task is performed **satisfactorily**, an "✗" if it is **not** performed satisfactorily, or **N/O** if not observed.
Satisfactory: Performs the step or task according to the standard procedure or guidelines
Unsatisfactory: Unable to perform the step or task according to the standard procedure or guidelines
Not observed: Step or task not performed by participant during evaluation by trainer

Participant: _____ Date observed: _____

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY					
1. Greet the woman respectfully and with kindness and introduce yourself.					
2. Make sure that Quick Check has been performed to identify any danger signs, and stabilise and manage or refer if danger signs present.					
HISTORY					
1. Check the woman's record or ask her about her childbirth and record her responses.					
2. Ask the woman about current postpartum period.					
3. Ask the woman about her medical history.					
4. Ask the woman about family planning and record her responses.					
5. Ask the woman about social support and record her responses.					
PHYSICAL EXAMINATION					
1. Observe general appearance (gait, facial expression, hygiene, skin).					
2. Help the woman onto the examination table and place a pillow under her head and upper shoulders.					
3. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean cloth or air dry.					
4. Take the woman's temperature, pulse, respiration and blood pressure and record findings.					
5. Examine the woman's head and neck (Check the woman's conjunctiva for pallor and jaundice).					
6. Examination of the breasts, heart, lungs.					
7. Examine abdomen.					
8. Examine legs.					
9. Put new examination or high-level disinfected gloves on both hands.					
10. Examine perineum and genitalia.					
11. Observe lochia.					
12. Remove gloves and discard them in a leakproof container or plastic bag.					
13. Use antiseptic handrub or wash.					

10. CHECKLIST FOR POSTPARTUM ASSESSMENT (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
PROVIDING CARE/TAKING ACTION					
1. Explain the importance of breastfeeding and how to breastfeed successfully.					
2. Provide nutritional counselling and supplements as locally applicable.					
3. Provide immunisations and preventive therapy as locally appropriate.					
4. Counsel on prevention of infection, for both mother and baby.					
5. Provide counseling about importance of keeping the baby warm.					
6. Counsel on mother-newborn and family relationships, sexual relationships and family planning.					
7. Record the relevant details of care for mother and baby.					
8. Ask the mother if she has any further questions or concerns.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

11. LEARNING GUIDE FOR POSTPARTUM FAMILY PLANNING

(To be completed by **Participants**)

Rate the performance of each step or task observed using the following rating scale (Write 1, 2 or 3 as the case may be in the box provided):

1. **Needs improvement:** Step or task not performed correctly or out of sequence (if necessary) or is omitted
2. **Competently performed:** Step or task performed correctly in proper sequence (if necessary) but participant does not progress from step to step efficiently
3. **Proficiently performed:** Step or task efficiently and precisely performed in the proper sequence (if necessary)

Note: Participants should use this learning guide in conjunction with the **Learning Guide for Basic Postpartum Care**

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY					
1. Prepare the client care area and necessary equipment.					
2. Greet the woman respectfully and with kindness and introduce yourself. Listen to her and respond attentively to her questions and concerns.					
PROVIDING CARE/TAKING ACTION					
1. Ask how long the woman plans to breastfeed.					
2. Ask how frequently the baby feeds during the day and during the night.					
3. Explain that women who are breastfeeding exclusively do not need contraception for at least six weeks postpartum. If they are using lactational amenorrhoea method (LAM), they may not need it for up to six months.					
4. Explain how LAM works and possible problems.					
5. If the woman is breastfeeding, but not exclusively, provide information about: ■ the contraceptive choices available and the potential effect of some contraceptives on breastfeeding and the health of the baby ■ the time for starting each method with respect to breastfeeding status.					
6. Make sure that the woman does not have a medical condition that would contraindicate use of a particular method (see Family Planning: A Global Handbook for Providers).					
7. Explain that to avoid all risk of pregnancy, contraception should be started at the time of (barriers, spermicides, withdrawal) or before (hormonals, IUD or voluntary sterilisation) the first sexual intercourse.					
8. Help the woman choose an appropriate method.					
9. Provide method of informed choice after counselling and instructions for use.					
10. Ask the woman to repeat instructions.					
11. Discuss what to do if the woman experiences side effects or problems with the method of choice.					
12. Provide follow-up visit instructions, including assurances that the woman can return to the clinic at any time to receive advice and medical attention.					
13. Answer any questions the woman may have.					

11. CHECKLIST FOR POSTPARTUM FAMILY PLANNING

(To be used by the **Participant** for practise and by the **Trainer** at the end of the course)
Place a "✓" in case box if step/task is performed **satisfactorily**, an "✗" if it is **not** performed satisfactorily, or **N/O** if not observed.
Satisfactory: Performs the step or task according to the standard procedure or guidelines
Unsatisfactory: Unable to perform the step or task according to the standard procedure or guidelines
Not observed: Step or task not performed by participant during evaluation by trainer

Participant: _____ Date observed: _____

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY					
1. Prepare the client care area and necessary equipment.					
2. Greet the woman respectfully and with kindness and introduce yourself					
PROVIDING CARE/TAKING ACTION					
1. Ask about breastfeeding practice and intention					
2. Explain that women who are breastfeeding exclusively do not need contraception for at least six weeks postpartum. If they are using lactational amenorrhoea method (LAM), they may not need it for up to six months.					
3. Explain how LAM works and possible problems.					
4. If the woman is breastfeeding, but not exclusively, provide information about the contraceptive choices available and when they can be started					
5. Make sure that the woman does not have a medical condition that would contraindicate use of a particular method					
6. Help the woman choose an appropriate method and provide method of informed choice					
7. Discuss what to do if the woman experiences side effects or problems with the method of choice.					
8. Provide follow-up visit instructions, including assurances that the woman can return to the clinic at any time to receive advice and medical attention					
9. Answer any questions the woman may have.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

9

SKILLS PRACTISE SESSION: MANUAL REMOVAL *of* PLACENTA

Purpose

The purpose of this activity is to enable participants to practise manual removal of the placenta and achieve competency in the skills required.

Instructions

This activity should be conducted in a simulated setting, using the appropriate model.

Resources

The following equipment or representations thereof:

- childbirth simulator and placenta/cord/amnion model
- high-level disinfected or sterile elbow-length surgical gloves
- personal protective equipment
- receptacle for placenta.

Participants should review the Learning Guide for Manual Removal of Placenta before beginning the activity.	Learning Guide for Manual Removal of Placenta
The trainer should demonstrate the steps/tasks in the procedure of manual removal of the placenta for participants. Under the guidance of the trainer, participants should then work in pairs to practise the steps/tasks and observe each other's performance, using the Learning Guide for Manual Removal of Placenta.	Learning Guide for Manual Removal of Placenta
Participants should be able to perform the steps/tasks in the Learning Guide for Manual Removal of Placenta before skill competency is assessed by the trainer in the simulated setting, using the Checklist for Manual Removal of Placenta.	Checklist for Manual Removal of Placenta
Finally, following supervised practise at a clinical site, the trainer should assess the skill competency of each participant, using the Checklist for Manual Removal of Placenta.[10]	Checklist for Manual Removal of Placenta

[10] If clients are not available at clinical sites for participants to practise manual removal of the placenta, the skills should be taught, practised and assessed in a simulated setting.

12. LEARNING GUIDE FOR MANUAL REMOVAL OF PLACENTA

(To be completed by **Participants**)

Rate the performance of each step or task observed using the following rating scale (Write 1, 2 or 3 as the case may be in the box provided):

1. **Needs improvement:** Step or task not performed correctly or out of sequence (if necessary) or is omitted
2. **Competently performed:** Step or task performed correctly in proper sequence (if necessary) but participant does not progress from step to step efficiently
3. **Proficiently performed:** Step or task efficiently and precisely performed in the proper sequence (if necessary)

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY					
1. Prepare the necessary equipment.					
2. Explain to the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.					
3. Provide continual emotional support and reassurance, as feasible.					
4. Have the woman empty her bladder or insert a catheter, if necessary.					
5. Give anaesthesia (IV pethidine and diazepam, or ketamine).					
6. Give a single dose of prophylactic antibiotics: ■ ampiclox/ampicillin 2g IV PLUS metronidazole 500mg IV, OR ■ cefazolin 1g IV PLUS metronidazole 500mg IV.					
7. Put on personal protective equipment.					
MANUAL REMOVAL OF PLACENTA					
1. Use antiseptic handrub or wash hands and forearms thoroughly with soap and water and dry with a sterile cloth or air dry.					
2. Put high-level disinfected or sterile surgical gloves on both hands. (Note: elbow-length gloves should be used, if available or improvise.)					
3. Hold the umbilical cord with a clamp.					
4. Pull the cord gently until it is parallel to the floor.					
5. Place the fingers of one hand into the vagina and into the uterine cavity, following the direction of the cord until the placenta is located.					
6. When the placenta has been located, let go of the cord and move that hand onto the abdomen to support the fundus abdominally and to provide counter-traction to prevent uterine inversion.					
7. Move the fingers of the hand in the uterus laterally until the edge of the placenta is located.					
8. Keeping the fingers tightly together, ease the edge of the hand gently between the placenta and the uterine wall, with the palm facing the placenta.					
9. Gradually move the hand back and forth in a smooth lateral motion until the whole placenta is separated from the uterine wall: ■ if the placenta does not separate from the uterine wall by gentle lateral movement of the fingers at the line of cleavage, suspect placenta accreta and arrange for surgical intervention.					

12. LEARNING GUIDE FOR MANUAL REMOVAL OF PLACENTA (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
10. When the placenta is completely separated: ■ palpate the inside of the uterine cavity to ensure that all placental tissue has been removed ■ slowly withdraw the hand from the uterus bringing the placenta with it ■ continue to provide counter-traction to the fundus by pushing it in the opposite direction of the hand that is being withdrawn.					
11. Give oxytocin 20 units in 1L IV fluid (normal saline or Ringer's lactate) at 60dpm.					
12. Have an assistant massage the fundus to encourage a tonic uterine contraction.					
13. If there is continued heavy bleeding, give ergometrine 0.2mg IM or give prostaglandins.					
14. Examine the uterine surface of the placenta to ensure that it is complete.					
15. Examine the woman carefully and repair any tears to the cervix or vagina, or repair episiotomy.					
POST-PROCEDURE TASKS					
1. Dispose of needle and syringe in a puncture-proof container.					
2. Remove gloves and discard them in a leakproof container or plastic bag.					
3. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.					
4. Monitor vaginal bleeding and take the woman's vital signs: ■ every 15 minutes for one hour ■ then every 30 minutes for two hours.					
5. Make sure that the uterus is firmly contracted.					
6. Record procedure and findings on woman's record.					

12. CHECKLIST FOR MANUAL REMOVAL OF PLACENTA

(To be used by the **Participant** for practise and by the **Trainer** at the end of the course)
Place a "✓" in case box if step/task is performed **satisfactorily**, an "✗" if it is **not** performed satisfactorily, or **N/O** if not observed.
Satisfactory: Performs the step or task according to the standard procedure or guidelines
Unsatisfactory: Unable to perform the step or task according to the standard procedure or guidelines
Not observed: Step or task not performed by participant during evaluation by trainer

Participant: _____ Date observed: _____

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY					
1. Prepare the necessary equipment.					
2. Explain to the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.					
3. Provide continual emotional support and reassurance, as feasible.					
4. Have the woman empty her bladder or insert a catheter.					
5. Give anaesthesia.					
6. Give prophylactic antibiotics.					
7. Put on personal protective equipment.					
MANUAL REMOVAL OF PLACENTA					
1. Use antiseptic handrub or wash hands and forearms thoroughly and put on high-level disinfected or sterile surgical gloves (use elbow-length gloves, if available or improvise).					
2. Hold the umbilical cord with a clamp and pull the cord gently.					
3. Place the fingers of one hand into the uterine cavity and locate the placenta.					
4. Provide counter-traction abdominally.					
5. Move the hand back and forth in a smooth lateral motion until the whole placenta is separated from the uterine wall.					
6. Withdraw the hand from the uterus, bringing the placenta with it while continuing to provide counter-traction abdominally.					
7. Give oxytocin in IV fluid.					
8. Have an assistant massage the fundus to encourage atonic uterine contraction.					
9. If there is continued heavy bleeding, give ergometrine by IM injection or prostaglandins.					
10. Examine the uterine surface of the placenta to ensure that it is complete.					
11. Examine the woman carefully and repair any tears to the cervix or vagina or repair episiotomy.					
POST-PROCEDURE TASKS					
1. Remove gloves and discard them in a leakproof container or plastic bag.					
2. Use antiseptic handrub or wash hands thoroughly.					
3. Monitor vaginal bleeding, take the woman's vital signs and make sure that the uterus is firmly contracted.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

10

SKILLS PRACTISE SESSION: BI-MANUAL COMPRESSION *of the* UTERUS

Purpose

The purpose of this activity is to enable participants to practise bi-manual compression of the uterus and achieve competency in the skills required.

Instructions

This activity should be conducted in a simulated setting, using the appropriate models.

Resources

The following equipment or representations thereof:

- childbirth simulator and placenta/cord/amnion model
- childbirth kit
- high-level disinfected or sterile surgical gloves
- personal protective equipment.

Participants should review the Learning Guide for Bi-manual Compression of the Uterus before beginning the activity.	Learning Guide for Bi-manual Compression of the Uterus
The trainer should demonstrate the steps/tasks in the procedure of bi-manual compression of the uterus for participants. Under the guidance of the trainer, participants should then work in pairs to practise the steps/tasks and observe each other's performance, using the Learning Guide for Bi-manual Compression of the Uterus.	Learning Guide for Bi-manual Compression of the Uterus
Participants should be able to perform the steps/tasks in the Learning Guide for Bi-manual Compression of the Uterus before skill competency is assessed by the trainer in the simulated setting, using the Checklist for Bi-manual Compression of the Uterus.	Checklist for Bi-manual Compression of the Uterus
Finally, following supervised practise at a clinical site, the trainer should assess the skill competency of each participant, using the Checklist for Bi-manual Compression of the Uterus.[11]	Checklist for Bi-manual Compression of the Uterus

[11] If clients are not available at clinical sites for participants to practise bi-manual compression of the uterus, the skills should be taught, practised and assessed in a simulated setting.

13. LEARNING GUIDE FOR BI-MANUAL COMPRESSION OF THE UTERUS

(To be completed by **Participants**)

Rate the performance of each step or task observed using the following rating scale (Write 1, 2 or 3 as the case may be in the box provided):

1. **Needs improvement:** Step or task not performed correctly or out of sequence (if necessary) or is omitted
2. **Competently performed:** Step or task performed correctly in proper sequence (if necessary) but participant does not progress from step to step efficiently
3. **Proficiently performed:** Step or task efficiently and precisely performed in the proper sequence (if necessary)

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY					
1. Explain to the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.					
2. Provide continual emotional support and reassurance, as feasible.					
3. Put on personal protective equipment.					
BI-MANUAL COMPRESSION					
1. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a sterile cloth or air dry.					
2. Put high-level disinfected or sterile surgical gloves on both hands.					
3. Clean the vulva and perineum with antiseptic solution.					
4. Insert one hand into the vagina and form a fist.					
5. Place the fist into the anterior vaginal fornix and apply pressure against the anterior wall of the uterus.					
6. Place the other hand on the abdomen behind the uterus.					
7. Press the abdominal hand deeply into the abdomen and apply pressure against the posterior wall of the uterus.					
8. Maintain compression until bleeding is controlled and the uterus contracts.					
POST-PROCEDURE TASKS					
1. Remove gloves and discard them in leakproof container or plastic bag.					
2. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.					
3. Monitor vaginal bleeding and take the woman's vital signs: ■ every 15 minutes for one hour ■ then every 30 minutes for two hours.					
4. Make sure that the uterus is firmly contracted.					

13. CHECKLIST FOR BI-MANUAL COMPRESSION OF THE UTERUS

(To be used by the **Participant** for practise and by the **Trainer** at the end of the course)
Place a "✓" in case box if step/task is performed **satisfactorily**, an "✗" if it is **not** performed satisfactorily, or **N/O** if not observed.
Satisfactory: Performs the step or task according to the standard procedure or guidelines
Unsatisfactory: Unable to perform the step or task according to the standard procedure or guidelines
Not observed: Step or task not performed by participant during evaluation by trainer

Participant: _____ Date observed: _____

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY					
1. Explain to the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.					
2. Provide continual emotional support and reassurance, as feasible.					
3. Put on personal protective equipment.					
BI-MANUAL COMPRESSION					
1. Use antiseptic handrub or wash hands thoroughly and put on high-level disinfected or sterile surgical gloves.					
2. Clean the vulva and perineum with antiseptic solution.					
3. Insert fist into anterior vaginal fornix and apply pressure against the anterior wall of the uterus.					
4. Place other hand on abdomen behind uterus, press the hand deeply into the abdomen and apply pressure against the posterior wall of the uterus.					
5. Maintain compression until bleeding is controlled and the uterus contracts.					
POST-PROCEDURE TASKS					
1. Remove gloves and discard them in leakproof container or plastic bag.					
2. Use antiseptic handrub or wash hands thoroughly.					
3. Monitor vaginal bleeding, take the woman's vital signs and make sure that the uterus is firmly contracted.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

11

SKILLS PRACTISE SESSION: COMPRESSION *of the* ABDOMINAL AORTA

Purpose

The purpose of this activity is to enable participants to practise compression of the abdominal aorta and achieve competency in the skills required.

Instructions

This activity should be conducted in a simulated setting, using the appropriate models.

Resources

The following equipment or representations thereof:

- childbirth simulator and placenta/cord/amnion model.

Participants should review the Learning Guide for Compression of the Abdominal Aorta before beginning the activity.

Learning Guide for Compression of the Abdominal Aorta

The trainer should demonstrate the steps/tasks in the procedure of compression of the abdominal aorta for participants. Under the guidance of the trainer, participants should then work in groups of three to practise the steps/tasks, while one participant performs the procedure on another, the third participant should use the Learning Guide for Compression of the Abdominal Aorta to observe performance. Participants should then reverse roles until each has had an opportunity to perform the procedure and be observed.

Learning Guide for Compression of the Abdominal Aorta

Participants should be able to perform the steps/tasks in the Learning Guide for Compression of the Abdominal Aorta before skill competency is assessed by the trainer in the simulated setting, using the Checklist for Compression of the Abdominal Aorta.

Checklist for Compression of the Abdominal Aorta

Finally, following supervised practise at a clinical site, the trainer should assess the skill competency of each participant, using the Checklist for Compression of the Abdominal Aorta.[12]

Checklist for Compression of the Abdominal Aorta

[12] If clients are not available at clinical sites for participants to practise compression of the abdominal aorta, the skills should be taught, practised and assessed in a simulated setting.

14. LEARNING GUIDE FOR COMPRESSION OF THE ABDOMINAL AORTA

(To be completed by **Participants**)

Rate the performance of each step or task observed using the following rating scale (Write 1, 2 or 3 as the case may be in the box provided):

1. **Needs improvement:** Step or task not performed correctly or out of sequence (if necessary) or is omitted
2. **Competently performed:** Step or task performed correctly in proper sequence (if necessary) but participant does not progress from step to step efficiently
3. **Proficiently performed:** Step or task efficiently and precisely performed in the proper sequence (if necessary)

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY					
1. Explain to the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.					
2. Provide continual emotional support and reassurance, as feasible.					
Note: *Steps 1 and 2 should be implemented at the same time as the following steps.*					
COMPRESSION OF THE ABDOMINAL AORTA					
1. Place a closed fist just above the umbilicus and slightly to the left. Pulpate the aortic pulse.					
2. Apply downward pressure over the abdominal aorta directly through the abdominal wall.					
3. With the other hand, palpate the femoral pulse to check the adequacy of compression: ■ if the pulse is palpable during compression, the pressure is inadequate ■ if the pulse is not palpable during compression, the pressure is adequate.					
4. Maintain compression releasing intermittently every five minutes until bleeding is controlled.					
POST-PROCEDURE TASKS					
1. Monitor vaginal bleeding and take the woman's vital signs: ■ every 15 minutes for one hour ■ then every 30 minutes for two hours.					
2. Make sure that the uterus is firmly contracted.					

14. CHECKLIST FOR COMPRESSION OF THE ABDOMINAL AORTA

(To be used by the **Participant** for practise and by the **Trainer** at the end of the course)
Place a "✓" in case box if step/task is performed **satisfactorily**, an "✗" if it is **not** performed satisfactorily, or **N/O** if not observed.
Satisfactory: Performs the step or task according to the standard procedure or guidelines
Unsatisfactory: Unable to perform the step or task according to the standard procedure or guidelines
Not observed: Step or task not performed by participant during evaluation by trainer

Participant: _____ Date observed: _____

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY					
1. Explain to the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.					
2. Provide continual emotional support and reassurance, as feasible.					
COMPRESSION OF THE ABDOMINAL AORTA					
1. Place a closed fist just above the umbilicus and slightly to the left. Palpate the aortic pulse.					
2. Apply downward pressure over the abdominal aorta directly through the abdominal wall.					
3. With the other hand, palpate the femoral pulse to check the adequacy of compression.					
4. Maintain compression releasing intermittently every five minutes until bleeding is controlled.					
POST-PROCEDURE TASKS					
1. Monitor vaginal bleeding, take the woman's vital signs and make sure that the uterus is firmly contracted.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

12

SKILLS PRACTISE SESSION: CAESAREAN SECTION

Purpose

The purpose of this activity is to enable participants to practise performing Caesarean section and achieve competency in the skills required.

Instructions

This activity should be done in a real client situation under close supervision of the trainer.

Resources

The following equipment or representations thereof:

- high-level disinfected or sterile surgical gloves
- pelvic model or foam block
- needles and syringes
- suture materials
- foetal model (with hard skull)
- receptacle for placenta
- childbirth kit.

Participants should review the Learning Guide for Caesarean Section before beginning the activity.	Learning Guide for Caesarean Section
The trainer should demonstrate the correct use of all instruments and correct suturing and knots technique with a pelvic block or foam model. Under the guidance of the trainer, participants should then do a return demonstration.	Learning Guide for Caesarean Section
The trainer should then demonstrate each step of a Caesarean section with a client. One participant acts as second assistant. As second assistant, the participant observes the demonstration.	Learning Guide for Caesarean Section
With another client, the trainer demonstrates each step again but this time the same participant acts as first assistant. As first assistant, the participant provides retraction, keeps site clear of blood, removes clamps, cuts sutures and, under guidance of the trainer, closes the abdomen.	Learning Guide for Caesarean Section
With the next client, the same participant now performs the procedure with the trainer as first assistant.	Learning Guide for Caesarean Section
Finally, the same participant performs the procedure with a client. The trainer acts as second assistant. The trainer should assess the skill competency of the participant, using the Checklist for Caesarean Section.[13]	Checklist for Caesarean Section

[13] If clients are not available at clinical sites for participants to practise Caesarean Section, the skills should be taught, practised and assessed in a simulated setting.

15. LEARNING GUIDE FOR CAESAREAN SECTION

(To be completed by **Participants**)

Rate the performance of each step or task observed using the following rating scale (Write 1, 2 or 3 as the case may be in the box provided):

1. **Needs improvement:** Step or task not performed correctly or out of sequence (if necessary) or is omitted
2. **Competently performed:** Step or task performed correctly in proper sequence (if necessary) but participant does not progress from step to step efficiently
3. **Proficiently performed:** Step or task efficiently and precisely performed in the proper sequence (if necessary)

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY					
1. Prepare the necessary equipment.					
2. Explain to the woman (and her support person) what is going to be done, listen to her, respond attentively to her questions and concerns and obtain informed consent.					
3. Examine the woman, assess her condition and examine the medical record for information and completeness.					
4. Obtain blood for haemoglobin and blood type and cross-match two units of blood.					
5. Set up an IV line and infuse 500cc of IV fluids (normal saline or Ringer's lactate).					
6. Give pre-medication including: ■ atropine 0.6mg IM (or IV if in theatre) ■ magnesium trisilicate 300mg.					
7. Catheterise the woman's bladder.					
8. Help the woman to put on a gown and cap.					
9. Evaluate anaesthetic options: ■ general anaesthetic ■ local anaesthetic ■ spinal anaesthetic.					
PRE-PROCEDURE TASKS					
1. Put on theatre clothes, protective footwear, cap, facemask, protective eyeglasses and a plastic apron.					
2. Perform a surgical handscrub for three to five minutes and dry each hand on a separate high-level disinfected or sterile towel.					
3. Put on a sterile gown and put high-level disinfected or sterile surgical gloves on both hands.					
4. Ensure that the instruments and supplies are available and arrange them on a sterile tray or in a high-level disinfected container. Conduct an instrument and swab count and ask an assistant to note on board.					
5. Ensure that an assistant is scrubbed and dressed.					
PREPARING THE WOMAN					
1. Tilt operating table to the left or place a pillow under the woman's right lower back.					
2. Ensure that the woman has been anaesthetised and the anaesthesia has taken full effect.					

15. LEARNING GUIDE FOR CAESAREAN SECTION (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
3. Apply antiseptic solution to the incision site and surrounding area three times. Swab the site with dry gauze.					
4. Drape the abdomen, leaving the surgical area exposed, and then drape the woman.					
PROCEDURE					
1. Ask the instrument nurse to stand with the instrument tray on the other side towards the woman's foot.					
2. Stand on the right side of the woman and ask the assistant to stand on the left side of the woman.					
3. Make a midline vertical incision below the umbilicus to the pubic hair (or Pfannenstiel's incision), through the skin and to the level of the fascia.					
4. Clamp any significant bleeding points with artery forceps, and tie off the vessels with plain 0 catgut or cauterise the tissue.					
5. Make a 2–3cm vertical incision in the fascia (or transverse incision if using Pfannenstiel's incision).					
6. Hold the fascial edge with forceps and lengthen the incision up and down using scissors.					
7. Use fingers or scissors to separate the rectus muscle.					
8. Use fingers to make an opening in the peritoneum near the umbilicus. Use scissors to lengthen the incision up and down in order to see the entire uterus. Carefully, to prevent bladder injury, use scissors to separate layers and open the lower part of the peritoneum.					
9. Place a bladder retractor over the pubic bone.					
10. Use forceps to pick up the loose peritoneum covering the anterior surface of the lower uterine segment and incise with scissors.					
11. Extend the incision by placing the scissors between the uterus and the loose serosa and cutting about 3cm on each side in a transverse fashion.					
12. Replace the bladder retractor over the pubic bone to retract the bladder downward.					
13. Use a scalpel to make a 3cm transverse (elliptical) incision in the lower segment of the uterus. It should be about 1cm below the level where the vesico-uterine serosa was incised to bring the bladder down.					
14. Widen the incision by placing a finger at each edge and gently pulling upward and laterally at the same time.					
15. If it is necessary to extend the incision, do so using scissors instead of fingers to avoid extension into the uterine vessels. Make a crescent-shaped incision.					
16. If the membranes are intact, rupture them. Ask the assistant to suction the liquid.					
DELIVERING THE NEWBORN					
1. Place one hand inside the uterine cavity between the uterus and the foetal head.					
2. With your fingers, grasp and flex the head.					
3. Gently lift the foetal head through the incision, taking care not to extend the incision down towards the cervix.					
4. With the other hand, gently press on the abdomen over the top of the uterus to help deliver the head.					
5. If the foetal head is deep in the pelvis or vagina, ask an assistant (not the scrubbed nurse) to put on high-level disinfected gloves and push the head up through the vagina from below. Then lift and deliver the head.					

15. LEARNING GUIDE FOR CAESAREAN SECTION (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
6. Suction the newborn's mouth and nose when delivered.					
7. If uterine tone is inadequate ask an assistant to check the blood pressure and give ergometrine 0.2mg IV/IM if the blood pressure is < 160/110. If blood pressure is 160/110 or higher give oxytocin 20 units in 1L IV at 60 dpm for two hours.					
8. Deliver the shoulders and body.					
9. Clamp the cord at two points and cut it.					
10. Hand the newborn to midwife or assistant.					
11. Ask an assistant to give a single dose of prophylactic antibiotics—ampicillin 2g IV or cefazolin 1g IV.					
12. Deliver the placenta by cord traction or manually.					
13. Quickly inspect the placenta for completeness and abnormalities. Dilate cervix from above if necessary.					
CLOSING THE UTERINE INCISION AND ABDOMEN					
1. Conduct an instrument and swab count.					
2. Grasp the edges and corners of the uterine incision with Green-Armytage clamps or ring forceps. Make sure that the clamp on the lower edge of the incision is separate from the bladder.					
3. Repair the incision, starting at the corner using a continuous locking stitch of chromic catgut suture no. 2 in two layers. Take care not to touch the needle with fingers.					
4. Ensure haemostasis. If there is any further bleeding from the incision site, close with figure-of-eight sutures.					
5. Make sure there is no bleeding and the uterus is firm.					
6. Before closing the abdomen, check for injury to the bladder. If the bladder has been injured, identify the extent of the injury and repair it.					
7. Hold the fascia at the upper and lower ends of the incision using Kocher's forceps. Place a clamp midway on either side of the incision.					
8. Close the fascia: ■ use toothed dissecting forceps and a cutting needle threaded with chromic catgut no. 2 (or polyglycolic) suture mounted in a needle holder ■ pass the needle into the fascia on the woman's right side from the inside out, starting at the upper end of the incision ■ pass the needle through the fascia on the woman's left side from the outside to the inside of the incision ■ tie the knot ■ take care not to touch the needle with fingers.					
9. Continue the closure of the fascia with a running suture until the lower end of the incision is reached, ensuring that the peritoneum and intra-peritoneal contents are not included in the suture.					
10. Tie off the suture: ■ once the lower end of the incision is reached, tie a knot with the suture ■ pull upward on the suture and knot ■ reinsert the needle into the fascia just below the knot and bring it out through the fascia about 1cm above the knot (towards the upper end of the incision) ■ pull on the suture to bury the knot under the fascia ■ cut the suture flush with the fascia.					

15. LEARNING GUIDE FOR CAESAREAN SECTION (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
11. If there are signs of infection, pack the subcutaneous tissue with gauze and place loose 0 catgut (or polyglycolic) sutures. Close the skin with a delayed closure after the infection has cleared. If there are no signs of infection: ■ use a toothed dissecting forceps and a round needle threaded with plain catgut in a needle holder to place interrupted sutures to bring the fat layer together, if necessary ■ use a toothed dissecting forceps and a cutting needle in a needle holder with 3-0 nylon (or silk) to place interrupted mattress sutures about 2cm apart to bring the skin layer together.					
12. Ensure there is no bleeding, clean the wound with gauze moistened in antiseptic solution and apply a sterile dressing.					
13. Evacuate clots from vagina using forceps and swab and put on sterile pad.					
14. Assist woman off the operating table.					
POST-PROCEDURE TASKS					
1. Before removing gloves, remove blade from knife handle, and dispose of blade and all suture needles in Sharps container. Dispose of waste materials in a leakproof container or plastic bag.					
2. Place all instruments in 0.5% chlorine solution for 10 minutes for decontamination.					
3. Dispose of needle or syringe in a puncture-proof container.					
4. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.					
5. Write notes of the operation, post-operative observations and management instructions.					
6. Monitor pulse, blood pressure, respiration rate and bleeding, both from the wound and vaginally.					
7. Assess the woman before she is transferred out of the recovery area.					
8. Check woman on the ward daily or as frequently as necessary.					
9. Discuss reasons for Caesarean section, family planning and future pregnancies before discharge.					
10. Schedule appointment for postpartum care.					

15. CHECKLIST FOR CAESAREAN SECTION

(To be used by the **Participant** for practise and by the **Trainer** at the end of the course)
Place a "✓" in case box if step/task is performed **satisfactorily**, an "✗" if it is **not** performed satisfactorily, or **N/O** if not observed.
Satisfactory: Performs the step or task according to the standard procedure or guidelines
Unsatisfactory: Unable to perform the step or task according to the standard procedure or guidelines
Not observed: Step or task not performed by participant during evaluation by trainer

Participant: _____ Date observed: _____

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY					
1. Prepare the necessary equipment.					
2. Explain to the woman (and her support person) what is going to be done, listen to her, respond attentively to her questions and concerns and obtain informed consent.					
3. Examine the woman, assess her condition and examine the medical record for information and completeness.					
4. Obtain blood for haemoglobin and blood type and cross-match two units of blood.					
5. Set up an IV line and infuse 500cc of IV fluids.					
6. Give pre-medication including: ■ atropine 0.6mg IM (or IV if in theatre) ■ magnesium trisilicate 300mg.					
7. Catheterise the woman's bladder.					
8. Help the woman to put on a gown and cap.					
9. Evaluate anaesthetic options: ■ general anaesthetic ■ local anaesthetic ■ spinal anaesthetic.					
PRE-PROCEDURE TASKS					
1. Put on theatre clothes, protective footwear, cap, facemask, protective eyeglasses and a plastic apron.					
2. Perform a surgical handscrub and put on high-level disinfected or sterile surgical gloves and a sterile gown.					
3. Ensure that the instruments and supplies are available and arrange them on a sterile tray or in a high-level disinfected container. Conduct an instrument and swab count and ask an assistant to note on board.					
4. Ensure that an assistant is scrubbed and dressed.					

15. CHECKLIST FOR CAESAREAN SECTION (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
PREPARING THE WOMAN					
1. Tilt operating table to the left or place a pillow under the woman's right lower back.					
2. Ensure that the anaesthesia has taken full effect.					
3. Apply antiseptic solution to the abdomen, allow to dry, and place a drape over the woman.					
PROCEDURE					
1. Make a 2–3cm midline vertical incision below the umbilicus to the pubic hair (or transverse incision if using Pfannenstiel's incision) through skin and fascia.					
2. Lengthen the incision and separate the rectus muscle.					
3. Open the lower part of the peritoneum.					
4. Place a bladder retractor over the pubic bone.					
5. Extend the incision by 3cm on each side.					
6. Push the bladder downward off the lower uterine segment and replace the bladder retractor over the pubic bone to retract the bladder downward.					
7. Make a 3cm transverse incision in the lower segment of the uterus.					
8. Widen the incision. Extend the incision, if necessary.					
9. If the membranes are intact, rupture them.					
DELIVERING THE NEWBORN					
1. Place one hand inside the uterine cavity between the uterus and the foetal head.					
2. Grasp and flex the head, and gently lift the foetal head through the incision.					
3. Gently press on the abdomen over the top of the uterus to help deliver the head. If necessary, ask an assistant to push the head up through the vagina from below.					
4. If uterine tone is inadequate, check the blood pressure and give ergometrine 0.2mg IV/IM if blood pressure is <160/110. If the blood pressure is 160/110 or higher, give oxytocin 20 units in 1L IV at 60 drops per minute for two hours.					
5. Suction the newborn's mouth and nose when delivered.					
6. Clamp the cord at two points and cut it.					
7. Ask an assistant to give a single dose of prophylactic antibiotics—ampicillin 2g IV or cefazolin 1g IV.					
8. Deliver the placenta and inspect it for completeness or abnormalities.					
9. Dilate cervix from above if necessary.					
10. Conduct an instrument and swab count.					
11. Repair the uterus and ensure haemostasis.					
12. Ensure that there is no further bleeding.					
13. Check the bladder for injury and repair injury, if necessary.					
14. Inspect the wall of the uterus and close the fascia with a running suture, using a cutting needle and chromic catgut no. 2 (or polyglycolic) suture, ensuring that the peritoneum and intra-peritoneal contents are not included in the suture.					

15. CHECKLIST FOR CAESAREAN SECTION (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
15. If there are signs of infection, pack the subcutaneous tissue with gauze and place loose 0 catgut (or polyglycolic) sutures. Close the skin with a delayed closure after the infection has cleared. If there are no signs of infection, close the fat layer, if necessary, with an interrupted suture, using a round needle and plain catgut, and close the skin with interrupted mattress sutures about 2cm apart, using a cutting needle and 3-0 nylon or silk.					
16. Ensure there is no bleeding, clean the wound with gauze moistened in antiseptic solution and apply a sterile dressing.					
17. Evacuate clots from vagina using forceps and swab and put on sterile pad.					
18. Assist woman off the operating table.					
POST-PROCEDURE TASKS					
1. Before removing gloves, remove blade from knife handle. Dispose of blade and all suture needles in sharps container, and dispose of waste materials in a leakproof container or plastic bag.					
2. Place all instruments in 0.5% chlorine solution for decontamination.					
3. Remove gown and gloves and discard them in a leakproof container or plastic bag.					
4. Use antiseptic handrub or wash hands thoroughly.					
5. Write operation notes and post-operative management instructions.					
6. Monitor pulse, blood pressure, respiration rate and bleeding, wound and vaginally.					
7. Assess the woman before she is transferred out of the recovery area.					
8. Check woman on the ward daily or as frequently as necessary.					
9. Discuss reasons for Caesarean section, family planning and future pregnancies before discharge.					
10. Schedule appointment for postpartum care.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

16. LEARNING GUIDE FOR EMERGENCY LAPAROTOMY

(To be completed by **Participants**)

Rate the performance of each step or task observed using the following rating scale (Write 1, 2 or 3 as the case may be in the box provided):

1. **Needs improvement:** Step or task not performed correctly or out of sequence (if necessary) or is omitted
2. **Competently performed:** Step or task performed correctly in proper sequence (if necessary) but participant does not progress from step to step efficiently
3. **Proficiently performed:** Step or task efficiently and precisely performed in the proper sequence (if necessary)

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY					
1. Prepare the necessary equipment.					
2. Explain to the woman (and her support person) what is going to be done, listen to her, respond attentively to her questions and concerns and obtain informed consent.					
3. Examine the woman, assess her condition and examine the medical record for information and completeness.					
4. Set up an IV line and infuse IV fluids (normal saline or Ringer's lactate) and check haemoglobin and availability of cross-matched blood.					
5. Catheterise the woman's bladder and shave where necessary, e.g. hirsutism.					
6. Arrange for anaesthesia.					
7. Ask the anaesthetist to give a single dose of prophylactic antibiotics: ■ ampicillin 2g IV PLUS metronidazole 500mg IV, OR ■ cefazolin 1g IV PLUS metronidazole 500mg IV.					
8. Put on personal protective equipment.					
PRE-PROCEDURE TASKS					
1. Put on theatre clothes, protective footwear, cap, facemask, protective eyeglasses and a plastic apron.					
2. Perform a surgical handrub for three to five minutes and dry each on a separate high-level disinfected or sterile towel.					
3. Put on a sterile gown and sterile surgical gloves on both hands.					
4. Ensure that the instruments (sterile) and supplies are available and arrange them on a sterile tray. Conduct an instrument and swab count and ask an assistant to note on board.					
5. Ensure that an assistant is scrubbed and dressed.					
PREPARING THE WOMAN					
1. Place the woman in the supine position on the operating table.					
2. Ensure that the woman has been anaesthetised and the anaesthesia has taken full effect (ideally general anaesthetic).					
3. Apply antiseptic solution to the incision site three times.					
4. Drape the abdomen, leaving the surgical area exposed, and then drape the woman.					

16. LEARNING GUIDE FOR EMERGENCY LAPAROTOMY (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
OPENING THE ABDOMEN					
1. Ask the instrument nurse to stand with the instrument tray towards the foot of the woman.					
2. Stand on the right side of the woman and ask the assistant to stand on the left side of the woman.					
3. Make a midline vertical incision below the umbilicus to the pubic hair (or other appropriate incisions), through the skin and to the level of the fascia.					
4. Clamp any significant bleeding points with artery forceps and tie off the vessels with plain 0 catgut or cauterise the tissue.					
5. Make a 2–3cm vertical (or transverse as per skin incision) incision in the fascia.					
6. Hold the fascial edges with forceps and push the tip of closed scissors under the fascia and above the rectus muscles through this incision.					
7. Open the scissors to make a tunnel under the fascia.					
8. Close the scissors and withdraw them. Use the scissors to cut the fascia along and up to the end of the tunnel.					
9. Insert the index fingers of both hands, back to back, between the rectus muscles (abdominal wall muscles) and separate the muscles. At the lower end, separate the two pyramidalis muscles by using scissors to cut the aponeurosis between them. The peritoneum should now be exposed.					
10. Use fingers to make an opening in the peritoneum near the umbilicus. Alternatively, lift the peritoneum with two forceps, ensure that no intra-abdominal contents are caught in forceps, and incise the peritoneum.					
11. Lift the peritoneum up using forceps.					
12. Use scissors to extend the incision in the peritoneum up and down, under direct vision, taking care to avoid damage to the bladder and other organs. Remove the forceps.					
13. Ligate the active bleeders.					
14. Place a bladder retractor over the pubic bone.					
15. Place self-retaining abdominal retractors.					
INSPECTING THE ABDOMEN					
1. Conduct a general examination of the peritoneal cavity to detect any abnormality and operative diagnosis; treat accordingly. Please see appropriate learning guide below.					
2. Before closing the abdomen, check for injury to the bladder. If the bladder has been injured, identify the extent of the injury and repair it.					

16. LEARNING GUIDE FOR EMERGENCY LAPAROTOMY (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
CLOSING THE ABDOMEN					
1. Conduct an instrument and swab count.					
2. Hold the fascia at the upper and lower ends of the incision using Kocher's forceps. Place a clamp midway on either side of the incision.					
3. Close the fascia: ■ Use a toothed dissecting forceps and a cutting needle threaded with 0 chromic catgut (or polyglycolic) suture mounted in a needle holder. ■ Pass the needle into the fascia on the woman's right side from the inside out, starting at the upper end of the incision. ■ Pass the needle through the fascia on the woman's left side from the outside to the inside of the incision. ■ Tie the knot.					
4. Continue the closure of the fascia with a running suture until the lower end of the incision is reached, ensuring that the peritoneum and intraperitoneal contents are not included in the suture.					
5. Tie off the suture: ■ Once the lower end of the incision is reached, tie a knot with the suture. ■ Pull upward on the suture and knot. ■ Reinsert the needle into the fascia just below the knot and bring it out through the fascia about 1cm above the knot (toward the upper end of the incision). ■ Pull on the suture to bury the knot under the fascia. ■ Cut the suture flush with the fascia.					
6. If there are signs of infection, pack the subcutaneous tissue with gauze and place loose 0 catgut (or polyglycolic) sutures. Close the skin with a delayed closure after the infection has cleared. If there are no signs of infection: ■ Use a toothed dissecting forceps and a round needle threaded with plain catgut in a needle holder to place interrupted sutures to bring the fat layer together, if necessary. ■ Use a toothed dissecting forceps and a cutting needle in a needle holder with 3-0 nylon (or silk) to place interrupted mattress sutures about 2cm apart to bring the skin layer together.					
7. Ensure there is no bleeding, clean the wound with gauze moistened in antiseptic solution and apply a sterile dressing.					

16. LEARNING GUIDE FOR EMERGENCY LAPAROTOMY (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
POST-PROCEDURE TASKS					
1. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
2. Place all instruments in 0.5% chlorine solution for 10 minutes for decontamination.					
3. Dispose of needle and syringe in a puncture-proof container.					
4. Remove gloves and discard them in a leakproof container or plastic bag.					
5. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.					
POST-PROCEDURE CARE					
1. Transfer the woman to recovery area. Do not leave the woman unattended until the effects of the anesthesia have worn off.					
2. Write notes of the operation, postoperative observations and management instructions.					
3. Assess the woman before she is transferred out of the recovery area.					
4. Once the woman has woken fully from the anesthesia, explain what was found at surgery and what procedures have been done.					
5. Ensure the woman has written postoperative instructions (e.g., awareness of complications and warning signs, when to return to work) and necessary medications before discharge.					
6. Tell her when to return if follow up is needed and that she can return anytime she has concerns.					
7. Discuss reproductive goals, provide counseling on prognosis for fertility and, if appropriate, provide family planning.					

16. CHECKLIST FOR EMERGENCY LAPAROTOMY

(To be used by the **Participant** for practise and by the **Trainer** at the end of the course)
Place a "✓" in case box if step/task is performed **satisfactorily**, an "✗" if it is **not** performed satisfactorily, or **N/O** if not observed.
Satisfactory: Performs the step or task according to the standard procedure or guidelines
Unsatisfactory: Unable to perform the step or task according to the standard procedure or guidelines
Not observed: Step or task not performed by participant during evaluation by trainer

Participant: _____ Date observed: _____

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY					
1. Prepare the necessary equipment.					
2. Explain to the woman (and her support person) what is going to be done, listen to her, respond attentively to her questions and concerns and obtain informed consent.					
3. Examine the woman, assess her condition and examine the medical record for information and completeness.					
4. Set up an IV line and infuse IV fluids.					
5. Catheterise the woman's bladder.					
6. Have anaesthetist give anaesthesia and prophylactic antibiotics.					
7. Put on personal protective equipment.					
PRE-PROCEDURE TASKS					
1. Put on theatre clothes, protective footwear, cap, facemask, protective eyeglasses and a plastic apron.					
2. Perform a surgical handscrub and put on high-level disinfected or sterile surgical gloves and a sterile gown.					
3. Ensure that the instruments and supplies are available and arrange them on a sterile tray or in a high-level disinfected container. Conduct an instrument and swab count and ask an assistant to note on board.					
4. Ensure that an assistant is scrubbed and dressed.					
PREPARING THE WOMAN					
1. Place the woman in the supine position on the operating table.					
2. Ensure that the anaesthesia has taken full effect.					
3. Apply antiseptic solution to the abdomen and place a drape over the woman.					
OPENING THE ABDOMEN					
1. Make a 2-3cm midline vertical incision below the umbilicus to the pubic hair through skin and fascia.					
2. Lengthen the incision and separate the rectus muscle.					
3. Place a bladder retractor and self-retaining abdominal retractors.					

16. CHECKLIST FOR EMERGENCY LAPAROTOMY (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
INSPECTING THE ABDOMEN					
1. Conduct a general examination of the peritoneal cavity to detect any abnormality and operative diagnosis; treat accordingly.					
2. Check the bladder for injury and repair injury, if necessary.					
CLOSING THE ABDOMEN					
1. Conduct an instrument and swab count.					
2. Close the fascia with a running suture, using a cutting needle and 0 chromic catgut (or polyglycolic) suture, ensuring that the peritoneum and intra-peritoneal contents are not included in the suture.					
3. If there are signs of infection, pack the subcutaneous tissue with gauze and place loose 0 catgut (or polyglycolic) sutures. Close the skin with a delayed closure after the infection has cleared. If there are no signs of infection, close the fat layer, if necessary, with an interrupted suture, using a round needle and plain catgut, and close the skin with interrupted mattress sutures about 2cm apart, using a cutting needle and 3-0 nylon or silk.					
4. Ensure there is no bleeding, clean the wound with gauze moistened in antiseptic solution and apply a sterile dressing.					
5. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
6. Place all instruments in 0.5% chlorine solution for decontamination.					
7. Dispose of needle and syringe in a puncture proof container.					
8. Remove gloves and discard them in a leakproof container or plastic bag.					
9. Use antiseptic handrub or wash hands thoroughly.					
POST-PROCEDURE CARE					
1. Do not leave the woman unattended until the effects of the anaesthesia have worn off.					
2. Explain to the woman what was found at surgery and what procedures have been done.					
3. Ensure the woman has written post-operative instructions, necessary medications before discharge and instructions regarding a follow-up visit.					
4. Provide counselling on prognosis for fertility and, if appropriate, provide family planning.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

17. LEARNING GUIDE FOR SALPINGECTOMY FOR ECTOPIC PREGNANCY

(To be completed by **Participants**)

Rate the performance of each step or task observed using the following rating scale (Write 1, 2 or 3 as the case may be in the box provided):

1. **Needs improvement:** Step or task not performed correctly or out of sequence (if necessary) or is omitted
2. **Competently performed:** Step or task performed correctly in proper sequence (if necessary) but participant does not progress from step to step efficiently
3. **Proficiently performed:** Step or task efficiently and precisely performed in the proper sequence (if necessary)

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY					
1. Prepare the necessary equipment.					
2. Explain to the woman (and her support person) what is going to be done, listen to her, respond attentively to her questions and concerns and obtain informed consent.					
3. Examine the woman, assess her condition and examine the medical record for information and completeness.					
4. Infuse IV fluids (normal saline or Ringer's lactate) and check haemoglobin and availability of cross-matched blood.					
5. Catheterise the woman's bladder and shave where necessary, e.g. hirsutism.					
6. Arrange for anaesthesia.					
7. Ask the anaesthetist to give a single dose of prophylactic antibiotics: ■ ampicillin 2g IV PLUS metronidazole 500mg IV, OR ■ cefazolin 1g IV PLUS metronidazole 500mg IV.					
8. Put on personal protective equipment.					
PRE-PROCEDURE TASKS					
1. Put on theatre clothes, protective footwear, cap, facemask, protective eyeglasses and a plastic apron.					
2. Perform a surgical handrub for three to five minutes and dry each hand on a separate high-level disinfected or sterile towel.					
3. Put on a sterile gown and put high-level disinfected or sterile surgical gloves on both hands.					
4. Ensure that the instruments (sterile) and supplies are available and arrange them on a sterile tray. Conduct an instrument and swab count and ask an assistant to note on board.					
5. Ensure that an assistant is scrubbed and dressed.					
PREPARING THE WOMAN					
1. Place the woman in the supine position on the operating table.					
2. Ensure that the woman has been anaesthetised and the anaesthesia has taken full effect.					
3. Apply antiseptic solution to the incision site three times.					
4. Drape the abdomen, leaving the surgical area exposed, and then drape the woman.					

17. LEARNING GUIDE FOR SALPINGECTOMY FOR ECTOPIC PREGNANCY (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
OPENING THE ABDOMEN					
1. Ask the instrument nurse to stand with the instrument tray at the foot of the woman.					
2. Stand on the right side of the woman and ask the assistant to stand on the left side of the woman.					
3. Make a midline vertical incision below the umbilicus to the pubic hair (or other appropriate incisions), through the skin and to the level of the fascia.					
4. Clamp any significant bleeding points with artery forceps, and tie off the vessels with plain 0 catgut or cauterise the tissue.					
5. Make a 2–3cm vertical (or transverse as per skin incision) incision in the fascia.					
6. Hold the fascial edges with forceps and push the tip of closed scissors under the fascia and above the rectus muscles through this incision.					
7. Open the scissors to make a tunnel under the fascia.					
8. Close the scissors and withdraw them. Use the scissors to cut the fascia along and up to the end of the tunnel.					
9. Insert the index fingers of both hands, back to back, between the rectus muscles (abdominal wall muscles) and separate the muscles. At the lower end, separate the two pyramidalis muscles by using scissors to cut the aponeurosis between them. The peritoneum should now be exposed.					
10. Use fingers to make an opening in the peritoneum near the umbilicus.					
11. Lift the peritoneum up using forceps.					
12. Use scissors to extend the incision in the peritoneum up and down, under direct vision, taking care to avoid damage to the bladder and other organs. Remove the forceps.					
13. Place a bladder retractor over the pubic bone.					
14. Place self-retaining abdominal retractors.					
SALPINGECTOMY					
1. Identify and bring to view the fallopian tube with the ectopic pregnancy and its ovary.					
2. Apply traction forceps (e.g., Babcock) to increase exposure and clamp the mesosalpinx to stop bleeding.					
3. Aspirate blood from the lower abdomen and remove blood clots.					
4. Use gauze moistened with warm, sterile saline to pack away the bowel and omentum from the operative field.					
5. Divide the mesosalpinx using a series of clamps, applying each clamp close to the tube.					
6. Transfix and tie the divided mesosalpinx with number 0 or 1 chromic catgut (or polyglycolic) suture before releasing the clamps.					
7. Place a proximal suture around the tube at the isthmic end and excise the tube.					
8. Ensure that there is no bleeding from the cut ends of the fallopian tube and remove blood clots.					
9. Before closing the abdomen, check for injury to the bladder. If the bladder has been injured, identify the extent of the injury and repair it.					
CLOSING THE ABDOMEN					
1. Check instruments and swabs.					

17. LEARNING GUIDE FOR SALPINGECTOMY FOR ECTOPIC PREGNANCY (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
2. Hold the fascia at the upper and lower ends of the incision (or the furthest ends for transverse incision) using Kocher's forceps. Place a clamp midway on either side of the incision.					
3. Hold the fascia at the upper and lower ends of the incision using Kocher's forceps. Place a clamp midway on either side of the incision.					
4. Close the fascia: a) use a toothed dissecting forceps and a cutting needle threaded with 0 chromic catgut (or polyglycolic) suture mounted in a needle holder b) pass the needle into the fascia on the woman's right side from the inside out, starting at the upper end of the incision c) pass the needle through the fascia on the woman's left side from the outside to the inside of the incision d) tie the knot.					
5. Continue the closure of the fascia with a running suture until the lower end of the incision is reached, ensuring that the peritoneum and intra-peritoneal contents are not included in the suture.					
6. If there are signs of infection, pack the subcutaneous tissue with gauze and place loose number 1 or 2 catgut (or polyglycolic) sutures. Close the skin with a delayed closure after the infection has cleared. If there are no signs of infection: ■ use toothed dissecting forceps and a round needle threaded with plain catgut in a needle holder to place interrupted sutures to bring the fat layer together, if necessary ■ use a toothed dissecting forceps and a cutting needle in a needle holder with 3-0 nylon (or silk) to place interrupted mattress sutures about 2cm apart to bring the skin layer together. Subcuticular method may also be done.					
7. Ensure there is no bleeding, clean the wound with gauze moistened in antiseptic solution and apply a sterile dressing.					
8. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
9. Place all instruments in 0.5% chlorine solution for 10 minutes for decontamination.					
10. Dispose of needle and syringe in a puncture-proof container.					
11. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.					
POST-PROCEDURE CARE					
1. Transfer the woman to the recovery area. Do not leave the woman unattended until the effects of the anaesthesia have worn off.					
2. Write notes of the operation, post-operative observations and management instructions.					
3. Assess the woman before she is transferred out of the recovery area.					
4. Once the woman has woken fully from the anaesthesia, explain what was found at surgery and what procedures have been done.					
5. Ensure the woman has been given post-operative instructions (e.g., awareness of complications and warning signs, when to return to work) and necessary medications before discharge.					
6. Tell her when to return if follow-up is needed and that she can return anytime she has concerns.					
7. Discuss reproductive goals, provide counselling on prognosis for fertility and, if appropriate, provide family planning.					

17. CHECKLIST FOR SALPINGECTOMY FOR ECTOPIC PREGNANCY

(To be used by the **Participant** for practise and by the **Trainer** at the end of the course)
Place a "✓" in case box if step/task is performed **satisfactorily**, an "✗" if it is **not** performed satisfactorily, or **N/O** if not observed.
Satisfactory: Performs the step or task according to the standard procedure or guidelines
Unsatisfactory: Unable to perform the step or task according to the standard procedure or guidelines
Not observed: Step or task not performed by participant during evaluation by trainer

Participant: _____ Date observed: _____

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY					
1. Prepare the necessary equipment.					
2. Explain to the woman (and her support person) what is going to be done, listen to her, respond attentively to her questions and concerns and obtain informed consent.					
3. Examine the woman, assess her condition and examine the medical record for information and completeness.					
4. Infuse IV fluids.					
5. Catheterise the woman's bladder.					
6. Have anaesthetist give anaesthesia and prophylactic antibiotics.					
7. Put on personal protective equipment.					
PRE-PROCEDURE TASKS					
1. Put on theatre clothes, protective footwear, cap, facemask, protective eyeglasses and a plastic apron.					
2. Perform a surgical handscrub and put on high-level disinfected or sterile surgical gloves and a sterile gown.					
3. Ensure that the instruments and supplies are available and arrange them on a sterile tray. Conduct an instrument and swab count and ask an assistant to note on board.					
4. Ensure that an assistant is scrubbed and dressed.					
PREPARING THE WOMAN					
1. Place the woman in the supine position on the operating table.					
2. Ensure that the anaesthesia has taken full effect.					
3. Apply antiseptic solution to the abdomen and place a drape over the woman.					
OPENING THE ABDOMEN					
1. Make a 2–3cm midline vertical incision below the umbilicus to the pubic hair (or other appropriate incision) through skin and fascia.					
2. Lengthen the incision and separate the rectus muscle.					
3. Place a bladder retractor and self-retaining abdominal retractors.					

17. CHECKLIST FOR SALPINGECTOMY FOR ECTOPIC PREGNANCY (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
SALPINGECTOMY					
1. Identify and bring to view the affected fallopian tube and its ovary.					
2. Clamp the mesosalpinx to stop bleeding, aspirate blood from the abdomen and remove any blood clots.					
3. Use moist gauze to pack away the bowel and omentum from the operative field.					
4. Divide the mesosalpinx using a series of clamps and tie the mesosalpinx with number 0 or 1 chromic catgut (or polyglycolic) suture.					
5. Place a proximal suture around the tube at the isthmic end and excise the tube.					
6. Ensure that there is no bleeding.					
7. Check the bladder for injury and repair injury, if necessary.					
CLOSING THE ABDOMEN					
1. Check instruments and swabs.					
2. Close the fascia with a running suture, using a cutting needle and number 1 or 2 chromic catgut (or polyglycolic) suture, ensuring that the peritoneum and intraperitoneal contents are not included in the suture.					
3. If there are signs of infection, pack the subcutaneous tissue with gauze and place loose 2/0 catgut (or polyglycolic) sutures. Close the skin with a delayed closure after the infection has cleared. If there are no signs of infection, close the fat layer, if necessary, with an interrupted suture, using a round needle and plain catgut, and close the skin with interrupted mattress sutures about 2cm apart, using a cutting needle and 3-0 nylon or silk.					
4. Ensure there is no bleeding, clean the wound with gauze moistened in antiseptic solution and apply a sterile dressing.					
5. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
6. Place all instruments in 0.5% chlorine solution for decontamination.					
7. Dispose of needle and syringe in a puncture-proof container.					
8. Remove gloves and discard them in a leakproof container or plastic bag.					
9. Use antiseptic handrub or wash hands thoroughly.					
POST-PROCEDURE CARE					
1. Do not leave the woman unattended until the effects of the anaesthesia have worn off.					
2. Explain to the woman what was found at surgery and what procedures have been done.					
3. Ensure the woman has been given written post-operative instructions, necessary medications before discharge and instructions regarding a follow-up visit.					
4. Provide counselling on prognosis for fertility and, if appropriate, provide family planning.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

18. LEARNING GUIDE FOR LAPAROTOMY AND REPAIR OF RUPTURED UTERUS

(To be completed by **Participants**)

Rate the performance of each step or task observed using the following rating scale (Write 1, 2 or 3 as the case may be in the box provided):

1. **Needs improvement:** Step or task not performed correctly or out of sequence (if necessary) or is omitted
2. **Competently performed:** Step or task performed correctly in proper sequence (if necessary) but participant does not progress from step to step efficiently
3. **Proficiently performed:** Step or task efficiently and precisely performed in the proper sequence (if necessary)

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY					
1. Prepare the necessary equipment.					
2. Explain to the woman (and her support person) what is going to be done, listen to her, respond attentively to her questions and concerns and obtain informed consent.					
3. Examine the woman, assess her condition and examine the medical record for information and completeness.					
4. Infuse IV fluids (normal saline or Ringer's lactate) and check haemoglobin and availability of cross-matched blood.					
5. Catheterise the woman's bladder and shave where necessary, e.g. hirsutism.					
6. Arrange for anaesthesia.					
7. Ask the anaesthetist to give a single dose of prophylactic antibiotics: ■ ampicillin 2g IV PLUS metronidazole 500mg IV, OR ■ cefazolin 1g IV PLUS metronidazole 500mg IV.					
8. Put on personal protective equipment.					
PRE-PROCEDURE TASKS					
1. Put on theatre clothes, protective footwear, cap, facemask, protective eyeglasses and a plastic apron.					
2. Perform a surgical handscrub for three to five minutes and dry each hand on a separate high-level disinfected or sterile towel.					
3. Put on a sterile gown and put sterile surgical gloves on both hands.					
4. Ensure that the instruments (sterile) and supplies are available and arrange them on a sterile tray. Conduct an instrument and swab count and ask an assistant to note on board.					
5. Ensure that an assistant is scrubbed and dressed.					
PREPARING THE WOMAN					
1. Place the woman in the supine position on the operating table.					
2. Ensure that the woman has been anaesthetised and the anaesthesia has taken full effect.					
3. Apply antiseptic solution to the incision site three times.					
4. Drape the abdomen, leaving the surgical area exposed, and then drape the woman.					

18. LEARNING GUIDE FOR LAPAROTOMY AND REPAIR OF RUPTURED UTERUS (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
OPENING THE ABDOMEN					
1. Ask the instrument nurse to stand with the instrument tray at the foot of the woman.					
2. Stand on the right side of the woman and ask the assistant to stand on the left side of the woman.					
3. Make a midline vertical incision below the umbilicus to the pubic hair (or other appropriate incisions), through the skin and to the level of the fascia.					
4. Clamp any significant bleeding points with artery forceps, and tie off the vessels with plain 0 catgut or cauterise the tissue.					
5. Make a 2–3cm vertical (or transverse as per skin incision) incision in the fascia.					
6. Hold the fascial edges with forceps and push the tip of closed scissors under the fascia and above the rectus muscles through this incision.					
7. Open the scissors to make a tunnel under the fascia.					
8. Close the scissors and withdraw them. Use the scissors to cut the fascia along and up to the end of the tunnel.					
9. Insert the index fingers of both hands, back to back, between the rectus muscles (abdominal wall muscles) and separate the muscles. At the lower end, separate the two pyramidalis muscles by using scissors to cut the aponeurosis between them. The peritoneum should now be exposed.					
10. Use fingers to make an opening in the peritoneum near the umbilicus. Alternatively, lift the peritoneum with two forceps, ensure that no intra-abdominal contents are caught in forceps, and incise the peritoneum.					
11. Lift the peritoneum up using forceps.					
12. Use scissors to extend the incision in the peritoneum up and down, under direct vision, taking care to avoid damage to the bladder and other organs. Remove the forceps.					
13. Examine the abdomen and the uterus for the site of rupture.					
14. Aspirate blood from the lower abdomen and remove any blood clots.					
15. Place a bladder retractor over the pubic bone.					
16. Place self-retaining abdominal retractors.					
REPAIR OF UTERINE RUPTURE					
1. Deliver the newborn and placenta.					
2. Ask the anaesthetist to infuse oxytocin 20 units in 1L normal saline or Ringer's lactate at 60dpm.					
3. Check for uterine contractions. After the uterus contracts, ask the anaesthetist to reduce oxytocin infusion rate to 20dpm.					
4. Lift the uterus out of the pelvis and examine the front, back and sides of the uterus.					
5. Hold the bleeding edges of the uterus with Green-Armytage clamps (or ring forceps).					
6. Separate the urinary bladder from the lower uterine segment by sharp and blunt dissection.					
7. Determine if the tear is through the cervix and vagina or laterally through the uterine artery or if there is a broad ligament haematoma, and repair as necessary.					

18. LEARNING GUIDE FOR LAPAROTOMY AND REPAIR OF RUPTURED UTERUS (cont'd)

STEP/TASK		CASES				
		1	2	3	4	5
8.	Repair the uterine tear using continuous locking sutures with number 1-2 chromic catgut (or polyglycolic) suture, ensuring the ureter is not included in a stitch.					
9.	Place a second layer of sutures if bleeding is not controlled or if the upper segment of the uterus is involved in the rupture.					
10.	Check the fallopian tubes and ovaries. If tubal ligation was requested, perform the procedure.					
11.	If there is bleeding, control by clamping with long artery forceps and ligating. If the bleeding points are deep, use figure-of-eight sutures.					
12.	Place an abdominal drain: ■ make a stab incision in the lower abdomen about 3–4cm away from the edge of the midline incision, just below the level of the anterior superior iliac spine ■ insert a long clamp through the incision ■ grasp the end of the abdominal drain and bring this end out through the incision ■ ensure that the peritoneal end of the drain is in place and anchor the drain to the skin with nylon or silk suture.					
13.	Ensure there is no bleeding and remove any blood clots. If there is a haematoma, drain the haematoma.					
14.	Before closing the abdomen, check for injury to the bladder/other abdominal organs. If the bladder/other abdominal organs have been injured, identify the extent of the injury and repair them.					
CLOSING THE ABDOMEN						
1.	Conduct an instrument and swab count.					
2.	Hold the fascia at the upper and lower ends of the incision (or the furthest ends for transverse incision) using Kocher's forceps. Place a clamp midway on either side of the incision.					
3.	Close the fascia: ■ use toothed dissecting forceps and a cutting needle threaded with number 1 or 2 chromic catgut (or polyglycolic) suture mounted on a needle holder ■ pass the needle into the fascia on the woman's right side from the inside out, starting at the upper end of the incision ■ pass the needle through the fascia on the woman's left side from the outside to the inside of the incision ■ if any other incision was made, the appropriate modification will be needed for above two steps e.g. starting from left to right for transverse incision ■ tie the knot.					
4.	Continue the closure of the fascia with a running suture until the lower end of the incision is reached, ensuring that the peritoneum and intra-peritoneal contents are not included in the suture (appropriate modifications should be made for other incisions).					
5.	Tie off the suture: ■ once the lower end of the incision is reached, tie a knot with the suture ■ pull upward on the suture and knot ■ reinsert the needle into the fascia just below the knot and bring it out through the fascia about 1cm above the knot (towards the upper end of the incision) ■ pull on the suture to bury the knot under the fascia ■ cut the suture flush with the fascia.					

18. LEARNING GUIDE FOR LAPAROTOMY AND REPAIR OF RUPTURED UTERUS (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
6. If there are signs of infection, pack the subcutaneous tissue with gauze and place loose number 1 or 2 catgut (or polyglycolic) sutures. Close the skin with a delayed closure after the infection has cleared. If there are no signs of infection: ■ use toothed dissecting forceps and a round needle threaded with plain catgut in a needle holder to place interrupted sutures to bring the fat layer together, if necessary ■ use toothed dissecting forceps and a cutting needle in a needle holder with 3-0 nylon (or silk) to place interrupted mattress sutures about 2cm apart to bring the skin layer together. Subcuticular method may also be done.					
7. Ensure there is no bleeding, clean the wound with gauze moistened in antiseptic solution and apply a sterile dressing.					
8. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
9. Place all instruments in 0.5% chlorine solution for 10 minutes for decontamination.					
10. Dispose of needle and syringe in a puncture-proof container.					
11. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.					
POST-PROCEDURE CARE					
1. Transfer the woman to the recovery area. Do not leave the woman unattended until the effects of the anaesthesia have worn off.					
2. Write notes of the operation, post-operative observations and management instructions.					
3. Assess the woman before she is transferred out of the recovery area.					
4. Once the woman has woken fully from the anaesthesia, explain what was found at surgery and what procedures have been done.					
5. Ensure the woman receives written post-operative instructions (e.g., awareness of complications and warning signs, when to return to work) and necessary medications before discharge.					
6. Tell her when to return if follow-up is needed and that she can return anytime she has concerns.					
7. If tubal ligation was not performed, discuss reproductive goals, provide counselling on prognosis for fertility and, if appropriate, provide family planning. If the woman wishes to have more children, advise her to have an elective Caesarean section for future pregnancies.					

18. CHECKLIST FOR LAPAROTOMY AND REPAIR OF RUPTURED UTERUS

(To be used by the **Participant** for practise and by the **Trainer** at the end of the course)
Place a "✓" in case box if step/task is performed **satisfactorily**, an "✗" if it is **not** performed satisfactorily, or **N/O** if not observed.
Satisfactory: Performs the step or task according to the standard procedure or guidelines
Unsatisfactory: Unable to perform the step or task according to the standard procedure or guidelines
Not observed: Step or task not performed by participant during evaluation by trainer

Participant: _____ Date observed: _____

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY					
1. Prepare the necessary equipment.					
2. Explain to the woman (and her support person) what is going to be done, listen to her, respond attentively to her questions and concerns and obtain informed consent.					
3. Examine the woman, assess her condition and examine the medical record for information and completeness.					
4. Infuse IV fluids.					
5. Catheterise the woman's bladder and shave if necessary.					
6. Have anaesthetist give anaesthesia and prophylactic antibiotics.					
7. Put on personal protective equipment.					
PRE-PROCEDURE TASKS					
1. Put on theatre clothes, protective footwear, cap, facemask, protective eye-glasses and a plastic apron.					
2. Perform a surgical handscrub and put on high-level disinfected or sterile surgical gloves and a sterile gown.					
3. Ensure that the instruments and supplies are available and arrange them on a sterile tray. Conduct an instrument and swab count and ask an assistant to note on board.					
4. Ensure that an assistant is scrubbed and dressed.					
PREPARING THE WOMAN					
1. Place the woman in the supine position on the operating table.					
2. Ensure that the anaesthesia has taken full effect.					
3. Apply antiseptic solution to the abdomen and place a drape over the woman.					
OPENING THE ABDOMEN					
1. Make a 2–3cm midline vertical incision (or transverse as per skin incision) below the umbilicus to the pubic hair through skin and fascia.					
2. Lengthen the incision and separate the rectus muscle.					
3. Examine the uterus for the site of rupture.					
4. Aspirate blood from the abdomen and remove any blood clots.					
5. Place a bladder retractor and self-retaining abdominal retractors.					

18. CHECKLIST FOR LAPAROTOMY AND REPAIR OF RUPTURED UTERUS (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
REPAIR OF UTERINE RUPTURE					
1. Deliver the newborn and placenta.					
2. Infuse oxytocin.					
3. Separate urinary bladder from uterus.					
4. Determine if the tear is through the cervix and vagina or laterally through the uterine artery or if there is a broad ligament haematoma, and repair as necessary.					
5. Repair uterine tear using continuous locking sutures with 0 chromic catgut (or polyglycolic) suture.					
6. Check the fallopian tubes and ovaries, and perform tubal ligation, if requested.					
7. Control bleeding by clamping and using figure-of-eight sutures.					
8. Place an abdominal drain if necessary.					
9. Check the bladder and other intra-abdominal organs for injury and repair injury, if necessary.					
CLOSING THE ABDOMEN					
1. Conduct an instrument and swab count.					
2. Inspect the wall of the uterus and close the fascia with a running suture, using a cutting needle and number 1 or 2 chromic catgut (or polyglycolic) suture, ensuring that the peritoneum and intra-peritoneal contents are not included in the suture.					
3. If there are signs of infection, pack the subcutaneous tissue with gauze and place loose 2/0 catgut (or polyglycolic) sutures. Close the skin with a delayed closure after the infection has cleared. If there are no signs of infection, close the fat layer, if necessary, with an interrupted suture, using a round needle and plain catgut, and close the skin with interrupted mattress sutures about 2cm apart, using a cutting needle and 3-0 nylon or silk. Subcuticular method may also be done.					
4. Ensure there is no bleeding, clean the wound with gauze moistened in antiseptic solution and apply a sterile dressing.					
5. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
6. Place all instruments in 0.5% chlorine solution for decontamination.					
7. Dispose of needle and syringe in a puncture-proof container.					
8. Use antiseptic handrub or wash hands thoroughly.					
POST-PROCEDURE CARE					
1. Do not leave the woman unattended until the effects of the anaesthesia have worn off.					
2. Explain to the woman what was found at surgery and what procedures have been done.					
3. Ensure the woman has written post-operative instructions, necessary medications before discharge and instructions regarding a follow-up visit.					
4. If tubal ligation was not performed, discuss reproductive goals, provide counselling on prognosis for fertility and, if appropriate, provide family planning. If the woman wishes to have more children, advise her to have an elective Caesarean section for future pregnancies.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

19. LEARNING GUIDE FOR LAPAROTOMY AND SUBTOTAL HYSTERECTOMY FOR REMOVAL OF RUPTURED UTERUS

(To be completed by **Participants**)

Rate the performance of each step or task observed using the following rating scale (Write 1, 2 or 3 as the case may be in the box provided):

1. **Needs improvement:** Step or task not performed correctly or out of sequence (if necessary) or is omitted
2. **Competently performed:** Step or task performed correctly in proper sequence (if necessary) but participant does not progress from step to step efficiently
3. **Proficiently performed:** Step or task efficiently and precisely performed in the proper sequence (if necessary)

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY					
1. Prepare the necessary equipment.					
2. Explain to the woman (and her support person) what is going to be done, listen to her, respond attentively to her questions and concerns and obtain informed consent.					
3. Examine the woman, assess her condition and examine the medical record for information and completeness.					
4. Set up an IV line and infuse IV fluids (normal saline or Ringer's lactate) and check haemoglobin and availability of cross-matched blood.					
5. Catheterise the woman's bladder and shave where necessary, e.g. hirsutism.					
6. Arrange for anaesthesia.					
7. Ask the anaesthetist to give a single dose of prophylactic antibiotics: ■ ampicillin 2g IV PLUS metronidazole 500mg IV, OR ■ cefazolin 1g IV PLUS metronidazole 500mg IV.					
8. Put on personal protective equipment.					
PRE-PROCEDURE TASKS					
1. Put on theatre clothes, protective footwear, cap, facemask, protective eyeglasses and a plastic apron.					
2. Perform a surgical handscrub for three to five minutes and dry each hand on a separate high-level disinfected or sterile towel.					
3. Put on a sterile gown and put high-level disinfected or sterile surgical gloves on both hands.					
4. Ensure that the instruments (sterile) and supplies are available and arrange them on a sterile tray. Conduct an instrument and swab count and ask an assistant to note on board.					
5. Ensure that an assistant is scrubbed and dressed.					
PREPARING THE WOMAN					
1. Place the woman in the supine position on the operating table.					
2. Ensure that the woman has been anaesthetised and the anaesthesia has taken full effect.					
3. Apply antiseptic solution to the incision site three times.					
4. Drape the abdomen, leaving the surgical area exposed, and then drape the woman.					

19. LEARNING GUIDE FOR LAPAROTOMY AND SUBTOTAL HYSTERECTOMY FOR REMOVAL OF RUPTURED UTERUS (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
OPENING THE ABDOMEN					
1. Ask the instrument nurse to stand with the instrument tray at the foot of the woman.					
2. Stand on the right side of the woman and ask the assistant to stand on the left side of the woman.					
3. Make a midline vertical incision below the umbilicus to the pubic hair (or other appropriate incisions), through the skin and to the level of the fascia.					
4. Clamp any significant bleeding points with artery forceps, and tie off the vessels with plain 0 catgut or cauterise the tissue.					
5. Make a 2–3cm vertical (or transverse as per skin incision) incision in the fascia.					
6. Hold the fascial edges with forceps and push the tip of closed scissors under the fascia and above the rectus muscles through this incision.					
7. Open the scissors to make a tunnel under the fascia.					
8. Close the scissors and withdraw them. Use the scissors to cut the fascia along and up to the end of the tunnel.					
9. Insert the index fingers of both hands, back to back, between the rectus muscles (abdominal wall muscles) and separate the muscles. At the lower end, separate the two pyramidalis muscles by using scissors to cut the aponeurosis between them. The peritoneum should now be exposed.					
10. Use fingers to make an opening in the peritoneum near the umbilicus. Alternatively, lift the peritoneum with two forceps, ensure that no intra-abdominal contents are caught in forceps, and incise the peritoneum.					
11. Lift the peritoneum up using forceps.					
12. Use scissors to extend the incision in the peritoneum up and down, under direct vision, taking care to avoid damage to the bladder and other organs. Remove the forceps.					
13. Examine the abdomen and the uterus for the site of rupture.					
14. Aspirate blood from the lower abdomen and remove any blood clots.					
15. Place a bladder retractor over the pubic bone.					
16. Place self-retaining abdominal retractors.					
SUBTOTAL HYSTERECTOMY					
1. Deliver the newborn and placenta.					
2. Lift the uterus out of the pelvis and examine the front, back and sides of the uterus.					
3. Hold the bleeding edges of the uterus with Green-Armytage clamps (or ring forceps).					
4. Separate the urinary bladder from the lower uterine segment by sharp and blunt dissection.					
5. Determine if the tear is through the cervix and vagina or laterally through the uterine artery or if there is a broad ligament haematoma, and repair as necessary.					
6. Apply two long clamps or artery forceps to tube, ovarian ligament and round ligament and divide between clamps: ■ transfix the lateral pedicle ■ apply two long clamps to uterine vessels and divide between clamps. Transfix the lateral pedicle.					

19. LEARNING GUIDE FOR LAPAROTOMY AND SUBTOTAL HYSTERECTOMY FOR REMOVAL OF RUPTURED UTERUS (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
7. Apply long artery forceps to the uterine rupture edge and divide uterine muscle between clamps, at the lower segment above the bladder.					
8. Free the uterus from the cervical stump and apply haemostatic sutures to the edge of the cut lower segment walls.					
9. Check to ensure haemostasis.					
10. If there is bleeding, control by clamping with long artery forceps and ligating. If the bleeding points are deep, use figure-of-eight sutures.					
11. Place an abdominal drain: a) make a stab incision in the lower abdomen about 3–4cm away from the edge of the midline incision, just below the level of the anterior superior iliac spine b) insert a long clamp through the incision c) grasp the end of the abdominal drain and bring this end out through the incision d) ensure that the peritoneal end of the drain is in place and anchor the drain to the skin with nylon or silk suture.					
12. Ensure there is no bleeding and remove any blood clots. If there is a haematoma, drain the haematoma.					
13. Before closing the abdomen, check for injury to the bladder/other abdominal organs. If the bladder/other abdominal organs have been injured, identify the extent of the injury and repair them.					
CLOSING THE ABDOMEN					
1. Conduct an instrument and swab count.					
2. Hold the fascia at the upper and lower ends of the incision (or the furthest ends for transverse incision) using Kocher's forceps. Place a clamp midway on either side of the incision.					
3. Close the fascia: ■ use a toothed dissecting forceps and a cutting needle threaded with number 1 or 2 chromic catgut (or polyglycolic) suture mounted on a needle holder ■ pass the needle into the fascia on the woman's right side from the inside out, starting at the upper end of the incision ■ pass the needle through the fascia on the woman's left side from the outside to the inside of the incision ■ if any other incision was made, the appropriate modification will be needed for above 2 steps, e.g. starting from left to right for transverse incision ■ tie the knot.					
4. Continue the closure of the fascia with a running suture until the lower end of the incision is reached, ensuring that the peritoneum and intra-peritoneal contents are not included in the suture (appropriate modifications should be made for other incisions).					
5. Tie off the suture: ■ once the lower end of the incision is reached, tie a knot with the suture ■ pull upward on the suture and knot ■ reinsert the needle into the fascia just below the knot and bring it out through the fascia about 1cm above the knot (towards the upper end of the incision) ■ pull on the suture to bury the knot under the fascia ■ cut the suture flush with the fascia.					

19. LEARNING GUIDE FOR LAPAROTOMY AND SUBTOTAL HYSTERECTOMY FOR REMOVAL OF RUPTURED UTERUS (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
6. If there are signs of infection, pack the subcutaneous tissue with gauze and place loose number 1 or 2 catgut (or polyglycolic) sutures. Close the skin with a delayed closure after the infection has cleared. If there are no signs of infection: ■ use a toothed dissecting forceps and a round needle threaded with plain catgut in a needle holder to place interrupted sutures to bring the fat layer together, if necessary ■ use a toothed dissecting forceps and a cutting needle in a needle holder with 3-0 nylon (or silk) to place interrupted mattress sutures about 2cm apart to bring the skin layer together. Subcuticular method may also be done.					
7. Ensure there is no bleeding, clean the wound with gauze moistened in antiseptic solution and apply a sterile dressing.					
8. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
9. Place all instruments in 0.5% chlorine solution for 10 minutes for decontamination.					
10. Dispose of needle and syringe in a puncture-proof container.					
11. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.					
POST-PROCEDURE CARE					
1. Transfer the woman to the recovery area. Do not leave the woman unattended until the effects of the anaesthesia have worn off.					
2. Write notes of the operation, post-operative observations and management instructions.					
3. Assess the woman before she is transferred out of the recovery area.					
4. Once the woman has woken fully from the anaesthesia, explain what was found at surgery and what procedures have been done.					
5. Ensure the woman has been given written post-operative instructions (e.g., awareness of complications and warning signs, when to return to work) and necessary medications before discharge.					
6. Tell her when to return if follow-up is needed and that she can return anytime she has concerns.					

19. CHECKLIST FOR LAPAROTOMY AND SUBTOTAL HYSTERECTOMY FOR REMOVAL OF RUPTURED UTERUS

(To be used by the **Participant** for practise and by the **Trainer** at the end of the course)
Place a "✓" in case box if step/task is performed **satisfactorily**, an "✗" if it is **not** performed satisfactorily, or **N/O** if not observed.

Satisfactory: Performs the step or task according to the standard procedure or guidelines

Unsatisfactory: Unable to perform the step or task according to the standard procedure or guidelines

Not observed: Step or task not performed by participant during evaluation by trainer

Participant: _____ Date observed: _____

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY					
1. Prepare the necessary equipment.					
2. Explain to the woman (and her support person) what is going to be done, listen to her, respond attentively to her questions and concerns and obtain informed consent.					
3. Examine the woman, assess her condition and examine the medical record for information and completeness.					
4. Set up an IV line and infuse IV fluids.					
5. Catheterise the woman's bladder and shave if necessary.					
6. Have anaesthetist give anaesthesia and prophylactic antibiotics.					
7. Put on personal protective equipment.					
PRE-PROCEDURE TASKS					
1. Put on theatre clothes, protective footwear, cap, facemask, protective eyeglasses and a plastic apron.					
2. Perform a surgical handscrub and put on high-level disinfected or sterile surgical gloves and a sterile gown.					
3. Ensure that the instruments and supplies are available and arrange them on a sterile tray or in a high-level disinfected container. Conduct an instrument and swab count and ask an assistant to note on board.					
4. Ensure that an assistant is scrubbed and dressed.					
PREPARING THE WOMAN					
1. Place the woman in the supine position on the operating table.					
2. Ensure that the anaesthesia has taken full effect.					
3. Apply antiseptic solution to the abdomen and place a drape over the woman.					
OPENING THE ABDOMEN					
1. Make a 2–3cm midline vertical incision below the umbilicus (or other appropriate incisions) to the pubic hair through skin and fascia.					
2. Lengthen the incision and separate the rectus muscle.					
3. Examine the uterus for the site of rupture.					
4. Aspirate blood from the abdomen and remove any blood clots.					
5. Place a bladder retractor and self-retaining abdominal retractors.					

19. CHECKLIST FOR LAPAROTOMY AND SUBTOTAL HYSTERECTOMY FOR REMOVAL OF RUPTURED UTERUS (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
SUBTOTAL HYSTERECTOMY					
1. Deliver the newborn and placenta.					
2. Separate urinary bladder from uterus.					
3. Determine if the tear is through the cervix and vagina or laterally through the uterine artery or if there is a broad ligament haematoma, and repair as necessary.					
4. Apply long artery forceps to the uterine rupture edge and divide untorn muscle between clamps, at the lower segment above the bladder.					
5. Free the uterus from the cervical stump and apply haemostatic sutures to the edge of the cut lower segment walls.					
6. Check to ensure haemostasis.					
7. Control bleeding by clamping and using figure-of-eight sutures.					
8. Place an abdominal drain.					
9. Check the bladder for injury and repair injury, if necessary.					
CLOSING THE ABDOMEN					
1. Close the fascia with a running suture, using a cutting needle and number 1 or 2 chromic catgut (or polyglycolic) suture, ensuring that the peritoneum and intra-peritoneal contents are not included in the suture.					
2. If there are signs of infection, pack the subcutaneous tissue with gauze and place loose 2/0 catgut (or polyglycolic) sutures. Close the skin with a delayed closure after the infection has cleared. If there are no signs of infection, close the fat layer, if necessary, with an interrupted suture, using a round needle and plain catgut, and close the skin with interrupted mattress sutures about 2cm apart, using a cutting needle and 3-0 nylon or silk. Subcuticular method may also be done.					
3. Ensure there is no bleeding, clean the wound with gauze moistened in antiseptic solution and apply a sterile dressing.					
4. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
5. Place all instruments in 0.5% chlorine solution for decontamination.					
6. Dispose of needle and syringe in a puncture-proof container.					
7. Use antiseptic handrub or wash hands thoroughly.					
POST-PROCEDURE CARE					
1. Do not leave the woman unattended until the effects of the anaesthesia have worn off.					
2. Explain to the woman what was found at surgery and what procedures have been done.					
3. Ensure the woman has written post-operative instructions, necessary medications before discharge and instructions regarding a follow-up visit.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

NOTES

13

SKILLS PRACTISE SESSION: NEWBORN EXAMINATION

Purpose

The purpose of this activity is to enable participants to practise newborn examination and achieve competency in the skills required.

Instructions

This activity should be conducted in a simulated setting, using the appropriate model.

Participants should review the Learning Guide for Newborn Examination before beginning the activity.

The trainer should demonstrate the steps/tasks in the procedure of newborn examination, using a bag and mask, for participants. Under the guidance of the trainer, participants should then work in pairs to practise the steps/tasks and observe each other's performance, using the Learning Guide for Newborn Examination.

Participants should be able to perform the steps/tasks in the Learning Guide for Newborn Examination before skill competency is assessed by the trainer in the simulated setting, using the Checklist for Newborn Examination.

Finally, following supervised practise at a clinical site, the trainer should assess the skill competency of each participant, using the Checklist for Newborn Examination.[14]

Resources

The following equipment or representations thereof:

- examination table
- weighing scale
- examination gloves.

Learning Guide for Newborn Examination

Learning Guide for Newborn Examination

Checklist for Newborn Examination

Checklist for Newborn Examination

[14] If clients are not available at clinical sites for participants to practise newborn resuscitation, the skills should be taught, practised and assessed in a simulated setting.

20. LEARNING GUIDE FOR NEWBORN EXAMINATION

(To be completed by **Participants**)

Rate the performance of each step or task observed using the following rating scale (Write 1, 2 or 3 as the case may be in the box provided):

1. **Needs improvement:** Step or task not performed correctly or out of sequence (if necessary) or is omitted
2. **Competently performed:** Step or task performed correctly in proper sequence (if necessary) but participant does not progress from step to step efficiently
3. **Proficiently performed:** Step or task efficiently and precisely performed in the proper sequence (if necessary)

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY					
1. Prepare the client care area and necessary equipment.					
2. Explain to the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.					
PHYSICAL EXAMINATION					
1. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry and put examination gloves on both hands.					
2. Quickly dry and wrap or cover the newborn					
3. Place the newborn on a clean, warm surface or examine him/her in the mother's arms.					
4. Check: ■ breathing (normal rate ranges from 30–60 breaths per minute), grunting, chest in-drawing ■ temperature (normal range 36.5°C–37.5°C) ■ colour ■ skin ■ general alertness, movements and muscle tone.					
5. Examine the genitalia for abnormalities and determine the sex of the newborn.					
6. Examine the head, face, mouth and eyes: ■ check general size and symmetry of the head ■ examine the face for any abnormalities, especially for asymmetrical movement. ■ check the mouth for any abnormalities and feel whether the palate is properly developed ■ check the skull contours and feel for the normal sutures and fontanelles ■ every examination, open the eyelids and check that the eyes have a normal appearance and that there are no signs of infection.					
7. Examine the spine and the CNS for abnormalities.					
8. Examine the chest for symmetrical movement and breast abnormalities.					
9. Auscultate for abnormal breath sounds or heart lesions.					
10. Examine the abdomen for any abnormalities, masses or enlarged organs.					
11. Examine the umbilicus for bleeding, infections or hernia.					
12. Examine the upper and lower limbs: ■ check the skin, soft tissues and bones for abnormalities, e.g. spina bifida, kyphosis and scoliosis ■ check for symmetry of movement.					
13. Weigh the newborn and compare with standard weight charts.					

20. LEARNING GUIDE FOR NEWBORN EXAMINATION (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
POST-PHYSICAL EXAMINATION TASKS					
1. Leave the baby in a comfortable condition.					
2. Remove gloves and discard all materials.					
3. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.					
4. Inform the mother of your findings and ask her if she has additional questions.					
5. Record all relevant findings from the physical examination.					
RECORD KEEPING					
1. Record the following details: ■ name ■ sex ■ contact information ■ date and time of birth ■ birth weight ■ any problem or concern of the mother.					
2. Record risk of infection if mother: ■ had a uterine infection or a fever during labour or birth ■ ruptured membranes more than 12 hours before childbirth ■ had a positive syphilis test during this pregnancy. If so, was she treated adequately? ■ is known to be HIV positive. If so, is she receiving AIDS-associated retrovirus treatment? ■ has been diagnosed with tuberculosis. If so, has she been treated for at least two months? ■ is known to be Hepatitis B positive.					
3. Record for birth or other complications such as: ■ shoulder dystocia, birth asphyxia, breech birth or instrumental assistance or eclampsia ■ weight less than 2,500g or more than 4,000g at birth ■ mode of delivery and complications to baby and mother at birth ■ other maternal/foetal complication in pregnancy and their treatment.					

20. CHECKLIST FOR NEWBORN EXAMINATION

(To be used by the **Participant** for practise and by the **Trainer** at the end of the course)
Place a "✓" in case box if step/task is performed **satisfactorily**, an "✗" if it is **not** performed satisfactorily, or **N/O** if not observed.
Satisfactory: Performs the step or task according to the standard procedure or guidelines
Unsatisfactory: Unable to perform the step or task according to the standard procedure or guidelines
Not observed: Step or task not performed by participant during evaluation by trainer

Participant: _____ Date observed: _____

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY					
1. Prepare the necessary equipment.					
2. Explain to the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.					
PHYSICAL EXAMINATION					
1. Use antiseptic handrub or wash hands thoroughly.					
2. Quickly dry and wrap or cover the newborn					
3. Check the newborn's general appearance and alertness, breathing, heart rate, temperature, skin, and muscle tone.					
4. Examine the genitalia.					
5. Examine the head, face, mouth and eyes.					
6. Examine the spine and the CNS.					
7. Examine the chest for symmetrical movement.					
8. Examine the abdomen with emphasis on the umbilicus for bleeding and infection.					
9. Examine the upper and lower limbs, checking the skin, soft tissues and bones and symmetrical movement.					
10. Weigh the newborn and compare with standard weight chart.					
11. Use antiseptic handrub or wash hands thoroughly.					
12. Inform mother of findings and ask her if she has additional questions.					
13. Record all relevant findings.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

14

SKILLS PRACTISE SESSION: NEWBORN RESUSCITATION

Purpose

The purpose of this activity is to enable participants to practise newborn resuscitation using a bag and mask and achieve competency in the skills required.

Instructions

This activity should be conducted in a simulated setting, using the appropriate model.

Resources

The following equipment or representations thereof:

- examination table
- suction equipment
- self-inflating bag (newborn)
- newborn facemasks
- clock.

Participants should review the Learning Guide for Newborn Resuscitation before beginning the activity.

Learning Guide for Newborn Resuscitation

The trainer should demonstrate the steps/tasks in the procedure of newborn resuscitation, using a bag and mask, for participants. Under the guidance of the trainer, participants should then work in pairs to practise the steps/tasks and observe each other's performance, using the Learning Guide for Newborn Resuscitation.

Learning Guide for Newborn Resuscitation

Participants should be able to perform the steps/tasks in the Learning Guide for Newborn Resuscitation before skill competency is assessed by the trainer in the simulated setting, using the Checklist for Newborn Resuscitation.

Checklist for Newborn Resuscitation

Finally, following supervised practise at a clinical site, the trainer should assess the skill competency of each participant, using the Checklist for Newborn Resuscitation.[15]

Checklist for Newborn Resuscitation

[15] If clients are not available at clinical sites for participants to practise newborn resuscitation, the skills should be taught, practised and assessed in a simulated setting.

21. LEARNING GUIDE FOR NEWBORN RESUSCITATION

(To be completed by **Participants**)

Rate the performance of each step or task observed using the following rating scale (Write 1, 2 or 3 as the case may be in the box provided):

1. **Needs improvement:** Step or task not performed correctly or out of sequence (if necessary) or is omitted
2. **Competently performed:** Step or task performed correctly in proper sequence (if necessary) but participant does not progress from step to step efficiently
3. **Proficiently performed:** Step or task efficiently and precisely performed in the proper sequence (if necessary)

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY ***Note:*** *Newborn resuscitation equipment should be available and ready for use at all births. Hands should be washed and gloves worn before touching the newborn.*					
1. Quickly dry and wrap or cover the newborn, except for the face and upper chest.					
2. Place the newborn on its back on a clean, warm surface.					
3. Explain to the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.					
4. Provide continual emotional support and reassurance, as feasible.					
RESUSCITATION USING BAG AND MASK					
1. Position the head in a slightly extended position to open the airway.					
2. Clear the airway by suctioning **the mouth first** and **then the nose if the newborn is not breathing**: ■ introduce catheter 5cm into the newborn's mouth and suction while withdrawing catheter ■ introduce catheter 3cm into each nostril and suction while withdrawing catheter ■ do not suction deep in the throat because this may cause the newborn's heart to slow or breathing to stop ■ be especially thorough with suctioning if there is blood or meconium in the newborn's mouth and/or nose ■ if the newborn is still not breathing, start ventilating.					
3. Quickly recheck the position of the newborn's head to make sure that the neck is in neutral position.					
4. Place the mask on the newborn's face so that it covers the chin, mouth and nose.					
5. Form a seal between the mask and the newborn's face.					
6. Squeeze the bag with two fingers only or with the whole hand, depending on the size of the bag.					
7. Check the seal by ventilating two times and observing the rise of the chest.					
8. If the newborn's chest is rising: a) ventilate at a rate of 40 breaths per minute b) observe the chest for an easy rise and fall.					
9. If the newborn's chest is not rising: a) check the position of the head again to make sure the neck is slightly extended b) reposition the mask on the newborn's face to improve the seal between mask and face c) squeeze the bag harder to increase ventilation pressure d) repeat suction of mouth and nose to remove mucus, blood or meconium from the airway.					

21. LEARNING GUIDE FOR NEWBORN RESUSCITATION (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
10. Ventilate for one minute and then stop and quickly assess if the newborn is breathing spontaneously.					
11. If breathing is normal (30–60 breaths per minute) and there is no in-drawing of the chest and no grunting: a) place in skin-to-skin contact with mother b) observe breathing at frequent intervals c) measure the newborn's axillary temperature and rewarm if temperature is less than 36°C d) keep in skin-to-skin contact with mother if temperature is 36°C or less e) encourage mother to begin infant feeding, as per PMTCT Protocol if relevant.					
12. If newborn is not breathing, breathing is less than 30 breaths per minute or severe chest in-drawing is present, ventilate with oxygen if available. Arrange immediate transfer for special care.					
13. If there is no gasping or breathing at all after 20 minutes of ventilation, stop ventilating.					
POST-PROCEDURE TASKS					
1. Dispose of disposable suction catheters and mucus extractors in a leakproof container or plastic bag.					
2. Take the valve and mask apart and inspect for cracks and tears.					
3. Wash the valve and mask and check for damage with water and detergent and rinse.					
4. Select a method of sterilisation or high-level disinfection: ■ silicone and rubber bags and client valves can be boiled for 10 minutes, autoclaved at 136°C or disinfected in an appropriate chemical solution (this may vary depending on the instructions provided by the manufacturer).					
5. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.					
6. After chemical disinfection, rinse all parts with clean water and allow to air dry.					
7. Reassemble the bag.					
8. Test the bag to make sure that it is functioning: ■ block the valve outlet by making an airtight seal with the palm of your hand and observe if the bag reinflates when the seal is released ■ repeat the test with the mask attached to the bag.					
DOCUMENTING RESUSCITATION PROCEDURES					
1. Record the following details: ■ condition of the newborn at birth ■ procedures necessary to initiate breathing ■ time from birth to initiation of spontaneous breathing ■ clinical observations during and after resuscitation measures ■ outcome of resuscitation measures ■ in case of failed resuscitation measures, possible reasons for failure ■ names of providers involved.					

21. CHECKLIST FOR NEWBORN RESUSCITATION

(To be used by the **Participant** for practise and by the **Trainer** at the end of the course)
Place a "✓" in case box if step/task is performed **satisfactorily**, an "✗" if it is **not** performed satisfactorily, or **N/O** if not observed.
Satisfactory: Performs the step or task according to the standard procedure or guidelines
Unsatisfactory: Unable to perform the step or task according to the standard procedure or guidelines
Not observed: Step or task not performed by participant during evaluation by trainer

Participant: _____ Date observed: _____

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY					
1. Quickly wrap or cover the newborn and place on a clean, warm surface.					
2. Explain to the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.					
3. Provide continual emotional support and reassurance, as feasible.					
RESUSCITATION USING BAG AND MASK					
1. Position the head in a slightly extended position to open the airway.					
2. Clear the airway by suctioning the mouth and nose.					
3. Position the newborn's neck and place the mask on the newborn's face so that it covers the chin, mouth and nose. Form a seal between mask and newborn's face.					
4. Ventilate at a rate of 40 breaths per minute for one minute and then stop and quickly assess if the newborn is breathing spontaneously.					
5. If breathing is normal, and there is no in-drawing of the chest and no grunting, place in skin-to-skin contact with mother.					
6. If newborn is not breathing, breathing is less than 30 breaths per minute or severe chest in-drawing is present, ventilate with oxygen if available. Arrange immediate transfer for special care.					
7. If there is no gasping or breathing at all after 20 minutes of ventilation, check heart sounds. If absent, stop ventilating.					
POST-PROCEDURE TASKS					
1. Dispose of disposable suction catheters and mucus extractors in a leakproof container or plastic bag. Place reusable catheters and mucus extractors in 0.5% chlorine solution for decontamination. Then, clean and process.					
2. Clean and decontaminate the valve and mask and check for damage.					
3. Use antiseptic handrub or wash hands thoroughly.					
4. Record pertinent information on the mother's/newborn's record.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

15

SKILLS PRACTISE SESSION: ENDOTRACHEAL INTUBATION

Purpose

Purpose of this activity is to enable participants to practise endotracheal intubation and achieve competency in the skills required.

Instructions

This activity should be conducted in a simulated setting, using the appropriate model.

Resources

The following equipment or representations thereof:

- model for endotracheal intubation
- adult laryngoscope and endotracheal tubes
- self-inflating bag and mask (adult size)
- new examination or high-level disinfected surgical gloves
- adhesive tape.

Participants should review the Learning Guide for Endotracheal Intubation before beginning the activity.

Learning Guide for Endotracheal Intubation

The trainer should demonstrate the steps/tasks in the procedure of endotracheal intubation for participants. Under the guidance of the trainer, participants should then work in pairs to practise the steps/tasks and observe each other's performance, using the Learning Guide for Endotracheal Intubation.

Learning Guide for Endotracheal Intubation

Participants should be able to perform the steps/tasks in the Learning Guide for Endotracheal Intubation before skill competency is assessed by the trainer in the simulated setting, using the Checklist for Endotracheal Intubation.

Checklist for Endotracheal Intubation

Finally, following supervised practise at a clinical site, the trainer should assess the skill competency of each participant, using the Checklist for Endotracheal Intubation.[16]

Checklist for Endotracheal Intubation

[16] If clients are not available at clinical sites for participants to practise endotracheal intubation, the skills should be taught, practised and assessed in a simulated setting.

22. LEARNING GUIDE FOR ENDOTRACHEAL INTUBATION

(To be completed by **Participants**)

Rate the performance of each step or task observed using the following rating scale (Write 1, 2 or 3 as the case may be in the box provided):

1. **Needs improvement:** Step or task not performed correctly or out of sequence (if necessary) or is omitted
2. **Competently performed:** Step or task performed correctly in proper sequence (if necessary) but participant does not progress from step to step efficiently
3. **Proficiently performed:** Step or task efficiently and precisely performed in the proper sequence (if necessary)

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK		CASES				
		1	2	3	4	5
GETTING READY						
1.	Prepare the necessary equipment.					
2.	If the woman is conscious and responsive, explain to the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.					
3.	Provide continual emotional support and reassurance, as feasible.					
INTUBATION						
1.	Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a sterile cloth or air dry.					
2.	Put new examination or high-level disinfected surgical gloves on both hands.					
3.	Give 100% oxygen by mask for two to three minutes.					
4.	Position the woman's head on a folded sheet, ensuring her neck is extended.					
5.	If the woman is conscious, give diazepam 5–10mg IV slowly over two minutes. Give a muscle relaxant e.g. scoline 10mg/Kg body weight.					
6.	Ask an assistant to apply pressure to the cricoid against the oesophagus.					
7.	Open the woman's mouth and gently insert the laryngoscope over the tongue and towards the back of the throat, displacing the tongue to the left.					
8.	If necessary, suction out any secretions in the throat.					
9.	Lift the blade of the laryngoscope upward and forward, using the wrist, to visualise the glottis.					
10.	Insert the endotracheal tube (ETT) and stylet through the glottis into the trachea.					
11.	Remove the laryngoscope.					
12.	Withdraw the stylet.					
13.	Inflate the cuff of the ETT with 3–5mL of air. If ETT is not cuffed use gauze to pack and remember to remove at the end.					
14.	Connect the ETT to the Ambu bag.					
ENSURING CORRECT PLACEMENT OF ENDOTRACHEAL TUBE						
1.	Press the Ambu bag two to three times rapidly while observing the woman's chest for inflation.					
2a.	If the chest inflates while pressing the Ambu bag, auscultate the chest to confirm that air is entering both lungs equally. ■ if air entry into both lungs is unequal, deflate the cuff and gently withdraw the ETT slightly until air entry is heard equally on both sides. Re-inflate the cuff.					

22. LEARNING GUIDE FOR ENDOTRACHEAL INTUBATION (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
2b. If the chest does not inflate: i) deflate the cuff and withdraw the ETT ii) give 100% oxygen by bag and mask for three minutes iii) attempt intubation again.					
3. Once the ETT is properly positioned, use adhesive tape to fix the tube to the woman's face.					
4. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
5. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.					
EXTUBATION					
1. Confirm that the woman is ready for extubation.					
2. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a sterile cloth or air dry.					
3. Put new examination or high-level disinfected surgical gloves on both hands.					
4. Remove adhesive tape that holds the tube in position.					
5. Gently open the woman's mouth and suction out any secretions in the throat.					
6. Deflate the cuff of the ETT and gently remove the tube. Remember to remove any packed gauze.					
7. Give oxygen by mask while ensuring that regular breathing is established.					
8. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
9. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.					

22. CHECKLIST FOR ENDOTRACHEAL INTUBATION

(To be used by the **Participant** for practise and by the **Trainer** at the end of the course)
Place a "✓" in case box if step/task is performed **satisfactorily**, an "✗" if it is **not** performed satisfactorily, or **N/O** if not observed.
Satisfactory: Performs the step or task according to the standard procedure or guidelines
Unsatisfactory: Unable to perform the step or task according to the standard procedure or guidelines
Not observed: Step or task not performed by participant during evaluation by trainer

Participant: _____ Date observed: _____

(Many of the following steps/tasks should be performed simultaneously)

STEP/TASK	CASES				
	1	2	3	4	5
GETTING READY					
1. Prepare the necessary equipment.					
2. If the woman is conscious and responsive, explain to the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.					
3. Provide continual emotional support and reassurance, as feasible.					
INTUBATION					
1. Use antiseptic handrub or wash hands thoroughly and put on new examination or high-level disinfected surgical gloves.					
2. Give oxygen.					
3. Position the woman's head.					
4. Give diazepam and scoline, if necessary.					
5. Ask an assistant to apply pressure to the cricoid against the oesophagus.					
6. Insert the laryngoscope. If necessary, suction out any secretions in the throat. Visualise the glottis.					
7. Insert the endotracheal tube, remove the laryngoscope and withdraw the stylet.					
8. Inflate the cuff of the endotracheal tube and connect it to the Ambubag.					
ENSURING CORRECT PLACEMENT OF ENDOTRACHEAL TUBE					
1. Observe inflation of the chest and auscultate the chest to ensure correct placement of the endotracheal tube.					
2. Once the endotracheal tube is properly positioned, fix the tube to the woman's face.					
3. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
4. Remove gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.					
5. Use antiseptic handrub or wash hands thoroughly.					

22. CHECKLIST FOR ENDOTRACHEAL INTUBATION (cont'd)

STEP/TASK	CASES				
	1	2	3	4	5
EXTUBATION					
1. Confirm that the woman is ready for extubation.					
2. Use antiseptic handrub or wash hands thoroughly and put on new examination or high-level disinfected surgical gloves.					
3. Remove the tube.					
4. Give oxygen while ensuring that regular breathing is established.					
5. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
6. Remove gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.					
7. Use antiseptic handrub or wash hands thoroughly.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

ROLE-PLAY:
INTERPERSONAL COMMUNICATION *during* EmOC

Directions

The trainer will select three participants to perform the following roles: skilled provider, postpartum client and support person. The three participants 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.

Client: Mrs. A. is 20 years old. She gave birth at home two hours ago.

Support person: Village traditional birth attendant (TBA) who attended Mrs. A.'s birth.

Situation

Mrs. A. has been brought to the health centre by the TBA because she has been bleeding heavily since childbirth two hours ago. The duration of labour was 12 hours and the TBA reports that there were no complications. The midwife has assessed Mrs. A. and treated her for shock and atonic uterus. Although the bleeding has decreased since Mrs. A. first arrived at the health centre, her uterus is not well contracted, despite fundal massage and the administration of oxytocin. Mrs. A., who is very frightened, must be transferred to the EmOC facility for further management. The TBA is anxious and feels guilty about Mrs. A.'s condition. The midwife must explain the situation to Mrs. A. and the TBA and attempt to provide emotional support and reassurance as preparations are made for transfer.

Focus of the role-play

The focus of the role-play is the interpersonal interaction among the midwife, Mrs. A. 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. A. and the TBA and the need to transfer Mrs. A. to the EmOC facility?
2. How did the midwife demonstrate emotional support and reassurance during his/her interaction with Mrs. A. and the TBA?
3. What verbal/nonverbal behaviours did Mrs. A. and the TBA use that would indicate they felt supported and reassured?

ANSWER KEY

Discussion questions

1. How did the midwife explain the situation to Mrs. A. and the TBA and the need to transfer Mrs. A. to the district hospital?
2. How did the midwife demonstrate emotional support and reassurance during her/his interaction with Mrs. A. and the TBA?
3. What verbal/non-verbal behaviors did Mrs. A. and the TBA use that would indicate they felt supported and reassured?

Answers

The following answers should be used by the trainer to guide discussion after the role play.

1. The midwife should speak in a calm, quiet, reassuring manner, using terminology that will be easily understood by Mrs. A. Sufficient information should be provided to enable Mrs. A. 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. A.'s feelings about her situation. For example, non-verbal behaviors such as a squeeze of the hand and a look of concern could be enormously helpful in providing emotional support and reassurance for Mrs. A. In addition, 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 non-verbal behaviors mentioned above, Mrs. A. is less likely to appear 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 be supportive to Mrs. A.

CASE STUDY 1: VAGINAL BLEEDING IN EARLY PREGNANCY

ANSWER KEY

Case study

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

Assessment (history, physical examination, screening procedures/laboratory tests)

1. **What will you include in your initial assessment of Mrs. A.? Why?**

- Greet Mrs. A. respectfully and with kindness.
- Explain what is going to be done and listen to her carefully. In addition, answer her questions in a calm and reassuring manner.
- Conduct a rapid initial assessment to check for the following signs to determine if she is in shock and in need of emergency treatment/ resuscitation: pulse >110; systolic blood pressure less than 90mm Hg; pallor; sweatiness or cold, clammy skin; rapid breathing; confusion. The initial assessment also includes rapid observation of consciousness/convulsions, temperature, and abdominal pain. Assess her to determine whether vaginal bleeding has increased or products of conception have been passed.

2. **What particular aspects of Mrs. A.'s physical examination will help you make a diagnosis or identify her problems/needs? Why?**

- Perform an abdominal examination 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.
- Perform a gentle bi-manual examination to check for cervical motion tenderness and tender adnexal mass, which may indicate ectopic pregnancy, and to check for products of conception in the cervical os, which may indicate incomplete abortion.

Diagnosis (identification of problems/needs)

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

Mrs. A.'s temperature is 36.8°C. Her pulse rate is 130 beats per minute and weak Her blood pressure is 85/60 and her respirations are 20 per minute. Her skin is pale and sweaty. Mrs. A. has acute abdominal and pelvic pain. Her abdomen is tense and she has rebound tenderness. She has light vaginal bleeding. On vaginal exam, the cervix is found to be closed, and cervical motion tenderness is present. The six-week size uterus is softer than normal.

3. **Based on these findings, what is Mrs. A.'s diagnosis (problem/need)? Why?**

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

Care provision (planning and intervention)

4. **Based on your diagnosis (problem/need identification), what is your plan of care for Mrs. A.? Why?**

- Mrs. A. should be treated for shock immediately:
  - Position her on her side.
  - Ensure that her airway is open.
  - Give her oxygen at 6–8L per minute by mask or cannula.
  - Keep her warm.
  - Elevate her legs.
  - Monitor her temperature, pulse, blood pressure and respiration.
  - Start an IV using a large bore needle for rapid infusion of fluids (1L 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).
- Draw blood for haemoglobin and cross-matching, and make available blood for transfusion as soon as possible.
- Make arrangements for immediate transfer to a hospital with surgical facilities for an emergency laparotomy. Do not delay surgery while waiting for blood to be made available for transfusion.
- Provide emotional support and reassurance to Mrs. A. and her family (or support person), explaining the situation and what to expect, and answering questions and concerns.

Evaluation

Mrs. A.'s post-operative course was without complications and notable for her tolerating oral intake, having minimal complaints of abdominal pain, ambulating well, and spontaneously voiding.

She is now ready to be discharged; however, her haemoglobin is 9g/dL.

She has indicated that she would like to become pregnant again, but not for at least a year.

5. **Based on these findings, what is your continuing plan of care for Mrs. A.? Why?**

- Treat Mrs. A.'s anaemia with ferrous sulphate or ferrous fumarate 60mg by mouth plus folic acid 400mcg by mouth once daily for six months.
- Provide counselling and advice on prognosis for fertility and the increased risk of a future ectopic pregnancy.
- Provide family planning counselling as well as family planning method of choice to Mrs. A. before discharge.
- Arrange a follow-up visit for Mrs. A. in four weeks, and encourage her to return before then if she has any questions or concerns.

References

Managing Complications in Pregnancy and Childbirth: pages C-1 to C-2; S-1; S-8; S-13 to S-15; S-26

CASE STUDY 2: PREGNANCY-INDUCED HYPERTENSION

ANSWER KEY

Case study

Mrs. B. is a 16-year-old gravida 1 para 0 at 30 weeks gestation, who has come today for a follow-up visit as requested by her provider at her last visit one week ago. She reports that at that visit she was told she had "high blood pressure" but was not given any advice about activity. However, she was told to return sooner than one week if she noticed any danger signs. A review of her records shows that she has had three antenatal visits this pregnancy and that before her last visit all findings were within normal limits. At her last visit, it was found that her blood pressure was 130/90mm Hg. Her urine was negative for protein. The foetal heart sounds were normal, the foetus was active and uterine size was consistent with dates.

Assessment (history, physical examination, screening procedures/laboratory tests)

1. **What will you include in your initial assessment of Mrs. B.? Why?**

- Greet Mrs. B. respectfully and with kindness.
- Explain what is going to be done and listen to her carefully. In addition, answer her questions in a calm and reassuring manner.
- Ask Mrs. B. how she is feeling and whether she has had headache, blurred vision, upper abdominal pain or other problems since her last clinic visit.
- Ask whether foetal activity has changed since her last visit.
- Check her blood pressure and test her urine for protein (the presence of proteinuria, together with a diastolic blood pressure equal to or greater than 90mm Hg, is indicative of pre-eclampsia).

2. **What particular aspects of Mrs. B.'s physical examination will help you make a diagnosis or identify her problems/needs? Why?**

- Measure her blood pressure.
- Perform an abdominal examination 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 intrapartum periods, and an increased risk of abruptio placentae).

3. **What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. B.? Why?**

- As mentioned above, check urine for protein.

Diagnosis (identification of problems/needs)

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

History

Mrs. B. denies severe headache, blurred vision, upper abdominal pain, convulsions or loss of consciousness, or other problems since her last visit. She reports normal foetal movement.

Physical Examination

Mrs. B.'s blood pressure is 130/90mm Hg, and she has proteinuria 1+.

The foetus is active and foetal heart rate is 136 per minute. Uterine size is consistent with dates.

4. **Based on these findings, what is Mrs. B.'s diagnosis (problem/need)? Why?**

- Mrs. B.'s signs and symptoms (e.g., diastolic blood pressure 90–110mm Hg after 20 weeks gestation and proteinuria up to 2+) are consistent with mild pre-eclampsia.

Care provision (planning and intervention)

5. **Based on your diagnosis (problem/need identification), what is your plan of care for Mrs. B.? Why?**

- Reassure Mrs. B. and her family and counsel them about the danger signs related to severe pre-eclampsia and eclampsia (severe headache, blurred vision, upper abdominal pain, convulsions or loss of consciousness) and the need to seek help immediately if any of these occur. Advise her of the possible consequences of pregnancy-induced hypertension.
- Encourage her to take additional periods of rest and to eat a normal diet (discourage salt restriction because this does not prevent pregnancy-induced hypertension).
- Ask Mrs. B. to return to the clinic twice weekly to have her blood pressure, urine and foetal condition monitored.
- In Mrs. B.'s management, do not include the use of anti-convulsants, anti-hypertensives, sedatives or tranquillisers (these should not be given unless the blood pressure or urinary protein level increases).
- Provide, as needed, basic antenatal care (early detection and treatment of problems, prophylactic interventions, birth plan development/revision, plan for newborn feeding).
- Advise her to plan for childbirth in the hospital.

Evaluation

Mrs. B. attends the antenatal clinic on a twice-weekly basis, as requested. Her blood pressure remains the same, she continues to have proteinuria 1+ and the foetal growth is normal. Four weeks later, however, her blood pressure is 130/100mm Hg and she has proteinuria 2+. Mrs. B. has not suffered headache, blurred vision, upper abdominal pain, convulsions, loss of consciousness or a change in foetal movement. She finds it very tiring, however, to have to travel to the clinic by bus twice weekly for follow-up and wants to come only once a week.

6. **Based on these findings, what is your continuing plan of care for Mrs. B.? Why?**

- Admit Mrs. B. to an emergency obstetric care facility for follow-up since her diastolic blood pressure and proteinuria have increased; follow-up as an outclient is no longer feasible.
- Explain to Mrs. B. the need for close follow-up. In relation to this, encourage her to express her concerns, listen carefully, and provide emotional support and reassurance.
- Her care in hospital should be as follows:
  - normal diet
  - blood pressure monitored twice daily
  - urine tested for protein daily
  - foetal condition monitored twice daily
  - no anti-convulsants, anti-hypertensives, sedatives or tranquillisers.
- If Mrs. B.'s blood pressure returns to normal or her condition is stable, discharge her, providing arrangements can be made for twice-weekly follow-up (e.g., it may be possible for her to attend the antenatal clinic once a week and be monitored at home once a week by a community midwife).
- If her condition remains unchanged, keep her in the hospital and monitor her as described above.
- Continue to provide basic antenatal care, as needed.
- If Mrs. B. develops signs of foetal growth restriction, consider early childbirth.
- If foetal and maternal conditions are stable, she should be able to go into spontaneous labour and deliver vaginally without the need for vacuum extraction or forceps.

References

Managing Complications in Pregnancy and Childbirth: pages S-35 to S-43

CASE STUDY 3:
ELEVATED BLOOD PRESSURE IN PREGNANCY

ANSWER KEY

Case study

Mrs. C. is a 34-year-old gravida 4 para 3 at 18 weeks gestation who has come to the antenatal clinic today for a follow-up visit as requested by her midwife at her last visit one week ago. She attended her first antenatal care visit one week ago, when it was found that her blood pressure was 140/100mm Hg on two readings taken four hours apart. Mrs. C. reports that she has had high blood pressure for years, which has not been treated with anti-hypertensive drugs. She does not know what her blood pressure was before she became pregnant. She moved to the district six months ago and her medical record is not available.

Assessment (history, physical examination, screening procedures/laboratory tests)

1. **What will you include in your initial assessment of Mrs. C.? Why?**

- Greet Mrs. C. respectfully and with kindness.
- Explain what is going to be done and listen carefully. In addition, answer her questions in a calm and reassuring manner.
- Ask how she is feeling and whether she has had headache, visual disturbance or upper abdominal pain since the last visit. Take her blood pressure and test her urine for protein (proteinuria up to 2+, together with a diastolic blood pressure of 90–110mm Hg before 20 weeks, is characteristic of chronic hypertension with mild superimposed pre-eclampsia).
- Obtain Mrs. C.'s medical record to check her history of hypertension.

2. **What particular aspects of Mrs. C.'s physical examination will help you make a diagnosis or identify or problems/needs? Why?**

- The most important examinations are measurement of blood pressure and urine protein estimation.
- Perform an abdominal examination to check foetal growth and condition (in cases of chronic hypertension and pre-eclampsia/eclampsia, reduced placental function may lead to low birth weight; there is an increased risk of hypoxia in both the antenatal and intrapartum periods, and an increased risk of abruptio placentae).

3. **What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. C.? Why?**

- As mentioned above, check urine for protein.

Diagnosis (identification of problems/needs)

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

Mrs. C.'s blood pressure is 140/100mm Hg. She is feeling well and denies headache, visual disturbance, upper abdominal pain or decreased foetal movements. Uterine is 18-week size. Foetal heart tones are 128 per minute. Her urine is negative for protein. It has not been possible to obtain Mrs. C.'s medical record.

4. **Based on these findings, what is Mrs. C.'s diagnosis (problem/need)? Why?**

- Mrs. C.'s symptoms and signs (e.g., diastolic blood pressure of 90mm Hg or more before 20 weeks gestation and, in Mrs. C.'s case, a history of hypertension, lack of proteinuria) are consistent with chronic hypertension.

Care provision (planning and intervention)

5. **Based on your diagnosis (problem/need identification), what is your plan of care for Mrs. C.? Why?**

- Counsel Mrs. C. about the danger signs in pregnancy, with particular emphasis on those related to pre-eclampsia and eclampsia (severe headache, blurred vision, upper abdominal pain, convulsions or loss of consciousness) and the need to seek help immediately if any of these occur.
- Encourage additional periods of rest.
- Ask Mrs. C. to return to the clinic in one week to have her blood pressure, urine and foetal growth and condition monitored.
- Encourage her to express her concerns, listen carefully and reassure her.
- In the meantime, make an attempt to obtain her medical record.
- At this stage in Mrs. C.'s management, do not include the use of anti-hypertensive drugs. (High levels of blood pressure maintain renal and placental perfusion in chronic hypertension. Reducing blood pressure will result in diminished perfusion—blood pressure should not be lowered below its pre-pregnancy level. There is no evidence that aggressive treatment to lower the blood pressure to normal levels improves either foetal or maternal outcome.)
- Provide basic antenatal care, as needed (early detection and treatment of problems, prophylactic interventions, birth plan development/revision, plan for newborn feeding).

Evaluation

Mrs. C. returns to the antenatal clinic in one week. She feels well and denies headache, blurred vision, upper abdominal pain, convulsions, loss of consciousness, or decreased foetal movement. Her blood pressure is 136/100mm Hg. On abdominal exam, her uterus is 19-week size and foetal heart rate is 132 per minute. Her urine is negative for protein. Her medical record has been obtained and her pre-pregnancy blood pressure is noted as 140/100mm Hg.

6. **Based on these findings, what is your continuing plan of care for Mrs. C.? Why?**

- Ask Mrs. C. to return to the clinic every two weeks to have her blood pressure, urine and foetal condition monitored.
- Counsel her about danger signs, again with particular emphasis on those related to pre-eclampsia/eclampsia.
- Encourage her to express her concerns, listen carefully and reassure her.
- If Mrs. C.'s diastolic blood pressure increases to 110mm Hg or more, or her systolic blood pressure increases to 160mm Hg or more, treat her with anti-hypertensive drugs.
- If she develops proteinuria, consider superimposed pre-eclampsia and manage her accordingly.
- Continue to provide basic antenatal care, as needed.
- If there are no complications, deliver Mrs. C. at term.

References

Managing Complications in Pregnancy and Childbirth: pages S-36 to S-38; S-49 to S-50

CASE STUDY 4:
UNSATISFACTORY PROGRESS IN LABOUR

ANSWER KEY

Case study

Mrs. D. is a 20-year-old primigravida at term. She had antenatal care in a health centre. She reports that labour pains started about 12 hours before she came to the hospital.

Assessment (history, physical examination, screening procedures/laboratory tests)

1. **What will you include in your initial assessment of Mrs. D.? Why?**

- Greet Mrs. D. respectfully and with kindness.
- Explain what is going to be done and listen to her carefully. In addition, answer her questions in a calm and reassuring manner.
- Ask her about frequency and regularity of contractions and whether she has had bleeding, loss of water (rupture of membranes), fever, decreased foetal movements, or other danger signs or problems.
- Take and record her temperature, pulse, blood pressure and respiration rate. If there are any signs of dehydration, ketosis or shock, start treatment immediately.
- Assess Mrs. D.'s emotional response to labour to determine her level of anxiety and tolerance of pain.

2. **What particular aspects of Mrs. D.'s physical examination will help you make a diagnosis or identify her problems/needs? Why?**

- Perform an abdominal exam to determine the size of the uterus, the presentation of the foetus and the descent of the presenting part, as well as foetal heart rate. Palpate the uterus to determine the frequency and duration of uterine contractions.
- Perform a vaginal examination to assess the dilatation of the cervix, to determine if the membranes are still intact and to detect any moulding of the foetal skull.

Diagnosis (identification of problems/needs)

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

History

Mrs. D. reports that contractions have increased in intensity in the 12 hours since they began and have been approximately every four to six minutes for the past four to five hours. She admits that she felt a gush of water approximately one hour prior to admission. She reports normal foetal movement. She denies any danger signs.

Physical Examination

Mrs. D.'s temperature is 37°C. Her pulse rate is 84 per minute. Her blood pressure is 112/70 and her respirations are 22 per minute. There are no signs of dehydration, ketosis or shock. She is moderately distressed by pain. The fundal height is 40cm. She has three contractions in 10 minutes, each lasting 30 seconds. The foetal head is 5/5 palpable above the symphysis pubis. The foetal heart rate is regular at 144 per minute. The cervix is 4cm dilated. The membranes are not palpable and no amniotic fluid is visibly draining. There is no moulding of the foetal skull.

3. **Based on these findings, what is Mrs. D.'s diagnosis (problem/need)? Why?**

- Mrs. D.'s symptoms and signs (e.g., cervix 4cm dilated and regular uterine contractions) are consistent with the active phase of the first stage of labour.

Care provision (planning and intervention)

4. **Based on your diagnosis (problem/need identification), what is your plan of care for Mrs. D.? Why?**

- Make sure Mrs. D. feels as comfortable as possible, and provide a supportive, encouraging atmosphere, respectful of her wishes. In particular, massage and other comfort measures such as changes in position and posture may help to relieve discomfort. Encourage her to walk about freely, to empty her bladder regularly and to eat and drink as she wishes. If necessary, give her analgesics.
- Ongoing observations should include: maternal pulse, foetal heart rate and contractions half hourly; temperature every two hours; blood pressure, dilatation, amniotic fluid, moulding, descent of head, and urine volume and for protein and acetone every four hours.
- Record observations on the partograph.
- Perform another vaginal examination four hours to assess progress in labour.

Evaluation

Four hours later, Mrs. D.'s temperature is 37°C. Her pulse rate is 88 per minute, and her blood pressure is 114/70. She is having four contractions in 10 minutes, each lasting 30 seconds. The cervix is 6cm dilated. Scanty but clear amniotic fluid is draining. There is no moulding. The foetal head is 5/5 palpable above the symphysis pubis and the foetal heart rate is 144 beats per minute. She produced 200mL of urine in the past four hours, negative for protein and acetone.

5. **Based on these findings, what is Mrs. D.'s diagnosis (problem/need)? Why?**

- Mrs. D.'s signs and symptoms are now consistent with prolonged active phase (arrest of cervical dilatation) since cervical dilatation is plotted to the right of the alert line on the partograph.

6. **Based on your diagnosis (problem/need identification), what is your plan of care for Mrs. D.? Why?**

- Because uterine contractions are less than 3 every 10 minutes and last less than 40 seconds, progress in labour has not been satisfactory; augment labour by infusing oxytocin.
- Start oxytocin infusion (2.5 units in 500mL). Titrate the infusion rate to ensure establishment of at least three uterine contractions in 10 minutes lasting at least 40 seconds.

7. **When would you reassess Mrs. D. again? Why?**

- Closely monitor Mrs. D. as before for her response to pain, uterine contractions, foetal heart rate and descent of the foetus. Maintain the oxytocin infusion rate at the lowest rate that achieves at least three contractions every 10 minutes lasting at least 40 seconds. Record the colour of the amniotic fluid that drains. Perform vaginal examination to assess cervical dilatation two hours after establishment of a good pattern of uterine contractions.
- On reassessment two and a half hours later, Mrs. D.'s temperature is 37°C. Her pulse rate is 90 per minute, and her blood pressure is 120/70. She is having four contractions in 10 minutes, each lasting 40–45 seconds. The foetal heart rate is 152 per minute. The foetal head is 4/5 palpable above the symphysis pubis. The cervix is 6cm dilated and oedematous. There is no amniotic fluid draining. Moulding is 2, with sutures overlapping but reducible. She produced 160mL of urine in the past four hours, negative for protein and acetone.

8. **Based on these findings, what is Mrs. D.'s diagnosis (problem/need)? Why?**

- Mrs. D.'s symptoms and signs (e.g., secondary arrest of cervical dilatation and descent of the presenting part in the presence of good contractions) are consistent with the diagnosis of obstructed labour due to cephalopelvic disproportion (CPD).

9. **Based on your diagnosis (problem/need identification), what is your plan of care for Mrs. D.? Why?**

- Make arrangements for immediate delivery of the baby by Caesarean section.

References

Managing Complications in Pregnancy and Childbirth: pages S-57; S-64 to S-67

CASE STUDY 5:
FEVER AFTER CHILDBIRTH

ANSWER KEY

Case study

Mrs. E. is a 35-year-old para three. Mrs. E.'s husband has brought her to the health centre today because she has had fever and chills for the past 24 hours. She gave birth to a full-term infant at home 48 hours ago. Her birth attendant was the local traditional birth attendant (TBA). Labour lasted two days and the TBA inserted herbs into Mrs. E.'s vagina to help speed up the child-birth. The newborn breathed spontaneously and appears healthy.

Assessment (history, physical examination, screening procedures/laboratory tests)

1. **What will you include in your initial assessment of Mrs. E.? Why?**

- Greet Mrs. E. and her husband respectfully and with kindness.
- Explain what is going to be done and listen to them carefully. In addition, answer their questions in a calm and reassuring manner.
- Perform a rapid initial assessment to determine the degree of illness, including her temperature, consciousness, abdominal pain, vaginal bleeding, and fever as well as any signs of shock, including pulse greater than 110, systolic blood pressure less than 90mm Hg, pallor, sweatiness or cold and clammy skin, rapid respirations and confusion. Ask whether she has felt weak and lethargic or whether she has had frequent, painful urination, or foul-smelling vaginal discharge. Determine whether she is from a malarious area.
- Also obtain the following information about the birth: when the membranes ruptured, problems delivering the placenta, whether it was complete and whether there was excessive bleeding following the birth.
- Check tetanus vaccination status, especially because herbs were inserted into Mrs. E.'s vagina during labour.

2. **What particular aspects of Mrs. E.'s physical examination will help you make a diagnosis or identify her problems/needs? Why?**

- Check Mrs. E.'s abdomen for tenderness and her vulva for purulent discharge (lower abdominal pain, tender uterus, and purulent, foul-smelling lochia are symptoms and signs of metritis). Check her legs for calf muscle tenderness, which may indicate deep vein thrombosis.
- Examine Mrs. E.'s perineum, vagina and cervix carefully for tears, particularly because 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. E.? Why?**

- None at this stage.

Diagnosis (identification of problems/needs)

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

History

Mrs. E. admits that she has felt weak and lethargic, has abdominal pain, and has noticed a foul-smelling vaginal discharge. She denies painful urination, as well as having been in a malarious area.

Physical Examination

Mrs. E.'s temperature is 39.8°C. Her pulse rate is 136 per minute. Her blood pressure is 100/70 and her respiration rate is 24 per minute. She appears pale and lethargic and slightly confused. Abdominal exam shows a poorly contracted and tender uterus that is just 1cm below the umbilicus. Examination of the perineum shows that she has foul-smelling vaginal discharge, but no tears or lesions. On vaginal exam, the cervix is 2cm dilated with cervical motion tenderness present. It is not known whether the placenta was complete. Mrs. E. is fully immunised against tetanus and had a booster three years ago.

4. **Based on these findings, what is Mrs. E.'s diagnosis (problem/need)? Why?**

- Mrs. E.'s symptoms and signs (e.g., fever, together with signs of shock [rapid pulse, confusion], lower abdominal pain, uterine tenderness, and foul-smelling vaginal discharge) are consistent with metritis.

Care provision (planning and intervention)

5. **Based on your diagnosis (problem/need identification), what is your plan of care for Mrs. E.? Why?**

- Treat Mrs. E. for shock immediately:
  - position her on her side
  - ensure that her airway is open
  - give her oxygen at 6–8L per minute by mask or cannula
  - keep her warm
  - elevate her legs
  - monitor her temperature, pulse, blood pressure and respiration
  - start an IV using a large bore needle for rapid infusion of fluids (1L of normal saline or Ringer's lactate in 15–20 minutes)
  - monitor her intake and output (an indwelling catheter should be inserted to monitor urine output).
- Draw blood for haemoglobin and cross-matching, and make sure blood for transfusion is available, if necessary.
- Give the following combination of antibiotics: ampicillin 2g IV every six hours; plus gentamicin 5mg/kg of body weight IV every 24 hours; plus metronidazole 500mg IV every eight hours.
- If retained placental fragments are suspected, perform a digital exploration of the uterus to remove clots and large pieces of tissue. If necessary, use ovum forceps or a large curette.
- Monitor temperature, pulse, blood pressure, uterine tenderness and involution, and lochia for improvement.
- Because Mrs. E.'s childbirth was unhygienic, immediately give a booster of tetanus toxoid (TT) 0.5mL IM since she has completed the initial three-dose series and has had a booster within the past 10 years. (If she had not completed the initial three-dose series or had not had a booster within the past 10 years, give her anti-tetanus serum (antitoxin) 1500 units IM. Then, after four weeks, give her a booster injection of tetanus toxoid 0.5mL IM).
- Explain to Mrs. E. and her husband the steps taken to manage the complication. In addition, encourage them to express their concerns, listen carefully, and provide emotional support and reassurance.

Evaluation

Thirty-six hours after initiation of treatment, you find the following:

Mrs. E.'s temperature is 38°C. Her pulse rate is 96 beats per minute. Her blood pressure is 110/70 and her respiration rate is 20 breaths per minute. She is less pale and no longer confused. Her uterus is less tender and is firm at 3cm below the umbilicus. Lochia is minimal and no longer foul-smelling.

6. **Based on these findings, what is your continuing plan of care for Mrs. E.? Why?**

- Continue IV antibiotics until Mrs. E. has been fever-free for 48 hours. Oral antibiotics are not necessary after stopping the IV antibiotics.
- Continue to monitor her vital signs, intake and output, uterine tenderness and involution, and lochia.
- Continue IV fluids to maintain hydration until Mrs. E. is well enough to take adequate fluid and nourishment by mouth.
- Explain to Mrs. E. and her husband the steps taken for continuing management of the complication. In addition, encourage them to express their concerns, listen carefully, and provide continuing emotional support and reassurance.
- Make arrangements to talk with the TBA who attended the birth, and provide community education about clean birth practices.

References

Managing Complications in Pregnancy and Childbirth: pages S-1 to S-2; S-107 to S-110; S-51

CASE STUDY 6:
VAGINAL BLEEDING AFTER CHILDBIRTH

ANSWER KEY

Case study

Mrs. F. is a 20-year-old para 1 who has been brought to the health centre by the local traditional birth attendant (TBA) because she has been bleeding heavily since childbirth at home two hours ago. The TBA reports that the birth was a spontaneous vaginal delivery of a full-term newborn. Mrs. F. and the TBA report that 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. F.? Why?**

- Greet Mrs. F. and the TBA respectfully and with kindness.
- Explain what is going to be done and listen to them carefully. In addition, answer their questions in a calm and reassuring manner.
- Conduct a rapid initial assessment to check for the following signs to determine if she is in shock and in need of emergency treatment/resuscitation: pulse >110; systolic blood pressure less than 90mm Hg; pallor; sweatiness or cold, clammy skin; rapid breathing; confusion. Rapidly note the Level of consciousness/convulsions and abdominal pain. Take temperature to screen for sepsis. Ask the TBA whether the uterus contracted well after the delivery of the placenta and whether the placenta and membranes were delivered complete and without difficulty or if they delivered in pieces.

2. **What particular aspects of Mrs. F.'s physical examination will help you make a diagnosis or identify her problems/needs? Why?**

- Check Mrs. F.'s uterus immediately to determine 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. If the placenta is not complete, the most likely cause of bleeding is retained placental fragments/membranes.
- Later, carefully examine Mrs. F.'s perineum, vagina and cervix for tears.

3. **What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. F.? Why?**

- None at this stage.

Diagnosis (identification of problems/needs)

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

History

The TBA says that she thinks the placenta and membranes were delivered without difficulty and were complete.

Physical Examination

Mrs. F.'s temperature is 36.8°C. Her pulse rate is 108 per minute. Her blood pressure is 80/60 and her respirations are 24 per minute. She is pale and sweating. Her uterus is soft and does not contract with fundal massage. She has heavy, bright red vaginal bleeding. On inspection, there is no evidence of perineal, vaginal or cervical tears.

4. **Based on these findings, what is Mrs. F.'s diagnosis (problem/need)? Why?**

- Mrs. F.'s symptoms and signs (e.g., immediate postpartum haemorrhage, uterus soft and not contracted, shock) are consistent with atonic uterus.

Care provision (planning and intervention)

5. **Based on your diagnosis (problem/need identification), what is your plan of care for Mrs. F.? Why?**

- Call for help/assistance because many things have to be done simultaneously. Do **not** leave Mrs. F. unattended.
- Ask an assistant to immediately start uterine massage (simultaneously with your assessment.)
- Ask an assistant to give oxytocin 10 units IM until an IV can be started. Continue uterine massage.
- **At the time of the rapid initial assessment**, as soon as shock is identified, begin treatment for shock:
  - ensure that her airway is open
  - start an IV using a large bore needle for rapid infusion of fluids (1L of normal saline or Ringer's lactate in 15–20 minutes). A second IV line should be used to infuse 20 units of oxytocin in 1L of fluid at 40 drops per minute. Do not give more than 3L of IV fluids containing oxytocin
  - position her on her side
  - give her oxygen at 6–8L per minute by mask or cannula
  - keep her warm
  - elevate her legs
  - monitor her temperature, pulse, blood pressure and respiration
  - monitor her intake and output (an indwelling catheter should be inserted to monitor urine output).
- If the uterus still does not contract, perform manual exploration to check for and remove retained placental fragments.
- Draw blood for haemoglobin and cross-matching, and make sure blood for transfusion is available as soon as possible. Perform a bedside clotting test to determine whether coagulopathy is present (coagulopathy is both a cause and result of massive obstetric haemorrhage).
- Explain to Mrs. F. the steps taken to manage the complication. In addition, encourage her to express her concerns, listen carefully, and provide emotional support and reassurance.

Evaluation

Manual exploration of the uterus was performed and some placental tissue has been removed. Fifteen minutes after the initiation of treatment, however, she continues to have heavy vaginal bleeding. Her uterus remains poorly contracted. Her bedside clotting test is five minutes. Her pulse is 110 per minute and her blood pressure is 80/60. Her skin continues to be cold and clammy, and she is confused.

6. **Based on these findings, what is your continuing plan of care for Mrs. F.? Why?**

- Make blood available for transfusion immediately.
- Continue rapid fluid replacement with Ringer's lactate or normal saline.
- If available, give ergometrine/methylergometrine 0.2mg IM or IV slowly and/or 15-methyl prostaglandin IM, or misoprostol 600mcg rectally or orally.
- Perform bi-manual compression of the uterus or abdominal aortic compression to control the bleeding; maintain compression until bleeding is controlled.
- If the bleeding continues in spite of compression, make arrangements immediately to transfer Mrs. F. to a hospital with surgical facilities for utero-ovarian artery ligation. If life-threatening bleeding continues after ligation, perform subtotal hysterectomy.
- Explain to Mrs. F. the steps taken for continuing management of the complication. In addition, encourage her to express her concerns, listen carefully, and provide continuing emotional support and reassurance.
- Maintain communication about Mrs. F.'s condition between the referring facility and the referral facility (hospital with surgical facilities), particularly about her healthcare needs following discharge from hospital.

References

Managing Complications in Pregnancy and Childbirth: pages S-25 to S-31

CLINICAL SIMULATION
FOR THE MANAGEMENT OF SHOCK (SEPTIC OR HYPOVOLAEMIC SHOCK)

Purpose

The purpose of this activity is to provide a simulated experience for participants to practise problem-solving and decision-making skills in the management of hypovolaemic 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 client and a second participant the role of skilled provider. Other participants may be called on to assist the provider
- the trainer will provide information about the client's condition to the participant playing the role of provider information and will 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 italicised 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 Adult Resuscitation, sphygmomanometer, stethoscope, equipment for starting an IV infusion, syringes and vials, oxygen cylinder, gauge, self-inflating mask, equipment for bladder catheterisation, new examination or high-level disinfected surgical gloves

SCENARIO 1 *(Information provided and questions asked by the trainer)*	KEY REACTIONS/RESPONSES *(Expected from participant)*
1. Mrs. L. is a 36-year-old multigravida who has five children. Her husband, who tells you that she gave birth at home with the help of a traditional birth attendant, has carried her into the hospital. The birth attendant told him that the placenta delivered easily and completely immediately after birth, but Mrs. L. has been bleeding "too much" since then. The family tried numerous things to help Mrs. L. before bringing her to the hospital, but she continues to bleed "too much." ■ what do you do?	■ **shouts** for help to urgently mobilise all available personnel ■ evaluates Mrs. L. immediately for shock, including vital signs (temperature, pulse, blood pressure and respiration rate), level of consciousness, colour and skin temperature ■ explains to Mrs. L. (and her husband) what is going to be done, listens to her and responds attentively to her questions and concerns ■ turns Mrs. L. on her side, if unconscious or semi-conscious, and keeps the airway open.
2. On examination, you find that Mrs. L.'s temperature is 37ºC, pulse 120 beats per minute, blood pressure 84/50mm Hg and respiration rate 34 breaths per minute. Her skin is cold and clammy. ■ what do you think is wrong with Mrs. L.? ■ what will you do now?	■ states that Mrs. L. is in shock ■ asks one of the staff that responded to his/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 1L in 15–20 minutes ■ while starting the IV, collects blood for appropriate tests (haemoglobin, blood typing and cross matching, and bedside clotting test for coagulopathy) ■ starts oxygen at 6–8L/minute ■ catheterises bladder ■ looks for the cause of shock (hypovolaemic or septic) by palpating the uterus for firmness and tenderness, assessing the amount of blood loss ■ covers Mrs. L. 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 per minute; systolic blood pressure less than 90mm Hg; cold, clammy skin; pallor; respiration rate greater than 30 breaths per minute; anxious and confused or unconscious*
Discussion question 2: *If a peripheral vein cannot be cannulated, what should be done?*	***Expected response:*** *A venous cut-down should be performed.*
3. On further examination, you find that Mrs. L.'s uterus is soft and not contracted, but not tender. Her clothing from the waist down is blood-soaked. ■ what are Mrs. L.'s main problems? ■ what are the causes of her shock and bleeding? ■ what will you do next?	■ states that Mrs. L. reportedly lost "too much" blood after childbirth and considerable blood loss is evident on her clothes ■ states that Mrs. L.'s uterus is soft and not contracted, but not tender; she has no fever ■ determines that Mrs. L.'s shock is due to postpartum haemorrhage, atonic uterus ■ massages Mrs. L.'s uterus to stimulate a contraction ■ starts a second IV infusion and gives 20 units oxytocin in 1L of fluid at 60dpm.
4. After 15 minutes, the uterus is firm and bleeding has stopped, but Mrs. L.'s pulse is still 116 beats/minute, blood pressure 88/60mm Hg and respiration rate 32 breaths per minute. ■ what will you do now?	■ gives another litre of fluid to ensure 2L are infused within an hour of starting treatment ■ continues to give oxygen at 6–8L/minute ■ continues to check that uterus remains contracted ■ continues to monitor pulse and blood pressure.
5. After another 15 minutes, the uterus is still firm and there is no further bleeding. Mrs. L.'s pulse is 90 beats per minute, blood pressure 100/60mm Hg and respiration rate 24 breaths per minute. ■ what will you do now?	■ adjusts rate of IV infusion to 1L in six hours ■ continues to check to ensure that uterus remains contracted ■ continues to monitor pulse and blood pressure ■ checks that urine output is 30mL/hour or more.
6. Mrs. L.'s conditions has stabilised. Twenty-four hours later, her haemoglobin is 6.5g/dL. ■ what will you do now?	■ begins ferrous fumerate 120mg by mouth PLUS folic acid 400mcg by mouth daily, and advises Mrs. L. that she will need to take this dosage for three months.

SCENARIO 2 *(Information provided and questions asked by the trainer)*		KEY REACTIONS/RESPONSES *(Expected from participant)*
1.	Mrs. M. is 26 years old and gave birth at home to her second child, with the help of her neighbour. The family reports that Mrs. M. has had a fever since yesterday, was very restless during the night and is very drowsy this morning. She was carried into the hospital by her husband and neighbour. ■ what do you do?	■ **shouts** for help to urgently mobilise available personnel ■ evaluates Mrs. M. immediately for shock, including vital signs (temperature, pulse, blood pressure and respiration rate), level of consciousness, colour and skin temperature ■ tells Mrs. M. (and her husband and neighbour) what is going to be done, listens to her and responds attentively to her questions and concerns ■ turns Mrs. M. on her side, if unconscious or semi-conscious, and keeps the airway open.
2.	On examination, you find that Mrs. M.'s temperature is 39.4°C, pulse 136 beats per minute, blood pressure 80/50mm Hg and respiration rate 34 breaths per minute. She is confused and drowsy. ■ what do you think is wrong with Mrs. M.? ■ what will you do now?	■ states that Mrs. M. is in shock ■ asks one of the staff that responded to his/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 1L in 15–20 minutes ■ while starting the IV, collects blood for appropriate tests (haemoglobin, blood typing and cross matching, and bedside clotting test for coagulopathy), while starting the IV ■ starts oxygen at 6–8L/minute ■ catheterises bladder ■ looks for the cause of the shock (hypovolaemic or septic) by palpating the uterus for firmness and tenderness ■ covers Mrs. M. to keep her warm ■ elevates legs.
3.	On further examination, you find that Mrs. M.'s uterus is tender and that she has foul-smelling lochia. Upon questioning, the neighbour admits that herbs were inserted into Mrs. M.'s vagina during labour. ■ what are Mrs. M.'s main problems? ■ what are the causes of her shock, and why? ■ what will you do next?	■ states that Mrs. M. has a fever, a tender uterus and foul-smelling lochia ■ determines that Mrs. M.'s shock is due to infection resulting from unclean labour and childbirth practises ■ gives penicillin G 2 million units OR ampicillin 2g IV (and repeats every six hours) PLUS gentamicin 5mg/Kg body weight IV (and repeats every 24 hours) PLUS metronidazole 500mg IV (and repeats every eight hours).
4.	After six hours, Mrs. M.'s temperature is 38°C, pulse 100 beats per minute, blood pressure 100/60mm Hg and respiration rate 24 breaths per minute. She is easily roused and is oriented. ■ what will you do now?	■ adjusts rate of IV infusion to 1L in six hours ■ continues to monitor temperature, pulse and blood pressure ■ checks that urine output is 30mL/hour or more ■ continues to administer antibiotics.

CLINICAL SIMULATION

FOR THE MANAGEMENT OF HEADACHES, BLURRED VISION, CONVULSIONS, LOSS OF CONSCIOUSNESS OR ELEVATED BLOOD PRESSURE

Purpose

The purpose of this activity is to provide a simulated experience for participants to practise problem-solving and decision-making skills in the management of headaches, blurred vision, convulsions, loss of consciousness or elevated blood pressure, 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 client and a second participant the role of skilled provider. Other participants may be called on to assist the provider
- the trainer will provide information about the client's condition to the participant playing the role of provider 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 italicised 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, gauge, self-inflating mask, equipment for bladder catheterisation, reflex hammer (or similar device), high-level disinfected or sterile surgical gloves

SCENARIO 1 *(Information provided and questions asked by the trainer)*	KEY REACTIONS/RESPONSES *(Expected from participant)*
1. Mrs. G. 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 mobilise all available personnel ■ checks airway to ensure that it is open, and turns Mrs. G. 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 his/her shout for help take Mrs. G.'s vital signs (temperature, pulse, blood pressure and respiration rate) and check her level of consciousness, colour and skin temperature ■ has another staff member start oxygen at 4–6L/minute ■ prepares and gives magnesium sulphate 20% solution, 4g IV over 5 minutes ■ follows promptly with 10g of 50% magnesium sulphate solution, 5g in each buttock deep IM injection with 1mL of 2% lidocaine in the same syringe ■ at the same time, explains to the family what is happening and talks to the woman as appropriate.
Discussion question 1: *What would you do if there was no magnesium sulphate in the hospital?*	***Expected response:*** *Use diazepam 10mg slowly over two minutes.*
2. After five minutes, Mrs. G. is no longer convulsing. Her diastolic blood pressure is 110mm Hg and her respiration rate is 20 breaths per minute. ■ what is Mrs. G.'s problem? ■ what will you do next? ■ what should the aim be with respect to controlling Mrs. G.'s blood pressure? ■ what other care does Mrs. G. require now?	■ states that Mrs. G.'s symptoms and signs are consistent with eclampsia ■ gives hydralazine 5mg IV slowly every five as until diastolic blood pressure is lowered to between 90–100mm Hg ■ states that the aim should be to keep Mrs. G.'s diastolic blood pressure between 90mm Hg and 100mm Hg to prevent cerebral haemorrhage ■ has one of the staff assist with the emergency insertion of an indwelling catheter to monitor urinary output and proteinuria ■ 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 ■ maintains a strict fluid balance chart.
Discussion question 2: *Would you give additional hydralazine after the first dose?*	***Expected response:*** *Repeat hourly as needed, or give 12.5mg IM every two hours as needed.*
3. After another 15 minutes, Mrs. G.'s blood pressure is 94mm Hg and her respiration rate is 16 breaths per minute. ■ what will you do now?	■ stays with Mrs. G. continuously and monitors pulse, blood pressure, respiration rate, patella reflexes and foetal heart ■ checks whether Mrs. G. has had any further contractions.

SCENARIO 1 (cont'd)

SCENARIO 1 *(Information provided and questions asked by the trainer)*	KEY REACTIONS/RESPONSES *(Expected from participant)*
4. It is now one hour since treatment was started for Mrs. G. She is sleeping but is easily roused. Her blood pressure is now 90mm Hg and her respiration rate is still 16 breaths per minute. She has had several more contractions, each lasting less than 20 seconds. ■ what will you do now?	■ continues to monitor pulse, blood pressure, respiration rate, patella reflexes and foetal heart ■ monitors urine output and IV fluid intake ■ monitors for the development of pulmonary oedema by auscultating lung bases for rales ■ assesses Mrs. G.'s cervix to determine whether it is favourable or unfavourable.
5. It is now two hours since treatment was started for Mrs. G. Her blood pressure is still 90mm Hg and her respiration rate is still 16 breaths per minute. All other observations are within expected range. She continues to sleep and rouses when she has a contraction. Contractions are occurring more frequently but still last less than 20 seconds. Mrs. G.'s cervix is 100% effaced and 3cm dilated. There are no foetal heart abnormalities. ■ what will you do now? ■ when should childbirth occur?	■ continues to monitor Mrs. G. as indicated above ■ states that membranes should be ruptured using an amniotic hook or a Kocher clamp and labour induced using oxytocin or prostaglandins ■ states that childbirth should occur within 12 hours of the onset of Mrs. G.'s convulsions.

SCENARIO 2 *(Information provided and questions asked by the trainer)*		KEY REACTIONS/RESPONSES *(Expected from participant)*
1.	Mrs. H. is 20 years old. She is 38 weeks pregnant. This is her second pregnancy. Her mother-in-law has brought Mrs. H. to the health centre this morning because she has had a severe headache and blurred vision for the past six hours. Mrs. H. says she feels very ill. ■ what will you do?	■ **shouts** for help to urgently mobilise all available personnel ■ places Mrs. H. on the examination table on her left side ■ makes a rapid evaluation of Mrs. H.'s general condition, including vital signs (temperature, pulse, blood pressure, and respiration rate), level of consciousness, colour and skin temperature ■ simultaneously asks about the history of Mrs. H.'s present illness.
2.	Mrs. H.'s pulse is 100 beats per minute, diastolic blood pressure is 96mm Hg and respiration rate 20 breaths per minute. She has hyper-reflexia. Her mother-in-law tells you that Mrs. H. has had no symptoms or signs of the onset of labour. ■ what is Mrs. H.'s problem? ■ what will you do now? ■ what is your main concern at the moment?	■ states that Mrs. H.'s symptoms and signs are consistent with severe pre-eclampsia ■ has one of the staff members who responded to his/her shout for help start oxygen at 4–6L/minute ■ prepares and gives magnesium sulphate 20% solution, 4g IV over 5 minutes ■ follows promptly with 10g of 50% magnesium sulphate solution, 5g in each buttock deep IM injection with 1mL of 2% lidocaine in the same syringe ■ at the same time, explains to Mrs. H. (and her mother-in-law) what is going to be done, listens to her and responds attentively to her questions and concerns ■ states that the main concern at the moment is to prevent Mrs. H. from convulsing.
3.	After 15 minutes, Mrs. H. is resting quietly. She still has a headache and hyper-reflexia. ■ what will you do now? ■ what will you do during the next hour?	■ has one of the staff assist with the emergency insertion of an indwelling catheter to monitor urinary output and proteinuria ■ starts an IV infusion of normal saline or Ringer's lactate ■ listens to the foetal heart ■ states that during the next hour will continue to monitor vital signs, reflexes and foetal heart, and maintain a strict fluid balance chart.
4.	It is now one hour since treatment for Mrs. H. was started. Her pulse is still 100 beats per minute, diastolic blood pressure 96mm Hg and respiration rate 20 breaths per minute. She still has hyper-reflexia. **You detect that the foetal heart rate is 80.** ■ what is your main concern now? ■ what will you do now?	■ states that main concern now is foetal heart abnormality ■ states that Mrs. H. should be prepared to go to the operating room for Caesarean section ■ explains to Mrs. H. (and her mother-in-law) what is happening, listens to her concerns and provides reassurance.

CLINICAL SIMULATION
FOR THE MANAGEMENT OF VAGINAL BLEEDING IN EARLY PREGNANCY

Purpose

The purpose of this activity is to provide a simulated experience for participants to practise 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 centre, where equipment and supplies are available for emergency interventions.

- one participant should play the role of client and a second participant the role of skilled provider. Other participants may be called on to assist the provider
- the trainer will provide information on the client's condition to the participant playing the role of provider and will 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 bi-manual examination 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 italicised 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 Post-abortion Care and Post-abortion Family Planning Counselling, childbirth simulator and placenta/cord/ammion model, sphygmomanometer, stethoscope, equipment for starting an IV infusion, syringes and vials, bucket for waste disposal, high-level disinfected or sterile surgical gloves, antiseptic solution

SCENARIO 1 *(Information provided and questions asked by the trainer)*	KEY REACTIONS/RESPONSES *(Expected from participant)*
1. Mrs. A. is 20 years old. This is her first pregnancy. Her family brings her into the health centre. Mrs. A. 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. She has had heavy bleeding and cramping, however, for the past six to eight 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?	■ states that first concern is to determine whether or not Mrs. A. is in shock ■ makes a rapid evaluation of Mrs. A.'s general condition, including vital signs (temperature, pulse, blood pressure and respiration rate), level of consciousness, colour and skin temperature ■ explains to Mrs. A. (and her family) what is going to be done, listens to her and responds attentively to her questions and concerns.
2. On examination, you find that Mrs. A.'s pulse is 100 beats per minute, blood pressure 100/60mm Hg and respiration rate 24 breaths per minute. She is conscious. Her skin is not cold or clammy. You notice bright red blood soaking through her dress. ■ is Mrs. A. in shock? ■ what will you do next? ■ what questions will you ask?	■ states that Mrs. A. is not in shock ■ starts an IV infusion of normal saline or Ringer's lactate ■ asks Mrs. A. if anything happened to her or if anyone did anything to her which may have caused the bleeding ■ asks how long it takes to soak a pad ■ asks if Mrs. A. has passed any tissue ■ asks if she has fainted.
3. Mrs. A. 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 four to five 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. A.'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 bi-manual examination to rule out inevitable or incomplete abortion ■ takes Mrs. A.'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. Bi-manual examination reveals that the cervix is approx 1–2cm 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?	■ states that Mrs. A. has an incomplete abortion ■ explains findings to Mrs. A. (and her family) ■ prepares Mrs. A. for manual vacuum aspiration (MVA).
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*
5. The treatment room is occupied at the moment because another client with incomplete abortion is undergoing an MVA. The room will be available in 30 minutes. ■ what will you do now?	■ explains the situation to Mrs. A. (and her family) and provides reassurance ■ keeps the IV running ■ gives ergometrine 0.2mg IM OR misoprostol 400mcg orally ■ continues to monitor blood loss, pulse and blood pressure.
6. Fifteen minutes have passed since ergometrine was given, but Mrs. A. is still soaking one pad every five minutes. Her pulse is 104 beats per minute and her blood pressure is 98/60mm Hg. ■ what will you do now?	■ repeats the ergometrine 0.2mg IM ■ continues IV infusion ■ continues to monitor blood loss, pulse and blood pressure ■ takes blood for typing and cross-matching so that it is available if needed.
7. Bleeding slowed after the second dose of ergometrine. MVA was performed 30 minutes later and complete evacuation of the products of conception has been assured. ■ what will you do now?	■ monitors Mrs. A.'s vital signs and blood loss ■ ensures that Mrs. A. is clean, warm and comfortable ■ encourages her to eat and drink as she wishes.

SCENARIO 1 (cont'd)

SCENARIO 1 *(Information provided and questions asked by the trainer)*	KEY REACTIONS/RESPONSES *(Expected from participant)*
8. After six hours, Mrs. A.'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. A. about whether or not she wants to get pregnant and when; provides family planning counselling and a family planning method, if necessary ■ provides reassurance about the chances for a subsequent successful pregnancy ■ advises Mrs. A. 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 immunisation status and provides immunisation if needed.

CLINICAL SIMULATION
FOR THE MANAGEMENT OF VAGINAL BLEEDING AFTER CHILDBIRTH

Purpose

The purpose of this activity is to provide a simulated experience for participants to practise problem-solving and decision-making skills in the management of 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 centre, where equipment and supplies are available for emergency interventions.

- one participant should play the role of client and a second participant the role of skilled provider. Other participants may be called on to assist the provider
- the trainer will provide information about the client's condition to the participant playing the role of provider and will 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 bi-manual examination 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 italicised 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 Bi-manual Compression of Uterus and Repair of Cervical Tears, sphygmomanometer, stethoscope, equipment for starting an IV infusion, oxygen cylinder, gauge, self-inflating mask, syringes and vials, vaginal speculum, sponge forceps, high-level disinfected or sterile surgical gloves

SCENARIO 1 *(Information provided and questions asked by the trainer)*	KEY REACTIONS/RESPONSES *(Expected from participant)*
1. Mrs. B. is 24 years old and has just given birth to a healthy baby girl after seven hours of labour. Active management of the third stage was performed, and the placenta and membranes were complete. The midwife who attended the birth left the hospital at the end of her shift. 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 mobilise 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.
2. On examination, you find that Mrs. B.'s pulse is 120 beats per minute and weak and her blood pressure is 86/60mm Hg. Her skin is not cold and clammy. ■ what is Mrs. B.'s problem? ■ what will you do now?	■ states that Mrs. B. is in shock from postpartum bleeding ■ palpates the uterus for firmness ■ asks one of the staff that responded to his/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 1L in 15–20 minutes with 10 units oxytocin ■ while starting the IV, collects blood for appropriate tests (haemoglobin, blood typing and cross matching, and bedside clotting test for coagulopathy).
Discussion question 1: *How do you know when a woman is in shock?*	***Expected responses:*** *Pulse greater than 110 beats per minute; systolic blood pressure less than 90mm Hg; cold, clammy skin; pallor; respiration rate greater than 30 breaths per minute; anxious and confused or unconscious*
3. You find that Mrs. B.'s uterus is soft and not contracted. ■ what will you do now?	■ massages the uterus to expel blood and blood clots and stimulate a contraction ■ starts oxygen at 6–8L/minute ■ catheterises bladder ■ covers Mrs. B. to keep her warm ■ elevates legs ■ continues to monitor (or has assistant monitor) blood loss, pulse and blood pressure.
4. After five minutes, Mrs. B.'s uterus is well contracted, but she continues to bleed heavily. ■ what will you do now?	■ examines the cervix, vagina and perineum for tears ■ asks one of the staff members assisting to locate placenta and examines for missing pieces
5. On further examination of the placenta, you find that it is complete. On examination of Mrs. B.'s cervix, vagina and perineum, you find a cervical tear. She continues to bleed heavily. ■ what will you do now?	■ prepares to repair the cervical tear ■ tells Mrs. B. what is happening, listens to her concerns and provides reassurance ■ has a staff member assisting check Mrs. B.'s vital signs.
Discussion question 2: *What would you have done if examination of the placenta had shown a missing piece (placenta incomplete)?*	***Expected responses:*** ■ *explain the problem to Mrs. B. and provide reassurance* ■ *give pethidine and diazepam IV slowly or use ketamine* ■ *give a single dose of prophylactic antibiotics (ampicillin 2g IV plus metronidazole 500mg IV OR cefazolin 1g IV plus metronidazole 500mg IV)* ■ *use sterile or high-level disinfected gloves to feel inside the uterus for placental fragments and remove with hand, ovum forceps or large curette.*
6. Forty-five minutes have passed since treatment for Mrs. B. was started. You have just finished repairing Mrs. B.'s cervical tear. Her pulse is now 100 beats per minute, blood pressure 96/60mm Hg and respiration rate 24 breaths per minute. She is resting quietly. ■ what will you do now?	■ adjusts rate of IV infusion to 1L in six hours ■ continues to check for vaginal blood loss ■ continues to monitor pulse and blood pressure ■ checks that urine output is 30mL/hour or more ■ continues with routine postpartum care, including breastfeeding of newborn.

CLINICAL SIMULATION
FOR THE MANAGEMENT OF THE ASPHYXIATED NEWBORN

Purpose

The purpose of this activity is to provide a simulated experience for participants to practise problem-solving and decision-making skills in the management of an asphyxiated newborn, 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 skilled provider. Other participants may be called on to assist the provider
- the trainer will provide information about the client's condition to the participant playing the role of provider and will 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 newborn resuscitation should be performed with a model and other 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 italicised 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 Newborn Resuscitation, newborn resuscitation model, newborn self-inflating bag and mask, suction equipment, blanket, towels

TIPS FOR TRAINERS

SCENARIO 1 *(Information provided and questions asked by the trainer)*	KEY REACTIONS/RESPONSES *(Expected from participant)*
1. Mrs. C. has given birth to a 2,800g baby boy after a prolonged second stage of labour. This was her second pregnancy. Her first baby is alive. At birth, the newborn is blue and limp and does not breath. ■ what do you do? ■ what precautions about suctioning do you observe, and why?	■ dries the newborn rapidly, wraps it in a dry cloth/towel and moves it to a warm, flat surface ■ places the newborn on its back with its head slightly extended to open the airway ■ keeps the newborn wrapped or covered, except for the face and upper chest ■ suctions the mouth and then the nose ■ reassesses the newborn and if still not breathing starts ventilating ■ places the mask on the newborn's face, covering the chin, mouth and nose ■ forms a seal between the mask and the face ■ squeezes the bag and checks seal by ventilating twice and observing if the chest rises ■ simultaneously tells the mother what is happening and provides reassurance ■ if the newborn's chest is rising, ventilates at 40 breaths per minute for 20 minutes or until the newborn starts to breathe ■ does not suction deeply, because this may cause the newborn to stop breathing or may cause its heart to stop.
2. You have started ventilating, but the newborn's chest does not rise. ■ what will you do now?	■ rechecks and corrects, if necessary, the position of the newborn ■ repositions the mask on the newborn's face to improve the seal between mask and face ■ squeezes the bag harder to increase ventilation pressure.
3. After repositioning the mask, the newborn's chest rises when ventilated. ■ what will you do now?	■ ventilates for one minute and then stops to quickly assess if the newborn is breathing.
4. After one minute of ventilating, the newborn is still not breathing. You remember that Mrs. C. received 100mg pethidine 40 minutes prior to the birth. ■ what will you do now?	■ continues ventilating until spontaneous breathing begins ■ states that after vital signs have been established, will give naloxone 0.1mg/Kg body weight IV to the newborn.
Discussion question 1: *From which newborns would you withhold naloxone?*	***Expected response:*** *Newborns whose mother is suspected of having recently abused narcotic drugs*
5. After two more minutes of ventilating, the newborn starts to cry. ■ what will you do now?	■ stops ventilating and observes for five minutes after crying stops ■ determines that breathing is normal (30–60 breaths per minute) and that there is no in-drawing of the chest and no grunting for one minute.
Discussion question 2: *What would you do if the newborn is breathing but has severe in-drawing of the chest?*	***Expected response:*** *Give oxygen by nasal catheter or prongs, if possible, and arrange transfer to a facility with special care for sick newborns.*
6. The newborn is now breathing normally. ■ what ongoing care does the newborn need?	■ prevents heat loss by placing in skin-to-skin contact with mother or putting under radiant heater ■ examines the newborn and counts the number of breaths per minute ■ measures the newborn's axillary temperature ■ encourages the mother to breastfeed and provides reassurance (a newborn that requires resuscitation is at higher risk of developing hypoglycemia) ■ monitors closely for 24 hours.

BEING AN EFFECTIVE CLINICAL TRAINER

Health professionals conducting clinical training courses are continually changing roles. They are **trainers** or **instructors** when presenting illustrated lectures and giving classroom demonstrations. They act as **facilitators** when conducting small group discussions and using role-plays, case studies and clinical simulations. Once they have demonstrated a clinical procedure, they then shift to the role of **coach** as participants begin practising.

CHARACTERISTICS OF AN EFFECTIVE TRAINER AND COACH

Coaching is a training technique in which the clinical trainer:

- **describes** the skills and client interactions that the participant is expected to learn
- **demonstrates** (models) the skill in a clear and effective manner using learning aids such as slide sets, videotapes and anatomic models
- provides detailed, specific **feedback** to participants as they practise the skills and client interactions using the anatomic model and actual instruments in a simulated clinical setting and as they provide services to clients.

An effective **clinical trainer**:

- is **proficient** in the skills to be taught
- **encourages** participants in learning new skills
- promotes **open (two-way) communication**
- provides **immediate feedback**:
  - informs participants whether they are meeting the objectives
  - does not allow a skill or activity to be performed incorrectly
  - gives positive feedback as often as possible
  - avoids negative feedback and instead offers specific suggestions for improvement.

Is able to receive feedback:

- **asks for it.** Find clinical trainers who will be direct with you. Ask them to be specific and descriptive.
- **directs it.** If you need information to answer a question or pursue a learning goal, ask for it.
- **accepts it.** Do not defend or justify your behaviour. Listen to what people have to say and thank them. Use what is helpful; quietly discard the rest.
- recognises that training can be stressful and knows how to **regulate participant as well as trainer stress**:
- uses appropriate humour
- observes participants and watches for signs of stress
- provides for regular breaks
- provides for changes in the training routine
- focuses on participant success as opposed to failure.

The characteristics of an **effective coach** are the same as those of an **effective clinical trainer**. Additional characteristics especially important for the coach include:

- being patient and supportive
- providing praise and positive reinforcement
- correcting participant errors while maintaining participant self-esteem
- listening and observing.

SKILL TRANSFER AND ASSESSMENT: THE COACHING PROCESS

The process of learning a clinical skill within the coaching process has three basic phases: demonstration, practise and evaluation. These three phases can be broken down further into the following steps:

- first, during interactive classroom presentations, **explaining** the skill or activity to be learned
- next, using a videotape or slide set, **showing** the skill or activity to be learned
- following this, **demonstrating** the skill or activity using an anatomic model (if appropriate), role-play (e.g., counselling demonstration) or clinical simulation
- then, allowing the participants to **practise** the demonstrated skill or activity with an **anatomic model** or in a simulated environment (e.g., role-play, clinical simulation) as the trainer functions as a coach
- after this, **reviewing** the practise session and giving constructive feedback
- after adequate practise, **assessing** each participant's performance of the skill or activity on models or in a simulated situation, using the competency-based checklist
- after competence is gained with models or practise in a simulated situation, having participants begin to **practise** the skill or activity with clients under a clinical trainer's guidance
- finally, **evaluating** the participant's ability to perform the skill according to the standardised procedure as outlined in the competency-based checklist.

During initial skill acquisition, the trainer demonstrates the skill as the participant observes. As the participant practises the skill, the trainer functions as a coach and observes and assesses performance. When demonstrating skill competency, the participant is now the person performing the skill as the trainer evaluates performance.

CREATING A POSITIVE LEARNING ENVIRONMENT

A successful training course does not come about by accident, but rather through careful planning. This planning takes thought, time, preparation and often some study on the part of the clinical trainer. The trainer is responsible for ensuring that the course is carried out essentially as it was designed. The trainer must ensure that the clinical development sessions, which are an integral part of a clinical skills course, as well as the classroom sessions, are conducted appropriately. In addition to taking responsibility for the organisation of the course in general, the trainer must also be able to give presentations and demonstrations and lead other course activities, all of which require prior planning. Well-planned and executed classroom and clinical sessions will help to create a positive learning environment.

PREPARING FOR THE COURSE

To prepare for the course, the following steps are recommended:

- **review the course syllabus**, including the course description, goals, learning methods, training materials, methods of evaluation, course duration and suggested course composition
- **review the course schedule**
- **study the course outline.** The course outline provides detailed suggestions regarding the teaching of each objective and the facilitation of each activity. Based on suggestions in the course outline and the trainer's own ideas, the trainer will gather the necessary equipment, supplies and materials. The trainer should also compare time estimates in the course outline to the schedule to ensure that sufficient time has been allotted for all sessions and activities
- **read and study the reference manual** to ensure complete familiarity with the content to be presented during the course
- **review the pre- and mid-course questionnaires** and make copies of the questionnaires, matrix and answer sheets if needed
- **check all audiovisual equipment** (e.g., overhead projector, video player, flipchart stand).

- **check all anatomic models** (e.g., Are they clean and in good condition? Are all parts in place?).
  - **practise all clinical procedures** using the anatomic model(s) and the learning guides and checklists found in the trainer guide and participant guide
- **obtain information about the participants who will be attending the course.** It is important for the clinical trainer to know basic information about participants such as:
  - the **experience and educational background** of the participants. The clinical trainer should attempt to gather as much information about participants as possible before training. If this is not possible, the trainer should inquire about their backgrounds and expectations during the first day of the course
  - the types of **clinical activities** the participants will perform in their daily work after training. Knowing the exact nature of the work that participants will perform after training is critical for the clinical trainer. The trainer must use appropriate, job-specific examples throughout the course so that participants can draw connections between what is being taught and what they will need to do. This is an excellent way to reinforce the importance of what is being learned.

Prepare the classroom and ensure:

- tables arranged in a U-shape or other formation that will allow as many of the participants as possible to see one another and the trainer (this may be difficult in a lecture hall where chairs are attached to the floor)
- a table in the front of the room where the trainers can place their course materials
- space for audiovisual equipment (e.g., flipchart, screen, overhead projector, video player, monitor); the trainer should make sure that participants will be able to see the projection screen and other audiovisuals
- space for participants to work in small groups (i.e., either arrange chairs in small circles or work around the tables), unless separate breakout rooms (see below) are available
- space to set up simulated clinics (e.g., for activities with anatomic models or counselling practise)
- breakout rooms for small group work (e.g., case studies, role-plays, clinical simulations, problem-solving activities) are available if necessary, and are set up with tables, chairs and any materials that the participants will need
- the room is properly heated or cooled and ventilated
- the lighting is adequate, and the room can be darkened enough to show audiovisuals and still permit participants to take notes or follow along in their learning materials
- there will be adequate electric power throughout the course, and contingency plans have been made in case the power fails
- furniture such as tables, chairs and desks is available. The chairs are comfortable and tablecloths are available
- there is a writing board with chalk or marking pens, as well as an information board available for posting notes and messages for participants
- there is audiovisual equipment in working order, with spare parts such as bulbs readily available. The video monitor is large enough so that all participants can see it well. Sufficient electrical connections, and extension cords, electrical adaptors and power strips (multi-plugs) are available, if necessary
- there are toilet facilities that are adequately maintained
- telephones are accessible and in working order, and emergency messages can be taken.

UNDERSTANDING HOW PEOPLE LEARN

Establishing a positive learning environment depends on understanding how adults learn. The clinical trainer must have a clear understanding of what the participants need and expect, and the participants must have a clear understanding of why they are there. Adults who attend courses to acquire new knowledge, attitudes and skills share the characteristics described below:

- they require learning to **be relevant**. The clinical trainer should offer participants learning experiences that **relate directly to their current or future job responsibilities**. At the beginning of the course, the objectives should be stated clearly and linked to job performance. The clinical trainer should take time to explain how each learning experience relates to the successful accomplishment of the course objectives
- they are highly **motivated** if they believe learning is relevant. People bring h**igh levels of motivation and interest** to learning. Motivation can be increased and channelled by the clinical trainer who provides clear learning goals and objectives.

To make the best use of a high level of participant interest, the clinical trainer should explore ways to incorporate the needs of each participant into the learning sessions. This means that the trainer needs to know quite a bit about the participants, either from studying background information about them or by allowing participants to talk early in the course about their experience and learning needs

- they need to **participate and be actively involved** in the learning process
- few individuals prefer just to sit back and listen. The effective clinical trainer will design learning experiences that **actively involve the participants in the training process**
- they want to provide input regarding schedules, activities and other events
- they need to question and receive feedback.
- they enjoy:
  - brainstorming and discussions
  - hands-on work
  - group and individual projects
  - classroom activities
  - a **variety** of learning experiences.

The clinical trainer should use a variety of learning methods including:

- audiovisual aids
- illustrated lectures
- demonstrations
- brainstorming
- small group activities
- group discussions, including role-plays, case studies and clinical simulations.

Participants desire **positive feedback** They need to know **how they are doing**, particularly in light of the objectives and expectations of the course. Is their progress in learning clinical skills meeting the trainer's expectations? Is their level of clinical performance meeting the standards established for the procedure? **Positive feedback provides this information.** Learning experiences should be designed to move from the known to the unknown, or from simple activities to more complex ones. This progression provides positive experiences and feedback for the participant. To maintain positive feedback, the clinical trainer can:

- give verbal praise either in front of other participants or in private
- use positive responses during questioning
- recognise appropriate skills while coaching in a clinical setting
- let the participants know how they are progressing towards achieving learning objectives.

Participants have **personal concerns**. The clinical trainer must recognise that many participants fear failure and embarrassment in front of their colleagues. Participants often have concerns about their ability to:

- fit in with the other participants
- get along with the trainer
- understand the content of the training
- perform the skills being taught.

Participants need an **atmosphere of safety**. The clinical trainer should open the course with an introductory activity that will help participants feel at ease. The course should communicate an atmosphere of safety so that participants do not judge one another or themselves. For example, a good introductory activity is one that acquaints participants with one another and helps them to associate the names of the other participants with their faces. Such an activity can be followed by learning experiences that support and encourage the participants.

People want to be **treated as individuals**, each of whom has a unique background, experience and learning needs. A person's past experiences is a good foundation upon which the clinical trainer can base new learning. To help ensure that participants feel like individuals, the clinical trainer should:

- use participant names as often as possible
- involve all participants as often as possible
- treat participants with respect
- allow participants to share information with others during classroom and clinical instruction.

Participants need to **maintain high self-esteem** to deal with the demands of a clinical training course. Often the clinical methods used in training are different from clinical practises used in the participants' clinics. It is essential that the clinical trainer show respect for the participants, no matter what practices and beliefs they hold to be correct, and continually support and challenge them. This requires the trainer to:

- reinforce those practices and beliefs embodied in the course content
- provide corrective feedback when needed, in a way that the participants can accept and use with confidence and satisfaction
- provide training that adds to, rather than subtracts from, their sense of competence and self-esteem
- recognise participants' own career accomplishments.

People attending courses tend to set **high expectations both for the trainers and for themselves**. Getting to know their clinical trainers is a real and important need. Clinical trainers should be prepared to talk modestly, and within limits, about themselves, their abilities and their backgrounds. All participants have **personal needs** during training. Taking timely breaks and providing the best possible ventilation, proper lighting and an environment as free from distraction as possible can help to reduce tension and contribute to a positive learning atmosphere.

USING EFFECTIVE PRESENTATION SKILLS

It is also important to use effective presentation skills. Establishing and maintaining a positive learning environment during training depends on how the clinical trainer delivers information because the **trainer sets the tone** for the course. In any course, **how** something is said may be just as important as **what** is said. Some common techniques for effective presentations are listed below:

- **follow a plan and use trainer's notes**, which include the session objectives, introduction, body, activity, audiovisual reminders, summary and evaluation
- **communicate in a way that is easy to understand.** Many participants will be unfamiliar with the terms, jargon and acronyms of a new subject. The clinical trainer should use familiar words and expressions, explain new language and attempt to relate to the participants during the presentation
- **maintain eye contact with participants.** Use eye contact to "read" faces. This is an excellent technique for establishing rapport and getting feedback on how well participants understand the content
- **project your voice** so that those in the back of the room can hear clearly. Vary volume, voice pitch, tone and inflection to maintain participants' attention. Avoid using a monotone voice, which is guaranteed to put participants to sleep!
- **avoid the use of slang or repetitive words, phrases or gestures** that may become distracting with extended use
- **display enthusiasm about the topic and its importance.** Smile, move with energy and interact with participants. The trainer's enthusiasm and excitement are contagious and directly affect the morale of the participants
- **move around the room.** Moving around the room helps ensure that the trainer is close to each participant at some time during the session. Participants are encouraged to interact when the clinical trainer moves towards them and maintains eye contact
- **use appropriate audiovisual aids** during the presentation to reinforce key content or help simplify complex concepts
- be sure to ask both **simple and more challenging questions**
- **provide positive feedback** to participants during the presentation
- **use participants' names as often as possible.** This will foster a positive learning climate and help keep the participants focused on the presenter
- display a **positive use of humour** related to the topic (e.g., humourous stories, cartoons on transparency or flipchart, cartoons for which participants are asked to create captions)
- **provide smooth transitions between topics.** Within a given presentation, a number of separate yet related topics may be discussed. When shifts between topics are abrupt, participants may become confused and lose sight of how the different topics fit together in the bigger picture. Before moving on to the next topic, the clinical trainer can ensure that the transition from one topic to the next is smooth by:
  - providing a brief summary
  - asking a series of questions
  - relating content to practice
  - using an application exercise (case study, role-play, etc.).
- **be an effective role model.** The clinical trainer should be a positive role model in appearance (appropriate dress) and attitude (enthusiasm for the course), and by beginning and ending the session at the scheduled times.

CONDUCTING LEARNING ACTIVITIES

Every presentation (training session) should begin with an **introduction** to capture participant interest and prepare the participant for learning. After the introduction, the clinical trainer may deliver content using an **illustrated lecture, demonstration, small group activity** or **other learning activity**. Throughout the presentation, questioning techniques can be used to encourage interaction and maintain participant interest. Finally, the clinical trainer should conclude the presentation with a **summary** of the key points or steps.

DELIVERING INTERACTIVE PRESENTATIONS

Introducing presentations

The first few minutes of any presentation are critical. Participants may be thinking about other matters, wondering what the session will be like, or have little interest in the topic. The **introduction** should:

- capture the interest of the entire group and prepare participants for the information to follow
- make participants aware of the trainer's expectations
- help foster a positive learning climate.

The clinical trainer can select from a number of techniques to provide variety and ensure that participants are not bored. Many introductory techniques are available, including:

- **reviewing the session objectives.** Introducing the topic by a simple restatement of the objectives keeps the participant aware of what is expected of him/her
- **asking a series of questions about the topic.** The effective clinical trainer will recognise when participants have prior knowledge concerning the course content and encourage their contributions. The trainer can ask a few key questions, allow participants to respond, discuss answers and comments, and then move into the body of the presentation
- **relating the topic to previously covered content.** When a number of sessions are required to cover one subject, relate each session to previously covered content. This ensures that participants understand the continuity of the sessions and how each relates to the overall topic. Where possible, link topics so that the concluding review or summary of one presentation can introduce the next topic
- **sharing a personal experience.** There are times when the clinical trainer can share a personal experience to create interest, emphasise a point or make a topic more job-related. Participants enjoy hearing these stories as long as they relate to the topic and are used only when appropriate
- **relating the topic to real-life experiences.** Many training topics can be related to situations most participants have experienced. This technique not only catches the participants' attention, but also facilitates learning because people learn best by "anchoring" new information to known material. The experience may be from the everyday world or relate to a specific process or piece of equipment
- **using a case study, clinical simulation or other problem-solving activity.** Problem-solving activities focus attention on a specific situation related to the training topic. Working in small groups generally increases interest in the topic
- **using videotape or other audiovisual aid.** Use of appropriate audiovisuals can be stimulating and generate interest in a topic
- **giving a classroom demonstration.** Most clinical training courses involve equipment, instruments and techniques that lend themselves to demonstrations, which generally increase participant interest
- **using a game, role-play or simulation.** Games, role-plays and simulations generate tremendous interest through direct participant involvement and therefore are useful for introducing topics
- **relating the topic to future work experiences.** Participants' interest in a topic will increase when they see a relationship between training and their work. The clinical trainer may capitalise on this by relating objectives, content and activities of the course to real work situations.

Using questioning techniques

Questions can be used at anytime to:

- introduce a topic
- increase the effectiveness of the illustrated lecture
- promote brainstorming
- supplement the discussion process.

Use a variety of questioning techniques to maintain interest and avoid a repetitive style:

- **ask a question of the entire group.** The advantage of this technique is that those who wish to volunteer may do so; however, some participants may dominate while others may not participate
- **target the question to a specific participant by using his/her name prior to asking the question.** The participant is aware that a question is coming, can concentrate on the question, and respond accordingly. The disadvantage is that once a specific participant is targeted, other participants may not concentrate on the question
- **state the question, pause and then direct the question to a specific participant.** All participants must listen to the question in the event that they are asked to respond. The primary disadvantage is that the participant receiving the question may be caught off guard and have to ask the trainer to repeat the question.

The key in asking questions is to avoid a pattern. The skilled clinical trainer uses all three of the above techniques to provide variety and maintain the participants' attention. Other techniques follow:

- **use participants' names** during questioning. This is a powerful motivator and also helps ensure that all participants are involved
- **repeat a participant's correct response.** This provides positive reinforcement to the participant and ensures that the rest of the group heard the response
- **provide positive reinforcement for correct responses** to keep the participant involved in the topic. Positive reinforcement may take the form of praise, displaying a participant's work, using a participant as an assistant or using positive facial expressions, nods or other nonverbal actions
- **when a participant's response is partially correct,** the clinical trainer should reward the correct portion and then improve the incorrect portion or redirect a related question to that participant or to another participant
- **when a participant's response is incorrect,** the clinical trainer should make a non-critical response and restate the question to lead the participant to the correct response
- **when a participant makes no attempt to respond,** the clinical trainer may wish to follow the above procedure or redirect the question to another participant. Come back to the first participant after receiving the desired response and involve him/her in the discussion
- **when participants ask questions**, the clinical trainer must determine an appropriate response by drawing upon personal experience and weighing the individual's needs against those of the group. If the question addresses a topic that is relevant but has not been previously discussed, the clinical trainer can either:
  - answer the question and move on
  - respond with another question, thereby beginning a discussion about the topic.

Summarising presentations

A **summary** is used to reinforce the content of a presentation and provide a review of its main points. The summary should:

- be **brief**
- draw together the **main points**
- **involve** the participants.

Many summary techniques are available to the clinical trainer:

- **asking the participants for questions** provides them with the opportunity to clarify their understanding of the instructional content. This may result in a lively discussion focusing on those areas that seem to be the most troublesome
- **asking the participants questions** that focus on major points of the presentation
- **administering a practise exercise or test** provides participants with the opportunity to demonstrate their understanding of the material. After the exercise or test, use the questions as the basis for a discussion by asking for correct answers and explaining why each answer is correct
- **using a game to review main points** provides some variety, when time permits. One popular game is to divide participants into two teams, give each team time to develop review questions, and then allow each team to ask questions of the other. The clinical trainer serves as moderator by judging the acceptability of questions, clarifying answers and keeping a record of team scores. This game can be highly motivational and serve as an excellent summary at the same time.

FACILITATING GROUP DISCUSSIONS

The **group discussion** is a learning method in which participants develop most of the ideas, thoughts, questions and answers. The clinical trainer typically serves as the **facilitator** and guides the participants as the discussion develops.

Group discussion is useful:

- at the conclusion of a presentation
- after viewing a videotape
- following a clinical demonstration or skills practise session
- after reviewing a case study or clinical simulation
- after a role-play
- any other time when participants have prior knowledge or experience related to the topic.

Attempting to conduct a group discussion when participants have limited knowledge or experience with the topic often will result in little or no interaction and thus an ineffective discussion. When participants are familiar with the topic, the ensuing discussion is likely to **arouse participant interest, stimulate thinking** and **encourage active participation**. This interaction affords the facilitator an opportunity to:

- provide positive feedback
- stress key points
- develop critical thinking skills
- create a positive learning climate.

The facilitator must consider a number of factors when selecting group discussion as the learning strategy:

- discussions involving **more than 15 to 20 participants** may be difficult both to lead and may not give each participant an opportunity to participate
- discussion requires **more time** than an illustrated lecture because of extensive interaction among the participants
- **a poorly directed discussion may move off target** and never reach the objectives established by the facilitator
- **if control is not maintained**, a few participants may dominate the discussion while others lose interest.

In addition to a **group discussion** that focuses on the session objectives, there are two other types of discussions that may be used in a training situation:

- **general discussion** that addresses participant questions about a learning event (e.g., why one type of episiotomy is preferred over another)
- **panel discussion** in which a moderator conducts a question and answer session between panel members and participants.

Follow these key points to ensure successful group discussion:

- **arrange seating to encourage interaction** (e.g., tables and chairs set up in a U-shape or a square or circle so that participants face each other)
- **state the topic** as part of the introduction
- **shift the conversation** from the facilitator to the participants.
- **act as a referee** and intercede only when necessary
  Example:
  "It is obvious that Alain and Ilka are taking two sides in this discussion. Alain, let me see if I can clarify your position. You seem to feel that...."
- **summarise the key points** of the discussion periodically
  Example:
  "Let's stop here for a minute and summarise the main points of our discussion."
- **ensure that the discussion stays on the topic**
- **use the contributions of each participant** and provide positive reinforcement
  Example:
  "That is an excellent point, Rosminah. Thank you for sharing that with the group."
- **minimise arguments** among participants
- **encourage all participants to get involved**
- **ensure that no one participant dominates the discussion**
- **conclude the discussion with a summary** of the main ideas. The facilitator must relate the summary to the objective presented during the introduction.

FACILITATING A BRAINSTORMING SESSION

Brainstorming is a learning strategy that **stimulates thought and creativity** and is often used in conjunction with group discussions. The primary purpose of brainstorming is to generate a list of ideas, thoughts or alternative solutions that focus on a specific topic or problem. This list may be used as the introduction to a topic or form the basis of a group discussion. Brainstorming requires that participants have some background related to the topic.

The following guidelines will facilitate the use of brainstorming:

- **establish ground rules**
  Example:
  "During this brainstorming session we will be following two basic rules. All ideas will be accepted and Alain will write them on the flipchart. Also, at no time will we discuss or criticise any idea. Later, after we have our list of suggestions, we will go back and discuss each one. Are there any questions? If not. . ."
- **announce the topic or problem**
  Example:
  "During the next few minutes we will be brainstorming and will follow our usual rules. Our topic today is 'Indications for Caesarean section.'
  I would like each of you to think of at least one indication. Maria will write these on the board so that we can discuss them later. Who would like to be first? Yes, Ilka.. . ."
- **maintain a written record** of the ideas and suggestions on a flipchart or writing board. This will prevent repetition and keep participants focused on the topic. In addition, this written record is useful when it is time to discuss each item
- **involve the participants and provide positive feedback** in order to encourage more input
- **review written ideas and suggestions periodically** to stimulate additional ideas
- **conclude brainstorming by reviewing all of the suggestions** and clarifying those that are acceptable.

FACILITATING SMALL GROUP ACTIVITIES

There are many times during training that the participants will be divided into several **small groups**, which usually consist of four to six participants. Examples of small group activities include:

- **reacting to a case study**, which may be presented in writing, orally by the clinical trainer or introduced through videotape or slides
- **preparing a role-play** within the small group and presenting it to the entire group as a whole
- **dealing with a clinical situation/scenario**, such as in a **clinical simulation**, that has been presented by the clinical trainer or another participant
- **practising a skill** that has been demonstrated by the clinical trainer using anatomic models.

Small group activities offer many advantages including:

- providing participants an opportunity to **learn from each other**
- **involving** all participants
- creating a sense of **teamwork** among members as they get to know each other
- providing for a **variety of viewpoints**.

When small group activities are being conducted, it is important that participants are not in the same group every time. Different ways the clinical trainer can create small groups include:

- **assigning** participants to groups
- asking participants to **count off** "1, 2, 3," etc. and having all the "1s" meet together, all the "2s" meet together, etc.
- asking participants to **form their own groups**
- asking participants to **draw a group number** (or group name).

The room(s) used for small group activities should be large enough to allow different arrangements of tables, chairs and teaching aids (models, equipment) so that individual groups can work without disturbing one another. The clinical trainer should be able to move easily about the room to visit each group. If available, consider using smaller rooms near the primary training room where small groups can go to work on their problem-solving activity, case studies, clinical simulations or role-plays. Note that it will be difficult to conduct more than one clinical simulation at the same time in the same room/area.

Activities assigned to small groups should be **challenging, interesting, relevant;** should require **only a short time to complete;** and should be **appropriate for the background of the participants**. Each small group may be working on the same activity or each group may be taking on a different problem, case study, clinical simulation or role-play. Regardless of the type of activity, there is usually a time limit. When this is the case, inform groups when there are five minutes left and when their time is up.

Instructions to the groups may be presented:

- in a **handout**
- on a **flipchart**
- on a **transparency**
- **verbally** by the clinical trainer.

Instructions for small group activities typically include:

- **directions**
- **time** limit
- a **situation or problem** to discuss, resolve or role-play
- participant **roles** (if a role-play)
- **questions** for a group discussion.

Once the groups have completed their activity, the clinical training facilitator will **bring them together** as a large group for a discussion of the activity. This discussion might involve:

- **reports** from each group
- **responses** to questions
- **role-plays** developed in each group and presented by participants in the small groups
- **recommendations** from each group
- **discussion of the experience** (if a clinical simulation).

It is important that the clinical trainer provide an effective summary discussion following small group activities. This provides closure and ensures that participants understand the point of the activity.

CONDUCTING AN EFFECTIVE CLINICAL DEMONSTRATION

When introducing a new clinical skill, a variety of methods can be used to demonstrate the procedure. For example:

- show **slides** or a **videotape** in which the steps and their sequence are demonstrated in accordance with the accepted performance standards
- use **anatomic models** such as the childbirth simulator to demonstrate the procedure and skills
- perform **role-plays** in which a participant or surrogate client simulates a client and responds much as a real client would
- demonstrate the procedure with **clients** in the clinical setting (clinic or hospital).

Whatever methods are used to demonstrate the procedure, the clinical trainer should set up the activities using the **"whole-part-whole"** approach:

- demonstrate the **whole procedure** from beginning to end to give the participant a visual image of the entire procedure or activity
- **isolate or break down the procedure** into activities (e.g., pre-operative counselling, getting the client ready, pre-operative tasks, performing the procedure) and allow practise of the individual activities of the procedure
- demonstrate the **whole procedure** again and then allow participants to practise the procedure from beginning to end.

When planning and demonstrating a clinical procedure, either using anatomic models (or with clients, if appropriate), the clinical trainer should use the following guidelines:

- before beginning, **state the objectives** of the demonstration and point out what the participants should do (e.g., interrupt with questions, observe carefully)
- make sure that **everyone can see** the steps involved
- **never** demonstrate the skill or activity incorrectly
- demonstrate the procedure in as **realistic** a manner as possible, using instruments and materials in a simulated clinical setting

- include **all steps** of the procedure in the **proper sequence** according to the approved performance standards. This includes demonstrating "non-clinical" steps such as pre- and post-operative counselling and communication with the client during surgery, and use of recommended infection prevention practices
- during the demonstration, **explain to participants what is being done**, especially any difficult or hard-to-observe steps
- **ask questions** of participants to keep them involved
  Example:
  "What should I do next?" "What would happen if...?"
- **encourage** questions and suggestions
- **take enough time** so that each step can be observed and understood. Remember that the objective of the demonstration is learning the skills, **not** for the clinical trainer to show his/her dexterity and speed
- **use equipment and instruments properly** and make sure participants clearly see how they are handled.

In addition, participants should use the learning guide developed specifically for each clinical procedure to observe the clinical trainer's performance during the initial demonstration. Doing this:

- familiarises the participant with the use of competency-based learning guides
- reinforces the standard way of performing the procedure
- communicates to participants that the clinical trainer, although very experienced, is not absolutely perfect and can accept constructive feedback on his/her performance.

As the role model for the participants, the clinical trainer must practise what he/she **demonstrates** (i.e., the approved **standard method** as detailed in the learning guide). Therefore, it is essential that the clinical trainer use the standard method. During the demonstration, the clinical trainer also should provide supportive behaviour and cordial, effective communication with **the client** and **staff** to reinforce the desired outcome.

TEACHING CLINICAL DECISION-MAKING

Clinical decision-making is the systematic process by which skilled providers make judgments regarding a client's condition, diagnosis and treatment. Despite the importance of sound clinical decision-making to the provision of high quality services, it is not well taught in either pre-service education or in-service training. There is so much basic knowledge to be acquired that it leaves little time for complex skills such as clinical decision-making. Even when there is enough time, decision-making is a difficult skill to teach and learn.

Until recently, very little was known about how decisions are made. For experienced providers, decision-making is an intuitive process based on knowledge and experience. Many of the steps necessary to arrive at a decision can be completed rapidly and unconsciously. Such providers are unable to explain how they make decisions, which in turn makes it difficult to teach this skill to others. Nor is it easy for learners to identify how a decision is made when simply observing other providers in action. Consequently, they have nothing to model for developing their own skill.

It is now known, however, that there is a process to clinical decision-making that can be broken down into a series of steps that help the provider to gather the information needed to form accurate judgments, begin appropriate care and evaluate the effectiveness of that care. There are a number of different ways to name these steps, but they describe the same process. Two such approaches are illustrated below:

- assessment, **or** gathering information
- diagnosis, **or** interpreting the information
- planning, **or** developing the care plan
- intervention, **or** implementing the care plan
- evaluation, **or** evaluating the care plan.

An important strategy in teaching clinical decision-making is to be sure that learners are aware of this step-by-step process and what occurs in each step. They also must understand that, although there is a sequence of steps for clinical decision-making, movement through the steps is rarely linear or sequential. Rather, it is an ongoing, circular process, in which the provider moves back and forth between the steps as the clinical situation changes and different needs or problems emerge.

Learners should be introduced to the steps in clinical decision-making early in their education. After that, these steps should receive continual emphasis and be used in a variety of situations. Throughout the curriculum, learners should be given opportunities and appropriate situations in which to apply these steps and practise their decision-making skills. Whether they are actively practising their own skills or observing more experienced providers, learners should focus on understanding the reasoning and judgment that are the basis for each step in the process. **How** a decision is made is as important as what decision is made. Explaining how a decision is made usually requires the active involvement of the teacher because the **process** of decision-making is not easy to observe or identify.

Another key strategy in teaching clinical decision-making is to provide as much experience and practise in decision-making as possible. This experience, together with clinical knowledge, is a key component of successful decision-making. Teachers should:

- expose learners to as many and as wide a **variety of clients** as possible
- put learners in the **clinical setting** as early as possible and provide careful guidance as they gain their experience
- give learners as much **structured independence** as possible; they must be given the opportunity and time to draw their own conclusions and consider their own decisions
- provide learners with a forum, for example, case reviews or clinical conferences, for **comparing their decisions** with the decisions made by more experienced providers.

It is important that the teacher discuss the decision-making process with each learner, and that learners share their experiences with one another. By sharing experiences, learners get that many more cases or approaches to the same case to "file away" for future use, even though they may not have been directly involved in the cases themselves.

Finally, the teacher should give learners feedback on how the clinical decision-making process was applied in a given situation. This will strengthen future performance more effectively than focusing on whether or not the "correct answer" was identified. In fact, a wrong answer for the right reason should receive more positive feedback than a right answer for the wrong reason.

Often, it is not possible to give learners experience with all the types of situations they will encounter as independent practitioners. Their "memory files" of experience can nevertheless be built up in other ways. Extensive use of case studies, role-plays and simulations, in which specific clinical situations are acted out, can contribute significantly to learners' experience. For example, true shoulder dystocia during childbirth is uncommon, but repeated drilling or practise on models of the corrective manoeuvres for shoulder dystocia will help learners respond to the emergency when it happens.

Tools for teaching clinical decision-making are presented throughout this learning resource package. The case studies and clinical simulations have been designed to facilitate the teaching of decision-making by reinforcing the steps involved in the process. The partograph exercises are also effective tools for decision-making. Their purpose is not simply to help learners plot data on the partograph, but also to use the data for identifying and responding to problems as soon as, or even before, they occur. The tools alone, however, will not effectively teach clinical decision-making. The teacher must take an active role in discussing, questioning, explaining and challenging the learners about **how** decisions are being made each time one of these tools is used. This interaction must continue as the learners move into the clinical area and work with clients.

Clinical decision-making is still a difficult skill to teach. By beginning early in the curriculum and continually providing practise opportunities and guidance—whether by using the tools included in this learning resource package or through experience with clients—teachers will help learners more fully understand the decision-making process and develop their decision-making skills. As a result, the quality of care received by clients will be improved.

MANAGING CLINICAL PRACTICE

Getting the most out of clinical skills practise requires that the trainer be well acquainted with the clinical skills practise sites. Being familiar with the healthcare facility before training begins allows the trainer to develop a relationship with the staff, overcome any inadequacies in the situation, and prepare for the best possible learning experience for participants. Even the best planning, however, is not always enough to ensure a successful clinical skills practise experience. In the classroom, the trainer is able to control the schedule and activities to a large extent, whereas in the clinic the trainer must always be alert to unplanned learning opportunities that may arise at any time and must be ready to modify the schedule accordingly.

PERFORMING CLINICAL PROCEDURES WITH CLIENTS

The final stage of clinical skill development involves practising procedures with clients. Anatomic models, no matter how realistic, cannot substitute entirely for the reality of performing the procedure with a living, breathing, feeling and reacting human being. The **disadvantages** of using real clients during clinical skills training are obvious. Clients may be subjected to increased discomfort or even increased risk of complications when procedures are performed by unskilled clinicians. Therefore, when possible and appropriate, participants should be allowed to work with clients only after they have **demonstrated skill competency** and some degree of **skill proficiency** on an anatomic model or in a simulated situation.

The **rights of clients** should be considered at all times during a clinical training course. The following practices will help ensure that clients' rights are routinely protected during clinical training:

- the right to **bodily privacy** must be respected whenever a client is undergoing a physical examination or procedure
- the **confidentiality** of any client information obtained during counselling, history taking, physical examinations or procedures must be strictly observed. Clients should be reassured of this confidentiality. Confidentiality can be difficult to maintain when specific cases are used in learning exercises such as case studies and clinical meetings. Such discussions always should take place in a private area where other staff and clients cannot overhear and should be conducted without reference to the client by name
- when receiving counselling, undergoing a physical examination or receiving maternal and neonatal health services, **the client should be informed about the role of each person involved** (e.g., clinical trainers, individuals undergoing training, support staff, researchers)
- the **client's permission should be obtained** before having a clinician-in-training observe, assist with or perform any procedures. Understanding the right to refuse care from a clinician-in-training is important for every client. Furthermore, care should not be rescheduled or denied if the client does not permit a clinician-in-training to be present or provide services. In such cases, the clinical trainer or other staff member should perform the procedure
- the **clinical trainer should be present during any client contact** in a training situation and the client should be made aware of the trainer's role. Furthermore, the clinical trainer should be ready to intervene if the client's safety is in jeopardy or if the client is experiencing severe discomfort
- the **trainer must be careful how coaching and feedback are given** during practise with clients. Corrective feedback in the presence of a client should be limited to errors that could harm or cause discomfort to the client. Excessive negative feedback can create anxiety for both the client and the clinician-in-training
- **clients should be chosen carefully** to ensure that they are appropriate for clinical training purposes. For example, participants should **not** practise with "difficult" clients until they are proficient in performing the procedure.

CREATING OPPORTUNITIES FOR LEARNING

Planning for learning

The clinical trainer should **develop a plan for each day spent in the healthcare facility**. The plan will provide a daily focus that is consistent with the learning objectives and help to ensure that all required skills are be adequately addressed. When preparing the plan, the trainer should consider the following points.

- clinical skills practise should progress from **basic to more complex skills**. This not only helps ensure the safety and quality of care provided by participants, but also allows them to gain self-confidence as they demonstrate competency in the basic skills
- **there may be more participants than can be accommodated** comfortably in one area of the healthcare facility at the same time. Generally, three or four participants are the most that a specific area of a facility can absorb without affecting service delivery. If there are more, the trainer should plan a rotation system that allows each participant to have equal time and opportunity in each clinical area

- some clinical experiences, such as **obstetrical emergencies (e.g., eclampsia, postpartum haemorrhage, obstructed labour), cannot be planned or predicted**. The trainer must be alert to identify appropriate clinical situations and distribute them equally among the participants. Before each day's practise, the trainer should ask the staff to notify him/her of any clients that may be of particular interest, so that participants can be assigned to work with them
- in addition to daily practise of specific clinical skills, the **trainer's plan should include other areas of focus** such as infection prevention, facility logistics or client flow. Although these topics may not be directly assessed with a checklist or other competency-based assessment tool, they play an important role in the provision of high quality maternal and neonatal health services. To make sure that participants give adequate attention to these topics, the trainer should design and develop activities that address each one, such as:
- observing the infection prevention practices used in the facility. Which recommended practices are being used, and which are not? Are they being used consistently and correctly? Why or why not?
- reviewing facility records for the past several months to identify the types of obstetrical clients seen. Additional information could be obtained, such as the most common complaints and, in individual cases, course of labour (partograph review), progression of a specific condition, treatment provided, response to treatment, etc.
- taking an inventory of the supplies, equipment and drugs available in the service provision area to ensure rapid access when needed
- inevitably there will be **times when there are few or no clients in the facility**. The trainer should have ready additional activities, such as those described above, for the participants. Case studies and role-plays also are very useful at such times. **Even without clients, learning must continue.** Taking extended breaks or leaving the clinical site early is not an acceptable option.

In the healthcare facility

As has been mentioned, planning alone is not sufficient to guarantee a successful clinical skills practise. There are several key strategies that a clinical trainer can use in the healthcare facility to increase the likelihood of success.

- the trainer must **actively monitor** the skills each participant is able to practise, and with what frequency, so that each participant has adequate opportunities to develop competency. A participant who demonstrates competency in performing a Caesarean section operation or in administering spinal anaesthesia should not be assigned additional clients requiring this operation or procedure until other participants have had an opportunity to develop such competency
- it is essential that the trainer **be flexible and constantly alert** to learning opportunities as they arise. This requires knowledge about the healthcare facility—how it is set up and functions, the client population, etc.—as well as a good working relationship with the staff. The trainer will need to rely on the staff's cooperation in notifying him/her of unique or unusual clients and allowing participants to provide services to these clients. This relationship is most easily established beforehand, during site preparation and other visits made by the trainer
- the **participants also should be encouraged to watch** for such learning opportunities. The trainer may then decide which, and how many, of the participants will be assigned to a particular client. The trainer and participants should remember that clinical experiences need to be shared equally. Therefore, the participant who identifies a case may not be assigned to it if this participant has had a similar case before. It is not appropriate to subject the client to a procedure multiple times simply so that all participants can practise a skill
- to take advantage of opportunities as they occur may require that the trainer **modify the plan for that day and subsequent days**, but with as little disruption as possible to the provision of services. Participants should be notified of any changes as soon as possible so that they can be well prepared for each clinical day

- rarely will all participants have the opportunity to work with all types of clients. The clinical trainer will need to **supplement, with case studies and role-plays, the work done with clients**. The trainer should rapidly identify important but rare events or conditions, such as severe pre-eclampsia, and prepare activities in advance. Actual cases seen in the healthcare facility may also serve as the basis for such activities. These can then be used during clinical sessions to expand the participants' range of experiences.

CONDUCTING PRE- AND POST-CLINICAL PRACTICE MEETINGS

Although every healthcare facility will not have a meeting room, the clinical trainer must make every effort to find a space that:

- allows **free discussion**, small group work and practise on models
- is **away from the client care area** if possible, so as to not interfere with efficient client care or other staff duties.

Pre-clinical practice meetings

The trainer and participants should meet at the beginning of each clinical practice session. The meeting should be brief. Items to be covered include:

- the learning objectives for that day
- any scheduling changes that may be needed
- participants' roles and responsibilities for that day, including the work assignments and rotation schedule if applicable
- special assignments to be completed that day
- the topic for the post-clinical practice meeting, so that the participants can take special note of anything happening during the day that would contribute to the discussion
- questions related to that day's activities or from previous days if they can be answered concisely; if not, they should be deferred until the post-clinical practice meeting.

Post-clinical practice meetings

The clinical trainer should end each clinical day with a meeting to review the day's events and build on them as learning experiences. A minimum of one hour is recommended. These meetings are used to:

- review the day's learning objectives and assess progress towards their completion
- present cases seen that day, particularly those that were interesting, unusual or difficult
- respond to clinical questions concerning situations and clients in the healthcare facility or information in the reference manual
- plan for the next clinical session, making changes in the schedule as necessary
- conduct additional practice with models if needed
- review and discuss case studies, role-plays or assignments that have been prepared in advance by the participants. These activities should complement the sessions conducted during the classroom portion of the course, especially when classroom time is limited and clinical experience is necessary to gain a better understanding of the issues to be discussed. Topics for case studies, role-plays and assignments include:
  - quality of care
  - clinical services provided
  - preventive care measures
  - medical barriers to providing high quality services
  - recommended follow-up.

THE TRAINER AS SUPERVISOR

In the role of supervisor, the trainer must monitor participant activities in the healthcare facility so that:

- each participant receives appropriate and adequate opportunities for skills practise
- participants do not disrupt the efficient provision of services within the facility or interfere with staff and their duties
- the care provided by each participant does not harm clients or place them in an unsafe situation.

The trainer must always be with participants when they are working with clients, especially when they are performing clinical procedures. Trainers may have more than one or two participants to supervise. Because the trainer cannot be with all of them at the same time, other methods of supervision must be used:

- participants must understand what they can do independently and what requires trainer supervision, so that they can keep busy when the trainer is involved with another participant. Participants should be made responsible for ensuring that they are supervised when necessary. The trainer, however, still holds the ultimate responsibility
- additional activities that require no direct supervision will give participants the opportunity to be actively engaged in learning when they are not with clients
- clinical staff also can act as supervisors if the trainer is confident of their clinical skills and ability to provide appropriate feedback. The possibility of having clinical staff supervise participants is another reason why the trainer should get to know the staff before the training begins. During clinical site preparation, the trainer can observe the skills of the staff members, and verify that they are competent, if not proficient, service providers. The trainer may also have the opportunity to assess their coaching skills. There may even be time to work with staff members to improve their skills so that they can serve as role models and support participant learning
- the more participants there are in the facility, the more the trainer relies upon the staff also to act as trainers. Nevertheless, the ultimate responsibility for each participant, including that of final assessment of skill competency, is the trainer's. For this reason, if multiple clinical sites are used during a course, a trainer must be assigned to each site
- because clinical staff usually are not involved in the classroom portion of a course, they do not have an opportunity to get to know the participants and their abilities before they arrive at the facility. Therefore, it is a good idea to share such information with the clinical staff whenever they will have to take over a large part of the participant supervision. Clinical staff should also be encouraged to do an initial assessment of participants' skills before allowing them to work with clients so that they can feel confident that the participants are well prepared
- clinical staff should also be aware of the feedback the trainer would like to receive from them about participants
- will it be oral, written or both? If written feedback is needed, the trainer should design an instrument or form to guide the clinical staff. The trainer should furnish a sufficient number of copies of the form and instruct the staff in its use. The trainer should develop a form that staff members can complete quickly and easily
- how frequently will feedback be provided? Daily? Weekly? Only at the end of training?
- should both positive and corrective feedback be provided?
- are there appropriate administrative channels through which the feedback should be transmitted? In some clinics, for example, staff members provide their feedback to the individual in charge of the healthcare facility who then prepares a report for the trainer
- when designing the feedback system, the trainer should keep in mind the time required to prepare and provide feedback. This will be extra work for the clinical staff who already have a very busy schedule. It is best to keep the system as simple and easy to use as possible.

THE TRAINER AS COACH

One of the most difficult tasks for the trainer, and one with which even experienced trainers struggle, is to be a good coach and provide feedback in the clinical setting. No matter how comfortable a trainer may be in giving feedback in the classroom or while working with models, the situation changes in the facility. The clients, staff and other participants are nearby and the emergency services need to keep running smoothly and efficiently. The trainer often feels pressured to keep things moving because other clients need to be seen and the trainer needs to be available to all the participants. Spending too much time with any one client or participant has an impact on everyone.

Feedback sessions

The feedback sessions before and after practise are often skipped in an effort to save time. These sessions, however, are very important for the continued development of the participant's psychomotor or decision-making skills. Without adequate feedback and coaching, the participant may miss an important learning opportunity and take longer to achieve competency.

Keep in mind that by this time the participant has already demonstrated competency on a model and may not need extensive feedback. To minimise disruption of services, the pre- and post-practise feedback sessions can take place in just a few minutes in a location away from the client care areas.

The structure of the feedback session is essentially the same regardless of whether the session takes place before or after practise, and whether it is for a participant's performance with models or with clients.

- the participant should first identify personal strengths and the areas where improvement is needed
- next, the trainer should provide specific, descriptive feedback that includes suggestions of not only what, but also how, to improve
- finally, the participant and the trainer should agree on what will be the focus of the practise session, including how they will interact while they are with the client. For example, they may agree that if the trainer places a hand on the participant's shoulder, it is a signal to stop and wait for further instructions.

The feedback session before practise should be given before entering the room to work with the client. The feedback session after practise can be delayed until the client's care has been completed or the client is in stable condition so that continuous care is no longer needed. The trainer should try not to delay feedback any longer than necessary. Feedback is always more effective when given as soon after care as possible. This will also allow the participant to use the feedback with the next client for whom services are provided, if appropriate.

Feedback during a procedure

Be sure the client knows that the participant, although already a service provider, is also a learner. Reassure the client that the participant has had extensive practise and mastered the skill on models. The client should expect to hear the trainer talk to the participant and understand that it does not mean that something is wrong. Finally, the client should clearly understand that the trainer is a proficient service provider and is there to ensure that the procedure is completed safely and without delay.

1. Positive feedback

Positive feedback is often easy to give and can be provided in the presence of the client. Trainers often think that hearing feedback, even positive feedback, will disturb the client. Many clients, however, find it comforting to hear the service provider being given positive feedback.

- keep the feedback restrained and low-key; overly exuberant praise can be as worrisome to the client as hearing negative comments. Too much praise may cause the client to wonder, "What is being hidden?" "Why is it so surprising that this person is doing a good job?"
- positive feedback can be conveyed by facial expression and tone of voice rather than words and still be highly effective.

At the same time, the **absence** of feedback of any kind can be disturbing to the participant. By this phase of skill development the participant is expected to do a good job even with the first client, and is accustomed to hearing positive comments. Therefore, in order to maintain the participant's confidence, it is still important to give positive feedback.

2. Corrective feedback

Corrective feedback is difficult to give under any circumstances, but particularly when a client is present. It is important to keep such feedback low-key and restrained. There are a number of techniques that will make it easier.

- often a look or hand gesture (e.g., a touch on the shoulder) can be as effective as words and less worrisome to the client
- simple suggestions to facilitate the procedure can be made in a quiet, direct manner. Do not go into lengthy explanations of why you are making the suggestion or offering an observation—save that for the post-practise feedback session
- to help a participant avoid making a mistake, the trainer can calmly ask a simple, straightforward question about the procedure itself. If a step in a procedure is about to be missed, for example, asking the participant to name the next step **before** doing anything further could help avoid an error. This is not the time to ask hypothetical questions about potential side effects and complications, as this may distract the participant and alarm the client
- sometimes, even though they have had extensive practise on models, participants make mistakes that can potentially harm the client. In these instances, the trainer must be prepared to step in and take over the procedure at a moment's notice. This should be done calmly and with complete control to avoid unnecessarily alarming the client.

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