CLINICAL TRAINING *for* REPRODUCTIVE HEALTH *in* EMERGENCIES

Emergency Obstetric Care

PARTICIPANT GUIDE

RAISE
Reproductive Health Access, Information and Services in Emergencies

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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	Cephalopelvicdisproportion
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 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 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 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.

Learning guides and checklists

The learning guides and checklists used in this course are designed to help the participant learn to provide EmOC and emergency newborn care 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:

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 practise) 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 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 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.

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. 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 skilled provider
- 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 skilled provider
- 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 skilled provider 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 package 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 *Course Materials* 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 practise. 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 17 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, clinical officers, 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 in order 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
- breech delivery
- episiotomy and repair
- repair of cervical tears
- 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 skills practise 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 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.

PRE-COURSE KNOWLEDGE QUESTIONNAIRE

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.

Participant's No: _____

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.	

Pre-course Knowledge Questionnaire (cont'd)

PARTOGRAPH		
20.	Cervical dilatation plotted to the right of the alert line on the partograph indicates unsatisfactory progress of labour.	
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.	

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															

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																

CONFIDENTIAL CLINICAL EXPERIENCE QUESTIONNAIRE

Name: Date:

Name of institution you are working in:	
For teaching/training:	
For clinical practise:	
Qualification (state all degrees and diplomas and year obtained)	
Qualification	**Year obtained**
Number of years in active clinical maternal and neonatal practice since qualification:	
The following questions refer to your clinical and teaching activities. For each skill listed on the reverse, please record:	
1. The number of cases personally managed in the last six months	
2. The degree of confidence you have in performing these skills	
a. Very confident, I do not need any coaching	
b. Not very confident, I need coaching	
c. I cannot perform this skill	
3. Whether you have taught skill in the last six months	

Skill	Number of cases in last six months	Degree of confidence	Have taught this skill in last six months?
		a or *b* or *c*	*Yes or No*
Counselling for birth preparedness and complication readiness			
Managing severe pre-eclampsia and eclampsia			
Managing malaria in pregnancy			
Monitoring labour using partograph			
Augmentation of labour			
Normal childbirth			
Managing shock			
Active management of third stage of labour			
Episiotomy and repair			
Bi-manual compression			
Manual removal of placenta			
Repair of cervical tears			
Repair of perineal tears			
Endotracheal intubation			
Vacuum extraction			
Breech delivery			
Caesarean section			
Postpartum hysterectomy			
Manual vacuum aspiration			

SKILLS PRACTISE SESSIONS: LEARNING GUIDES

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/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.					

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

STEP/TASK		CASES				
		1	2	3	4	5
12.	Connect IV tubing to needle or cannula.					
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 to 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.	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.	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.					

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 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 a 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 a Childbirth.

Learning Guide for Conducting a Childbirth

Participants should be able to perform the steps/tasks in the Learning Guide for Conducting a Childbirth before skill competency is assessed by the trainer in the simulated setting, using the Checklist for Conducting a 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 a 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 10 IU 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.					
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.					

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?

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?

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?

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.					
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.					

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, palmar 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 a piece of 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.					

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.					

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/cm2 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.					

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. Tell her she may feel discomfort during some of the steps of the procedure and that you will warn her in advance.					
5. Ask about allergies to antiseptics and anaesthetics.					
6. 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.					
7. Check the MVA syringe and charge it (establish vacuum).					
8. Check that client has recently emptied her bladder.					
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.	Clean the cervix with antiseptic solution 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, reassess then 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.					

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 the 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 misoprostol.					
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 7 days after treatment unless medically necessary (i.e. for haemostatic or infection control).					
4. Provide contraceptive counselling 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.					

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.					

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 planning.

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. (see **Learning Guide for Post-partum Family Planning**)					
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.					

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.					

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.					

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.					

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. 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: ■ 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.					

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 3 to 5 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 anaesthetist 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 60dpm 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 anaesthetist.					
11.	Ask an anaesthetist 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 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.					
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 in getting woman off 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 and 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.					

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 3 to 5 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.					

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 3 to 5 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 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 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 were 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.					

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 3 to 5 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 ligate. 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 were 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.					

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 ligate. If the bleeding points are deep, use figure-of-eight sutures.					
11.	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.					
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 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.					

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 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 were 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.					

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.

Resources

The following equipment or representations thereof:

- examination table
- weighing scale
- examination gloves.

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

Learning Guide for Newborn Examination

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.

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.

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]

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.					

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 a 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 in neutral position 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) put 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 re-inflates when the seal is released ■ repeat the test with the mask attached to the bag.					
DOCUMENTING RESUSCITATION PROCEDURES					
1. Record the following details in the baby's case notes: ■ 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.					

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.					

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?

CASE STUDIES

CASE STUDY 1: VAGINAL BLEEDING IN EARLY PREGNANCY

Directions

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

Case study

Mrs. 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?**

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

Diagnosis (identification of problems/needs)

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

History

Mrs. A.'s temperature is 36.8ºC. 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?**

Care provision (planning and intervention)

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

Evaluation

Mrs. A.'s post-operative course was without complications, and notable for client 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?**

CASE STUDY 2: PREGNANCY-INDUCED HYPERTENSION

Directions

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

Case study

Mrs. 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, 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?**

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

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

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?**

Care provision (planning and intervention)

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

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?**

CASE STUDY 3:
ELEVATED BLOOD PRESSURE IN PREGNANCY

Directions

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

Case study

Mrs. 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?**

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

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

Diagnosis (identification of problems/needs)

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

History

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 size 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 records.

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

Care provision (planning and intervention)

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

Evaluation

Mrs. C. returns to the antenatal clinic in one week. She feels well and denies headache, blurred vision, upper abdominal pain, convulsions, and 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?**

CASE STUDY 4: UNSATISFACTORY PROGRESS IN LABOUR

Directions

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

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?**

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

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 37ºC. 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?**

Care provision (planning and intervention)

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

Evaluation

Four hours later, Mrs. D.'s temperature is 37ºC. 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.

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

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

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

Oxytocin infusion (2.5 units in 500mL) is started. The infusion rate is titrated 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?**

History

On reassessment two and a half hours later, Mrs. D.'s temperature is 37ºC. 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?**

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

CASE STUDY 5:
FEVER AFTER CHILDBIRTH

Directions

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

Case study

Mrs. E. is a 35-year-old para 3. 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 childbirth. 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?**

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

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

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 39.8ºC. 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?**

Care provision (planning and intervention)

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

Evaluation

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

Mrs. E.'s temperature is 38ºC. 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?**

CASE STUDY 6:
VAGINAL BLEEDING AFTER CHILDBIRTH

Directions

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

Case study

Mrs. 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 2 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?**

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

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

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 36.8ºC, 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?**

Care provision (planning and intervention)

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

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 5 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?**

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