

EMERGENCY OBSTETRIC CARE

For Doctors and Midwives

Course Notebook for Trainers

AMDD

Averting Maternal Death
& Disability Program



Columbia University
**MAILMAN SCHOOL
OF PUBLIC HEALTH**

Maternal
& Neonatal
Health

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Prepared by the JHPIEGO/MNH Program

The Averting Maternal Death and Disability (AMDD) Program focuses on the improved availability, quality and utilization of emergency obstetric care (EmOC). The AMDD program is based on the premise that most obstetric complications cannot be predicted or prevented, and that the vast majority of women who die in childbirth can be saved through prompt, efficient and appropriate treatment. This publication was supported by the AMDD Program at the Heilbrunn Department of Population and Family Health at the Joseph L. Mailman School of Public Health, Columbia University, and the Bill & Melinda Gates Foundation.

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JHPIEGO is a nonprofit international health organization dedicated to improving the health of women and families. Established in 1973, JHPIEGO—affiliated with Johns Hopkins University and headquartered in Baltimore, Maryland—works in more than 30 countries through its collaborative partnerships with public and private organizations, and local communities.
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Section One: Guide for Participants

OVERVIEW

BEFORE STARTING THIS TRAINING COURSE

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 her/his 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 minimize 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 percent of the participants will “master” the knowledge and skills on which the learning is based. Mastery learning is used extensively in inservice training where the number of participants, who may be practicing clinicians, is often low. Although

the principles of mastery learning can be applied in preservice 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 emphasizes 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 practicing skills. Key features of mastery learning are that it:

- Uses behavior modeling,
- Is competency-based, and
- Incorporates humanistic learning techniques.

Behavior Modeling

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 modeling 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.

Behavior modeling, 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 practices until **skill competency** is achieved, and s/he feels confident performing the procedure. The final stage, **skill proficiency**, occurs with repeated practice over time.

<i>Skill Acquisition</i>	Knows the steps and their sequence (if necessary) to perform the required skill or activity but needs assistance
<i>Skill Competency</i>	Knows the steps and their sequence (if necessary) and can perform the required skill
<i>Skill Proficiency</i>	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 emphasized 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 analyzed to determine the most efficient and safe way to perform and learn it. The process is called standardization. Once a procedure, such as active management of the third stage of labor, has been standardized, 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 practice**—The trainer and participants meet briefly before each practice session to review the skill/activity, including the steps/tasks that will be emphasized during the session.
- **During practice**—The trainer observes, coaches and provides feedback to the participant as s/he performs the steps/tasks outlined in the learning guide.
- **After practice**—Immediately after practice, the trainer uses the learning guide to discuss the strengths of the participant's performance and also offer specific suggestions for improvement.

Humanistic Training Techniques

The use of more humane (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 patients allows participants to learn and practice new skills in a simulated setting. This reduces stress for the participant as well as risk of injury and discomfort to the patient. 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 patient, two learning activities should occur:

- The clinical trainer should demonstrate the required skills and patient interactions several times using an anatomic model, role plays or simulations.
- Under the guidance of the trainer, the participant should practice the required skills and patient 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 patient. This often presents challenges in a preservice education setting when there are large numbers of participants. Before any participant provides services to a patient, 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 behavior modeling, 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.

There are two important activities that should be undertaken to prepare for each lecture or interactive presentation. First, the participants should be directed to read relevant sections of the reference manual (and other resource materials, if and when used) before each lecture. Second, the trainer should prepare for the lectures by becoming thoroughly familiar with lecture content.

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 in the learning resource package 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 for IP. All of these skills are essential for providing emergency obstetric care (EmOC).

Case Studies

The purpose of the case studies included in the learning resource package is to help participants develop and practice clinical decision-making skills. The case studies can be completed in small groups or individually, in the classroom, at the clinical site or as homework assignments.

The case studies follow a clinical decision-making framework. (See “Teaching Clinical Decision-Making” in Tips for Trainers section.) Each case study has a key that contains the expected responses. The trainer should be thoroughly familiar with these responses before introducing the case studies to participants. Although the key contains “likely” answers, other answers provided by participants during the discussion may be equally acceptable. The technical content of the case studies is taken from the *Managing Complications in Pregnancy and Childbirth* reference manual. The relevant sections of the manual are indicated at the end of the case study keys.

Role Plays

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

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

Learning Guides and Checklists

The learning guides and checklists used in this course are designed to help the participant learn to provide EmOC services. There are 22 learning guides and 21 checklists in the learning resource package:

Learning Guide and Checklist for Adult Resuscitation

Learning Guide and Checklist for Postabortion Care (Manual Vacuum Aspiration [MVA])

Learning Guide and Checklist for Postabortion Family Planning Counseling

Learning Guide and Checklist for Conducting a Childbirth

Learning Guide and Checklist for Episiotomy and Repair

Learning Guide and Checklist for Repair of Cervical Tears

Learning Guide and Checklist for Breech Delivery

Learning Guide and Checklist for Vacuum Extraction

Learning Guide and Checklist for Bimanual Compression of the Uterus

Learning Guide and Checklist for Compression of the Abdominal Aorta

Learning Guide and Checklist for Manual Removal of Placenta

Learning Guide and Checklist for Newborn Resuscitation

Learning Guide and Checklist for Endotracheal Intubation

Learning Guide and Checklist for Cesarean Section

Learning Guide and Checklist for Emergency Laparotomy

Learning Guide and Checklist for Salpingectomy for Ectopic Pregnancy

Learning Guide and Checklist for Laparotomy and Repair of Ruptured Uterus

Learning Guide and Checklist for Laparotomy and Subtotal Hysterectomy for Removal of Ruptured Uterus

Learning Guide for Postpartum Assessment

Learning Guide for Basic Postpartum Care

Checklist for Postpartum Assessment and Basic Postpartum Care

Learning Guide and Checklist for Postpartum Family Planning

Learning Guide and Checklist for Newborn Examination

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 s/he practices 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 patient.

Used consistently, the learning guides and checklists for practice enable each participant to chart her/his progress and to identify areas for improvement. Furthermore, the learning guides are designed to make communication (coaching and feedback) between the participant and clinical trainer easier and more helpful. 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., MVA) the first time, the clinical trainer should briefly review the steps involved and discuss the expected outcome. The trainer should ask the participant if s/he feels comfortable going on. In addition, immediately **after** the skill or activity has been completed, the clinical trainer should debrief with the participant. The purpose of the debriefing is to provide **positive feedback** about the participant's progress and to define the areas (knowledge, attitude or practice) where improvement is needed in later practice 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 practicing with models.

The **Learning Guide for Postabortion Family Planning Counseling** and **Learning Guide for Postpartum Family Planning** should be used at first during practice (simulated) counseling sessions using volunteers or with patients 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 counseling a woman. Later, during the classroom practice sessions, they serve as step-by-step guides for the participant as s/he performs the skill using the models or counsels a volunteer “patient.”

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:

- | | |
|----------|--|
| 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) |

Using the Checklists for Practice

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 her/his own performance. These checklists that the participant uses for practice 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 Practice Sessions

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

The first step in a skills practice 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 standardized 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 practice 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 practice should then be undertaken at a clinical site before the trainer assesses skill competency with patients, using the same checklist.

The time required to practice 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 practice sessions will usually be required to ensure achievement of competency before moving into the clinical practice area.

Clinical Simulations

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

The clinical simulations included in the learning resource package, therefore, provide participants with the opportunity to develop the skills they need to address complex, rare or life-threatening situations **before** moving into the clinical practice 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 practice 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. As they analyze this information and identify additional information that is needed, it 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 and depth of their knowledge and understanding, and provides feedback and suggestions for improvement.

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

Participants will need time and repeated practice to achieve competency in the management of the complex situations presented in the simulations. They should be provided with as many opportunities

to participate in simulations as possible. The same simulation can be used repeatedly until the situation it presents is mastered. It can also be adapted to address different causes for the problem it presents, different treatment options or different outcomes, to provide participants with as wide a variety of experiences as possible. When a simulation is used for assessment, one standard version should be used with all participants to ensure the consistency of assessment standards and allow comparison of the performance of individual participants.

Emergency Drills

Emergency drills provide participants with opportunities to observe and take part in an emergency rapid response system. Unscheduled emergency drills should be a part of each service provision unit that potentially encounters emergencies. Frequent drills help ensure that each member of the emergency team knows her/his 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 hemorrhage. In the first drill, trainers play all roles as in a demonstration. A participant may play the role of patient. Trainers should practice their roles before conducting the drill. The roles are as follows:

Role 1: Charge Person

- Conducts rapid initial assessment
- Stabilizes patient (massages uterus, gives oxytocin, gives directions to others on team)
- Assists doctor when s/he arrives

Role 2: Runner

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

Role 3: Supplier

- Checks emergency tray at beginning of each shift

- Brings emergency tray to bedside during emergency
- Gives needed supplies/medications to doctor/midwife
- Replenishes supplies/medications after use

Role 4: Assistant

- Cares for newborn
- Assists with crowd control
- Escorts family members away from bed; keeps patient and family informed of situation

At a pre-designated time, a small bell is rung. The participant selected to play the role of patient lies down on a table or bed; she has a newborn anatomic model. Another participant may act as the patient's family member. The charge person (Role 1) goes directly to the bedside and begins the rapid initial assessment. The runner (Role 2) telephones or runs to inform the doctor 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 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, etc. Upon arrival of the doctor, the charge person gives her/him a report of the patient's status and follows further directions until the patient is stable. After the emergency, the supplies are replenished, and equipment is disposed of using correct IP practices.

Subsequent Drills

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

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

COMPONENTS OF THE EMERGENCY OBSTETRIC CARE LEARNING RESOURCE PACKAGE

This clinical training course is based on the following components:

- A **reference manual** and additional reference materials containing the need-to-know information
- A **participant's handbook** containing validated questionnaires, learning guides and skills checklists, case studies, role plays, and clinical simulations
- A **trainer's notebook**, which includes answer keys for questionnaires, case studies and role plays, and detailed information for conducting the course
- **Well designed learning aids** such as videotapes, presentation graphics and anatomic models
- 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) (World Health Organization [WHO] and JHPIEGO). The manual describes a symptom-based approach to the management of life-threatening obstetric complications and emphasizes 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).

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). The manual provides information covering the principles and practices 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 chartbook, *Improving Emergency Obstetric Care through Criterion-Based Audit* covers information on undertaking an audit. Other resources include the *JHPIEGO PocketGuide for Family Planning Service Providers*, 2nd edition.

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 precourse 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’s handbook. 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’s handbook**, 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 (precourse questionnaire, individual and group assessment matrix, learning guides, case studies and role plays) needed during the course.

The **trainer’s notebook** contains the same material as the participant’s handbook as well as material for the trainer. This includes the course outline, precourse questionnaire and answer key, midcourse 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 requires that the role of the trainer continually change 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; and shifts to the role of **coach** when helping participants practice a procedure. Finally, when objectively assessing performance, the trainer serves as an **evaluator**.

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 behavior modeling to facilitate learning a standardized 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 practice repeatedly the standardized 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.**

INTRODUCTION

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 hemorrhage, unsafe abortion, eclampsia, sepsis and obstructed labor. 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 district hospitals to avert maternal death and disability.

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

In addition, throughout the training course emphasis is placed on 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 district hospitals are included as an integral part of the course.

COURSE DESIGN

The course builds on each participant's past knowledge and takes advantage of her/his high motivation to accomplish the learning tasks in the minimum time. Training emphasizes **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 **Precourse Questionnaire**.
- Classroom and clinical sessions focus on key aspects of EmOC.
- Progress in knowledge-based learning is measured during the course using a standardized written assessment (**Midcourse Questionnaire**).
- Clinical skills training builds on the participant's previous experience relevant to EmOC. For many of the skills, participants practice 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 standardized 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 practice with patients.
- Appropriate interpersonal skills are learned through behavior modeling, role play and evaluation during clinical practice with patients.

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 district hospitals. Qualification is a statement by the training institution(s) that the participant has met the requirements of the course in knowledge, skills and practice. Qualification does **not** imply certification. Only an authorized organization 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 **Midcourse 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:

- **Midcourse 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 her/him on using the reference manual(s) to learn the required information. Participants scoring less than 85% can take the Midcourse 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 5 weeks of the course, with models in a simulated setting and with patients at the clinical training site; and during the 3-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 patients. 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 practice 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 practice particular skills with patients

may be limited; therefore, practice and assessment of skill competency should take place in a simulated setting.

- **Clinical Practice.** 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—toward women who experience obstetric emergencies and toward other members of the EmOC team. By doing this, the clinical trainer assesses how the participant uses what s/he has learned.

Further evaluation is provided during the 3-month self-directed practicum (see below) and is important for several reasons. First, it not only gives the participant direct feedback on her/his 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 center, 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 5-week block at a designated training site and focuses on the development, application and evaluation of knowledge and skills; the first two weeks take place in the classroom and weeks three, four and five in designated clinical sites, which should be as close to the classroom as possible. The first five weeks are followed immediately by a 3-month self-directed practicum at the participant's worksite, during which the clinical trainers for the course provide at least two followup visits for mentoring and further evaluation. See pages 28–31 for participant guidelines for the self-directed practicum.

Course Goals

- To influence in a positive way the attitudes of the participant toward team work and her/his abilities to manage and provide emergency obstetric services
- To provide the participant with the knowledge and clinical skills needed to respond appropriately to obstetric emergencies
- To provide the participant with the decision-making skills needed to respond appropriately to obstetric emergencies

- To 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 labor, childbirth and the postpartum period.

14. Demonstrate use of the partograph to monitor progress in labor, recognize unsatisfactory progress in a timely manner and respond appropriately.
15. Demonstrate clean and safe childbirth, including active management of the third stage of labor 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 bimanual 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 anesthesia 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 cesarean 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 doctors

Training/Learning Methods

- Illustrated lectures and group discussions
- Case studies
- Role plays
- Simulated practice 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* (WHO and JHPIEGO)
 - *Infection Prevention: A Reference Booklet for Health Care Providers* and supplement *Infection Prevention Practices in Emergency Obstetric Care* (EngenderHealth)
- 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 Chartbook)
 - *JHPIEGO PocketGuide for Family Planning Service Providers*, 2nd edition

- Audiovisuals on managing complications in pregnancy and childbirth:

Videotapes

- *Malpresentation and Vaginal Breech Delivery* by Phyllis Long, available from:
Designed by Experience, Inc.
P.O. Box 423
Hyden, Kentucky 41749, USA
Telephone/Fax: 606-672-2763
- *Vacuum Delivery: Reducing Risk* by Dr. Aldo Vacca, available from:
Clinical Innovations, Inc.
6777 S. Cottonwood Street
Salt Lake City, Utah 84170, USA
Telephone: 888-268-6222 or 801-268-8200
- *Use of Manual Vacuum Aspiration and Recommended Practices for Processing MVA Instruments* (JHPIEGO Postabortion Care Video Photoset)

Presentation Graphics

- Averting Maternal Death and Disability, Program Orientation
- Changing Obstetric and Midwifery Practice
- Human Rights and Emergency Obstetric Care
- Universal Precautions in Infection Prevention
- Rapid Initial Assessment
- Management of Shock
- Vaginal Bleeding in Early Pregnancy
- Vaginal Bleeding in Later Pregnancy and Labor
- Postabortion Care
- Headaches, Blurred Vision, Convulsions, Loss of Consciousness or Elevated Blood Pressure
- Normal Labor and Childbirth
- Managing Labor Using the Partograph
- Postpartum Care
- Vaginal Bleeding After Childbirth
- Fever During and After Childbirth
- Normal Newborn Care
- Analgesia and Anesthesia in Emergency Obstetric Care

- Operative Care Principles
- Obstetric Surgery
- Improving Emergency Obstetric Care through Criterion-Based Audit
- 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 catheterization (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 anesthetic
 - 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
 - Fetal model (with hard skull)
 - Newborn resuscitation model
 - Model for endotracheal intubation

Participant Selection Criteria

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

Methods of Evaluation

Participant

- Pre and Midcourse Knowledge Questionnaires
- Learning Guides and Checklists for emergency obstetric skills/procedures
- Simulations for clinical decision-making

Course Duration

- The course is composed of 20 classroom sessions (2 weeks), followed by 3 weeks of supervised clinical practice and a 3-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 practice and/or the self-directed practicum. Alternatively, it may also be necessary to extend the classroom component of the course.

Suggested Course Composition

- Four doctors and eight midwives and/or nurses with midwifery skills (four teams consisting of one doctor and two midwives and/or nurses with midwifery skills)
- Four clinical trainers (two doctors and two midwives)

PARTICIPANT GUIDELINES FOR SELF-DIRECTED PRACTICUM

The purpose of the 3-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 toward 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, labor and childbirth, with particular emphasis on EmOC. The clinical skills include:

- Management of Shock
- Adult Resuscitation
- Postabortion Care Clinical Skills
- Postabortion Care Family Planning Skills
- Clean and Safe Childbirth
- Episiotomy and Repair
- Repair of Cervical Tears
- Breech Delivery
- Vacuum Extraction
- Bimanual Compression of the Uterus
- Compression of the Abdominal Aorta
- Manual Removal of Placenta
- Newborn Resuscitation
- Postpartum Physical Examination and Care
- Newborn Examination
- Endotracheal Intubation*
- Cesarean Section*

- Salpingectomy (Ectopic Pregnancy)*
- Laparotomy (Ruptured Uterus)*
- Postpartum Hysterectomy*

*Applies only to doctors

Because obstetric emergencies are not common, opportunities to practice the skills listed above may be limited. Each time a participant has an opportunity to practice a skill, however, the relevant learning guide should be used. In addition, the participant must record the experience in her/his Clinical Experience Log Book, including the client's/patient's unit/hospital/patient 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 3-week clinical practice period that preceded the self-directed practicum.

In conjunction with skills practice, 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 3-week clinical practice period. At a minimum, this should include:

- Conducting emergency drills
- Ensuring readiness of casualty, labor 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 labor ward rounds to discuss client/patient 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:

Monday 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

Friday meetings:

- Clinical cases requiring EmOC: presenting symptom(s), diagnosis, treatment and outcome
- Factors that facilitated clinical practice
- Factors that made clinical practice difficult; overcoming difficulties
- Individual and team strengths with respect to clinical practice
- 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/patients 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.

MODEL EMOC COURSE SCHEDULE (5 WEEKS OF 17-WEEK COURSE)				
DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
A.M. (4.5 Hours) Opening: Welcome and introductions Overview of the course (goals, objectives, schedule) Review course materials Identify participant expectations Precourse Knowledge Questionnaire Review clinical experience Identify individual and group learning needs Review and Discussion: Review site assessment findings and discuss improving provider performance, quality of care and team approach to EmOC Presentation and Discussion: Averting maternal death and disability, basic and comprehensive EmOC	A.M. (4.5 Hours) Agenda and opening activity Presentation and Discussion: IP practices Demonstration: <ul style="list-style-type: none"> Handwashing Decontamination Sharps handling Waste disposal Instrument handling and preparation Presentations and Discussion: Rapid initial assessment, recognizing and managing shock, adult resuscitation, monitoring blood transfusion	A.M. (4.5 Hours) Agenda and opening activity Presentations and Discussion: Vaginal bleeding in early and later pregnancy and labor Case Studies: Vaginal bleeding in early pregnancy Presentation and Discussion: Postabortion care Skill Demonstration: MVA using model Videotape: <ul style="list-style-type: none"> Postabortion Care Photoset Skill Practice: MVA <ul style="list-style-type: none"> Participants practice in pairs using model 	A.M. (4.5 Hours) Agenda and opening activity Presentation and Discussion: Normal labor and childbirth <ul style="list-style-type: none"> Ambulation Nutrition Support person Presentation and Discussion: Plotting and interpreting the partograph <ul style="list-style-type: none"> Normal labor Unsatisfactory progress in labor Prolonged active phase Obstructed labor Exercise: Plotting and interpreting the partograph	A.M. (4.5 Hours) Agenda and opening activity Presentation and Discussion: Care of the woman in the postpartum period Skill Demonstration: Episiotomy and repair and repair of cervical tears using learning aid Skill Practice: Episiotomy and repair and repair of cervical tears <ul style="list-style-type: none"> Participants practice in pairs using learning aid Presentation and Discussion and Videotape: Breech delivery Skill Demonstration: Breech delivery using model Skill Practice: Breech delivery <ul style="list-style-type: none"> Participants practice in pairs using model
LUNCH P.M. (3.5 Hours) Presentation and Discussion: Changing obstetric and midwifery practice Presentation and Discussion: Human rights and EmOC: <ul style="list-style-type: none"> Feeling a sense of urgency Accountability for one's actions Respect for human life Recognizing women's right to life, health, privacy and dignity Role Play: Interpersonal communication during EmOC Review of the day's activities	LUNCH P.M. (3.5 Hours) Skill Demonstration: Adult resuscitation using model Skill Practice: Adult resuscitation <ul style="list-style-type: none"> Participants practice in pairs using model Clinical Simulation: Emergency drill <ul style="list-style-type: none"> Selected participants take part Remaining participants observe Discussion: Being prepared for an emergency Review of the day's activities	LUNCH P.M. (3.5 Hours) Discussion: Changing attitudes toward postabortion care services Presentation and Discussion: Headaches, blurred vision, convulsions, loss of consciousness, elevated blood pressure Case Study: Pregnancy-induced hypertension Presentation and Discussion: Managing prolapsed cord Review of the day's activities	LUNCH P.M. (3.5 Hours) Presentation and Discussion: Normal labor and childbirth <ul style="list-style-type: none"> Assessing descent, dilatation, position Second stage Active management of third stage Episiotomy and repair Immediate postpartum care Skill Demonstration: Clean and safe safe childbirth using model Skill Practice: Clean and safe childbirth <ul style="list-style-type: none"> Participants practice in pairs using model Review of the day's activities	LUNCH P.M. (3.5 Hours) Presentation and Discussion and Videotape: Vacuum extraction Skill Demonstration: Vacuum extraction using model Skill Practice: Vacuum extraction <ul style="list-style-type: none"> Participants practice in pairs using model Skills Practice with Models Review of the day's activities
Reading Assignment: IP Manual: Sections 1 to 6; IP Supplement: 1-12; MCPC Manual: Section 1, C-1 to C-3, C-23 to C-29; Section 2, S-1 to S-5	Reading Assignment: MCPC Manual: Section 2, S-7 to S-23; Section 3, P-65 to P-68; Section 2, S-35 to S-50, S-97 to S-98	Reading Assignment: MCPC Manual: Section 1, C-57 to C-76; Section 2, S-57 to S-67	Reading Assignment: MCPC Manual: Section 1, C-13 to C-14; Section 2, S-74, S-79 to S-80; Section 3, P-27 to P-31, P-37 to P-42, P-71 to P-75, P-81	Reading Assignment: MCPC Manual: Section 2, S-25 to S-34, S-107 to S-114; Section 3, P-77 to P-79, P-91 to P-94

MODEL EMOC COURSE SCHEDULE (5 WEEKS OF 17-WEEK COURSE)				
DAY 6	DAY 7	DAY 8	DAY 9	DAY 10
<p>A.M. (4.5 Hours)</p> <p>Agenda and opening activity</p> <p>Presentation and Discussion: Vaginal bleeding after childbirth</p> <p>Skill Demonstration: Bimanual compression of the uterus, abdominal aortic compression, manual removal of placenta using model</p> <p>Skill Practice: Bimanual compression of the uterus, abdominal aortic compression, manual removal of placenta</p> <ul style="list-style-type: none"> • Participants practice in pairs using model <p>Case Studies: Vaginal bleeding after childbirth</p>	<p>A.M. (4.5 Hours)</p> <p>Agenda and opening activity</p> <p>Presentation and Discussion: Normal newborn care</p> <ul style="list-style-type: none"> • Preventing infections • Thermal protection • Basic newborn resuscitation • Breastfeeding • Best practices <p>Skill Demonstration: Newborn resuscitation using model</p> <p>Skill Practice: Newborn resuscitation</p> <ul style="list-style-type: none"> • Participants practice in pairs using model <p>Skills Practice with Models</p>	<p>A.M. (4.5 Hours)</p> <p>Agenda and opening activity</p> <p>Presentation and Discussion: Endotracheal intubation</p> <p>Skill Demonstration: Endotracheal intubation using model</p> <p>Skill Practice: Endotracheal intubation</p> <ul style="list-style-type: none"> • Participants practice in pairs using model <p>Presentation and Discussion (Part I): Obstetric surgery:</p> <ul style="list-style-type: none"> • Cesarean section • Laparotomy • Postpartum hysterectomy 	<p>A.M. (4.5 Hours)</p> <p>Agenda and opening activity</p> <p>Skills Practice with Models</p>	<p>A.M. (4.5 Hours)</p> <p>Agenda and opening activity</p> <p>Midcourse Knowledge Questionnaire</p> <p>Instructions for Clinical Practice</p> <p>Clinical Experience Log Book</p>
<p>LUNCH</p> <p>P.M. (3.5 Hours)</p> <p>Presentation and Discussion: Fever during and after childbirth</p> <p>Case Studies: Fever after childbirth</p> <p>Skills Practice with Models</p>	<p>LUNCH</p> <p>P.M. (3.5 Hours)</p> <p>Presentation and Discussion: Pain management and analgesia and anesthesia in EmOC</p> <p>Presentation and Discussion: Pre and postoperative care principles</p>	<p>LUNCH</p> <p>P.M. (3.5 Hours)</p> <p>Presentation and Discussion (Part II): Obstetric surgery:</p> <ul style="list-style-type: none"> • Cesarean section • Laparotomy • Hysterectomy <p>Videotape:</p> <ul style="list-style-type: none"> • Cesarean section <p>Presentation and Discussion: Craniotomy</p>	<p>LUNCH</p> <p>P.M. (3.5 Hours)</p> <p>Skills Practice with Models</p>	<p>LUNCH</p> <p>P.M. (3.5 Hours)</p> <p>Tour of Clinical Facilities</p>
<p>Review of the day's activities</p> <p>Reading Assignment: MCPC Manual: Section 1, C-75 to C-80; Section 2, S-141 to S-150; Section 1, C-37 to C-55; Section 3, P-7 to P-14</p>	<p>Review of the day's activities</p> <p>Reading Assignment: MCPC Manual: Section 3, P-43 to P-52, P-95 to P-111, P-57 to P-60</p>	<p>Review of the day's activities</p> <p>Assignment:</p>	<p>Review of the day's activities</p> <p>Assignment: Review and become familiar with Clinical Experience Log Book.</p>	<p>Review of the day's activities</p> <p>Assignment: Participants who scored less than 85% on the Midcourse Knowledge Questionnaire should study the relevant sections of the reference manual(s).</p>

MODEL EMOC COURSE SCHEDULE (5 WEEKS OF 17-WEEK COURSE)				
DAY 11	DAY 12	DAY 13	DAY 14	DAY 15
A.M. (4.5 Hours) Teams 1&2: Tour of model district hospital EmOC facilities Teams 3&4: Antenatal Ward rounds, case reviews and discussion: <ul style="list-style-type: none"> • Early pregnancy bleeding • Elevated blood pressure • Late pregnancy bleeding 	A.M. (4.5 Hours) Teams 3&4: Tour of model district hospital EmOC facilities Teams 1&2: Antenatal Ward rounds, case review and discussion: <ul style="list-style-type: none"> • Early pregnancy bleeding • Elevated blood pressure • Late pregnancy bleeding 	A.M. (4.5 Hours) Demonstration in operating room (1) Anesthesia: Teams 1&2 then Teams 3&4 <ul style="list-style-type: none"> • Ketamine anesthesia • Spinal anesthesia (2) IP: Teams 3&4 then Teams 1&2 <ul style="list-style-type: none"> • Instrument and linen preparation • High-level disinfection • Sterilization Discussion: Maintaining operating room readiness	A.M. (4.5 Hours) Teams 1&2: Main Hospital Labor Ward (full day) Teams 3&4: District Hospital Labor Ward (full day) <ul style="list-style-type: none"> • Ward rounds and discussion • Monitor and manage normal and complicated labor • MVA and obstetric surgery 	A.M. (4.5 Hours) Teams 1&2: Main Hospital Labor Ward (full day) Teams 3&4: District Hospital Labor Ward (full day) <ul style="list-style-type: none"> • Ward rounds and discussion • Monitor and manage normal and complicated labor • MVA and obstetric surgery
LUNCH	LUNCH	LUNCH	LUNCH	LUNCH
P.M. (3.5 Hours) Teams 1&2: Postnatal Ward Demonstration, discussion and practice: <ul style="list-style-type: none"> • Postpartum examination and care • Fever • Postoperative care • Immediate newborn examination Teams 3&4: Emergency reception area (Casualty) Demonstration and practice: <ul style="list-style-type: none"> • Rapid assessment • Shock management 	P.M. (3.5 Hours) Teams 1&2: Emergency reception area (Casualty) Demonstration and practice: <ul style="list-style-type: none"> • Rapid assessment • Shock management Teams 3&4: Emergency reception area (District Hospital Casualty) Demonstration and practice: <ul style="list-style-type: none"> • Rapid assessment • Shock management 	P.M. (3.5 Hours) Teams 1&2: Emergency reception area (District Hospital Casualty) Practice: <ul style="list-style-type: none"> • Rapid assessment • Shock management Teams 3&4: Postnatal Ward Demonstration, discussion and practice: <ul style="list-style-type: none"> • Postpartum examination and care • Fever • Postoperative care • Immediate newborn examination 	P.M. (3.5 Hours) Downtime case study or actual case: pregnancy-induced hypertension (severe pre-eclampsia/eclampsia) Review of the day's activities (split)	P.M. (3.5 Hours) Downtime case study or actual case: vaginal bleeding in early pregnancy (ectopic pregnancy) Review of the day's activities (split)
Review of the day's activities (all)	Review of the day's activities (all)	Review of the day's activities (all)	Review of the day's activities (split)	Review of the day's activities (split)
Reading Assignment: MCPC Manual: Section 2, S-7 to S-23, S-35 to S-56; Section 1, C-1 to C-3; Section 2, S-1 to S-5	Reading Assignment: MCPC Manual: Section 3, P-13 to P-14; Section 1, C-1 to C-3, C-43 to C-46; Section 2, S-1 to S-5; IP Manual: Sections 1 to 6; IP Supplement: 1-12	Reading Assignment: MCPC Manual: Section 2, S-35 to S-50	Reading Assignment: MCPC Manual: Section 2, S-7 to S-16 Late duty teams 1&3	Reading Assignment: MCPC Manual: Section 2, S-57 to S-67 Late duty teams 2&4

Saturday Duty Week 3: Team 1 main hospital, Team 3 district hospital

MODEL EMOC COURSE SCHEDULE (5 WEEKS OF 17-WEEK COURSE)				
DAY 16	DAY 17	DAY 18	DAY 19	DAY 20
A.M. (4 Hours)	A.M. (4 Hours)	A.M. (4 Hours)	A.M. (4 Hours)	A.M. (4 Hours)
Teams 1&2: Main Hospital Labor Ward (full day)	Teams 1&2: Main Hospital Labor Ward (full day)	Teams 1&2: Main Hospital Labor Ward (full day)	Teams 3&4: Main Hospital Labor Ward (full day)	Teams 3&4: Main Hospital Labor Ward (full day)
Teams 3&4: District Hospital Labor Ward (full day)	Teams 3&4: District Hospital Labor Ward (full day)	Teams 3&4: District Hospital Labor Ward (full day)	Teams 1&2: District Hospital Labor Ward (full day)	Teams 1&2: District Hospital Labor Ward (full day)
<ul style="list-style-type: none"> Ward rounds and discussion Monitor and manage normal and complicated labor MVA and obstetric surgery 	<ul style="list-style-type: none"> Ward rounds and discussion Monitor and manage normal and complicated labor MVA and obstetric surgery 	<ul style="list-style-type: none"> Ward rounds and discussion Monitor and manage normal and complicated labor MVA and obstetric surgery 	<ul style="list-style-type: none"> Ward rounds and discussion Monitor and manage normal and complicated labor MVA and obstetric surgery 	<ul style="list-style-type: none"> Ward rounds and discussion Monitor and manage normal and complicated labor MVA and obstetric surgery
LUNCH	LUNCH	LUNCH	LUNCH	LUNCH
P.M. (3 Hours)	P.M. (3 Hours)	P.M. (3 Hours)	P.M. (3 Hours)	P.M. (3 Hours)
Downtime case study or actual case: unsatisfactory progress in labor (obstructed labor)	Downtime case study or actual case: fever after childbirth (metritis)	Downtime case study or actual case: vaginal bleeding after childbirth (atonic uterus)	Downtime clinical simulation: management of shock	Downtime clinical simulation: management of headaches, blurred vision, convulsions, loss of consciousness, elevated blood pressure
Review of the day's activities (split)	Review of the day's activities (split)	Review of the day's activities (split)	Review of the day's activities (split)	Review individual progress with participants
Review of the day's activities (split)	Review of the day's activities (split)	Review of the day's activities (split)	Review of the day's activities (split)	Review of the day's activities (split)
Reading Assignment: MCPC Manual: Section 2, S-17 to S-114 Late duty teams 1&3	Reading Assignment: MCPC Manual: Section 2, S-25 to S-34 Late duty teams 2&4	Reading Assignment: MCPC Manual: Section 2, S-1 to S-5 Late duty teams 1&3	Reading Assignment: MCPC Manual: Section 2, S-35 to S-50 Late duty teams 2&4	Reading Assignment: MCPC Manual: Section 2, S-7 to S-16 Late duty teams 1&3

Saturday Duty Week 4: Team 2 main hospital, Team 4 district hospital

MODEL EMOC COURSE SCHEDULE (5 WEEKS OF 17-WEEK COURSE)				
DAY 21	DAY 22	DAY 23	DAY 24	DAY 25
<p>A.M. (4 Hours)</p> <p>Teams 3&4: Main Hospital Labor Ward (full day)</p> <p>Teams 1&2: District Hospital Labor Ward (full day)</p> <ul style="list-style-type: none"> • Ward rounds and discussion • Monitor and manage normal and complicated labor • MVA and obstetric surgery <p>LUNCH</p> <p>P.M. (3 Hours)</p> <p>Downtime clinical simulation: management of vaginal bleeding in early pregnancy</p> <p>Review of the day's activities (split)</p> <p>Reading Assignment: MCPC Manual: Section 2, S-25 to S-34 Late duty teams 2&4</p>	<p>A.M. (4 Hours)</p> <p>Teams 3&4: Main Hospital Labor Ward (full day)</p> <p>Teams 1&2: District Hospital Labor Ward (full day)</p> <ul style="list-style-type: none"> • Ward rounds and discussion • Monitor and manage normal and complicated labor • MVA and obstetric surgery <p>LUNCH</p> <p>P.M. (3 Hours)</p> <p>Downtime clinical simulation: management of vaginal bleeding after childbirth</p> <p>Review of the day's activities (split)</p> <p>Reading Assignment: MCPC Manual: Section 2, S-141 to S-146 Late duty teams 1&3</p>	<p>A.M. (4 Hours)</p> <p>Teams 3&4: Main Hospital Labor Ward (full day)</p> <p>Teams 1&2: District Hospital Labor Ward (full day)</p> <ul style="list-style-type: none"> • Ward rounds and discussion • Monitor and manage normal and complicated labor • MVA and obstetric surgery <p>LUNCH</p> <p>P.M. (3 Hours)</p> <p>Downtime clinical simulation: management of the asphyxiated newborn</p> <p>Review of the day's activities (split)</p> <p>Reading Assignment: MCPC Manual: Section 2, S-141 to S-146; Improving Emergency Obstetric Care through Criterion-Based Audit: 1-31; AMDD Workbook, Process Indicators: 1-29 Late duty teams 2&4</p>	<p>A.M. (4 Hours)</p> <p>Agenda and opening activity</p> <p>Presentation and Discussion: Maternal and perinatal mortality reviews, near miss audits, records</p> <p>Demonstration: review or audit</p> <p>Discussion: Using the results of reviews and audits to identify and solve problems</p> <p>LUNCH</p> <p>P.M. (3 Hours)</p> <p>Discussion: Lessons from clinical experience</p> <p>Discussion: Setting up and managing the emergency obstetric team and services</p> <p>Discussions with Trainers: Determine further individual learning needs of participants</p> <p><i>Introduce group work</i></p> <p>Review of the day's activities (all)</p> <p>Assignment: Each team is to discuss and prepare for the development of an action plan during group work the next morning.</p>	<p>A.M. (4 Hours)</p> <p>Agenda and opening activity</p> <p>Group Work: Develop action plans</p> <p>Presentations: Action plans</p> <p>Next Steps: Log book, on-the-job learning, planning mentoring visits</p> <p>LUNCH</p> <p>P.M. (3 Hours)</p> <p>Course Summary</p> <p>Closing Ceremony</p>

PRECOURSE KNOWLEDGE QUESTIONNAIRE

HOW THE RESULTS WILL BE USED

The main objective of the **Precourse 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 which may need additional emphasis during the course. Providing the results of the precourse 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.

PRECOURSE 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 anemia typically presents with difficulty in breathing and wheezing. _____

BLEEDING DURING PREGNANCY AND LABOR

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 8 weeks. _____
7. Assessment of a woman who presents with vaginal bleeding after 22 weeks of pregnancy should be limited to abdominal examination. _____
8. If bleeding is heavy in the case of abruptio placentae and the cervix is fully dilated, delivery should be assisted by vacuum extraction. _____

BLEEDING AFTER CHILDBIRTH

- 9. Postpartum hemorrhage is defined as sudden bleeding after childbirth. _____
- 10. Continuous slow bleeding or sudden bleeding after childbirth requires early and aggressive intervention. _____
- 11. Absent fetal movements and fetal heart sounds, together with intra-abdominal and/or vaginal bleeding and severe abdominal pain, suggest ruptured uterus. _____

MANAGEMENT OF THIRD STAGE OF LABOR

- 12. Active management of the third stage of labor should be practiced only on women who have a history of postpartum hemorrhage. _____
- 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 hemorrhage, 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 90 mm 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 tranquilizers. _____
19. The drug of choice for preventing and treating convulsions in severe pre-eclampsia and eclampsia is diazepam. _____

PARTOGRAPH

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

NORMAL LABOR 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 labor is prolonged, delivery should be by cesarean section. _____
23. It is recommended to first perform artificial rupture of membranes (if the membranes are intact) for induction of labor, except in patients with HIV. _____
24. Conditions for vacuum extraction are fetal 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 fetal 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 fetal head is well flexed with occiput anterior or occiput transverse (in early labor), normal childbirth should be anticipated. _____

28. If labor is prolonged in the case of a breech presentation, a cesarean section should be performed. _____
29. In the case of a single large fetus, delivery should be by cesarean section. _____
30. A transverse uterine scar in a previous pregnancy is an indication for elective cesarean section. _____
31. If prelabor rupture of membranes occurs before 37 weeks gestation and there are no signs of infection, labor should be induced. _____
32. Meconium staining of amniotic fluid is seen frequently as the fetus matures and by itself is not an indicator of fetal distress. _____

FEVER DURING AND AFTER CHILDBIRTH

33. Loin pain and/or tenderness may be present in acute pyelonephritis. _____
34. Breast pain and tenderness 3 to 5 days after childbirth is 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. _____

EMERGENCY OBSTETRIC CARE: INDIVIDUAL AND GROUP ASSESSMENT MATRIX

COURSE: _____ **DATES:** _____

TRAINER(S): _____

Question Number	CORRECT ANSWERS (Participants)																								CATEGORIES
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1																									MANAGEMENT OF SHOCK; RAPID INITIAL ASSESSMENT
2																									
3																									
4																									
5																									BLEEDING DURING PREGNANCY AND LABOR
6																									
7																									
8																									
9																									BLEEDING AFTER CHILD BIRTH
10																									
11																									
12																									MANAGEMENT OF THIRD STAGE OF LABOR
13																									
14																									

Question Number	CORRECT ANSWERS (Participants)																								CATEGORIES
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
15																									HEADACHES, BLURRED VISION, CONVULSIONS, LOSS OF CONSCIOUSNESS OR ELEVATED BLOOD PRESSURE
16																									
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19																									
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33																									FEVER DURING AND AFTER CHILDBIRTH
34																									
35																									
36																									NEWBORN RESUSCITATION

CONFIDENTIAL CLINICAL EXPERIENCE QUESTIONNAIRE

Name: _____ Date: _____

Name of institution you are working in: For teaching/training: _____ For clinical practice: _____											
Qualification (state all degrees and diplomas and year obtained) <table style="width: 100%; border: none;"> <thead> <tr> <th style="text-align: left; width: 60%;">Qualification</th> <th style="text-align: left; width: 40%;">Year obtained</th> </tr> </thead> <tbody> <tr><td>_____</td><td>_____</td></tr> <tr><td>_____</td><td>_____</td></tr> <tr><td>_____</td><td>_____</td></tr> <tr><td>_____</td><td>_____</td></tr> </tbody> </table>		Qualification	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: <ol style="list-style-type: none"> 1. The number of cases personally managed in the last 6 months 2. The degree of confidence you have in performing these skills <ol style="list-style-type: none"> 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 this skill in the last 6 months 											

Skill	Number of Cases in Last 6 Months	Degree of Confidence <i>a</i> or <i>b</i> or <i>c</i>	Have Taught This Skill in Last 6 Months
Counseling for birth preparedness and complication readiness			
Managing severe pre-eclampsia and eclampsia			
Managing malaria in pregnancy			
Monitoring labor using partograph			
Augmentation of labor			
Normal childbirth			
Managing shock			
Active management of third stage of labor			
Episiotomy and repair			
Bimanual compression			
Manual removal of placenta			
Repair of cervical tears			
Repair of perineal tears			
Endotracheal intubation			
Vacuum extraction			
Breech delivery			
Cesarean section			
Postpartum hysterectomy			
Manual vacuum aspiration			

Week 1

ROLE PLAY: INTERPERSONAL COMMUNICATION DURING EmOC

Directions

The trainer will select three participants to perform the following roles: skilled provider, postpartum patient and support person. The three participants participating in the role play should take a few minutes to prepare for the activity by reading the background information provided below. The remaining participants, who will observe the role play, should at the same time read the background information.

The purpose of the role play is to provide an opportunity for participants to appreciate the importance of good interpersonal communication skills when providing care for a woman who experiences a postpartum complication.

Participant Roles

Provider:	The provider is an experienced midwife who has good interpersonal communication skills.
Patient:	Mrs. A. is 20 years old. She gave birth at home 2 hours ago.
Support person:	Village traditional birth attendant (TBA) who attended Mrs. A.'s birth.

Situation

Mrs. A. has been brought to the health center by the TBA because she has been bleeding heavily since childbirth 2 hours ago. The duration of labor 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 center, 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 district hospital 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 district hospital?
2. How did the midwife demonstrate emotional support and reassurance during her/his interaction with Mrs. A. and the TBA?
3. What verbal/nonverbal behaviors did Mrs. A. and the TBA use that would indicate they felt supported and reassured?

SKILLS PRACTICE SESSION: ADULT RESUSCITATION

PURPOSE

The purpose of this activity is to enable participants to practice 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 patient.

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

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 practice the steps/tasks and observe each other's performance, using the 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.

Finally, following supervised practice at a clinical site, the trainer should assess the skill competency of each participant, using the Checklist for Adult Resuscitation.¹

RESOURCES

The following equipment or representations thereof:

- Equipment for starting an IV infusion
- Needles and syringes
- Equipment for bladder catheterization
- Sphygmomanometer and stethoscope
- Self-inflating bag and mask, oxygen cylinder, gauge
- Endotracheal tube
- New examination or high-level disinfected surgical gloves

Learning Guide for Adult Resuscitation

Learning Guide for Adult Resuscitation

Checklist for Adult Resuscitation

Checklist for Adult Resuscitation

¹ If patients are not available at clinical sites for participants to practice adult resuscitation in relation to obstetric emergencies, the skills should be taught, practiced and assessed in a simulated setting.

LEARNING GUIDE FOR ADULT RESUSCITATION

(To be completed by **Participants**)

Rate the performance of each step or task observed using the following rating scale:

- 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)

LEARNING GUIDE FOR ADULT RESUSCITATION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK					
GENERAL MANAGEMENT					
1. SHOUT FOR HELP to urgently mobilize available personnel.					
2. Greet the woman respectfully and with kindness.					
3. If the woman is conscious and responsive, tell 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: <ul style="list-style-type: none"> • 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 6–8 L/minute by face mask 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 1 L 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.					

LEARNING GUIDE FOR ADULT RESUSCITATION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
8. Clean skin at site selected for infusion.					
9. Insert 16- or 18-gauge needle or cannula into the vein.					
10. Draw blood for hemoglobin, cross-matching and bedside clotting test.					
11. Detach syringe from needle or cannula.					
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 1 L in 15–20 minutes.					
15. Place the blood drawn into a labeled test tube for hemoglobin and cross-matching.					
16. Place 2 mL of blood into a small glass test tube (approximately 10 mm x 75 mm) to do a bedside clotting test: <ul style="list-style-type: none"> • Hold the test tube in your closed fist to keep it warm. • After 4 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. Immerse both gloved hands in 0.5% chlorine solution. Remove gloves by turning them inside out. <ul style="list-style-type: none"> • If disposing of gloves, place them in a leakproof container or plastic bag. • If reusing surgical gloves, submerge them in 0.5% chlorine solution for 10 minutes for decontamination. 					
20. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a sterile cloth or air dry.					
BLADDER CATHETERIZATION					
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.					

LEARNING GUIDE FOR ADULT RESUSCITATION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
5. Immerse both gloved hands in 0.5% chlorine solution. Remove gloves by turning them inside out. <ul style="list-style-type: none"> • If disposing of gloves, place them in a leakproof container or plastic bag. • If reusing surgical gloves, submerge them in 0.5% chlorine solution for 10 minutes decontamination. 					
6. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.					
REASSESSMENT AND FURTHER MANAGEMENT					
1. Reassess the woman's response to IV fluids within 30 minutes for signs of improvement: <ul style="list-style-type: none"> • Stabilizing pulse (90 beats/minute or less) • Increasing systolic blood pressure (100 mm Hg or more) • Improving mental status (less confusion or anxiety) • Increasing urine output (30 mL/hour or more) 					
2. If the woman's condition improves: <ul style="list-style-type: none"> • Adjust the rate of IV infusion to 1 L in 6 hours. • Continue management for underlying cause of shock. 					
3. If the woman's condition fails to improve: <ul style="list-style-type: none"> • Infuse normal saline rapidly until her condition improves. • Continue oxygen at 6–8 L/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.					

CHECKLIST FOR ADULT RESUSCITATION

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

Place a “✓” in case box if step/task is performed **satisfactorily**, an “X” if it is **not** performed **satisfactorily**, or N/O if not observed.

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

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

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

PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR ADULT RESUSCITATION (Many of the following steps/tasks should be performed simultaneously.)						
STEP/TASK	CASES					
GENERAL MANAGEMENT						
1. Shout for help.						
2. Greet woman respectfully and with kindness.						
3. Provide continual emotional support and reassurance, as feasible.						
SKILL/ACTIVITY PERFORMED SATISFACTORILY						
IMMEDIATE MANAGEMENT						
1. Check the woman's vital signs.						
2. Ensure that her airway is open.						
3. Give oxygen at 6–8 L/minute by face mask or nasal cannula.						
4. Ensure that she is warm.						
5. Elevate the woman's legs.						
SKILL/ACTIVITY PERFORMED SATISFACTORILY						
BLOOD COLLECTION, FLUID REPLACEMENT AND BLADDER CATHETERIZATION						
1. Use antiseptic handrub or wash hands thoroughly and put on new examination or high-level disinfected surgical gloves.						
2. Draw blood for hemoglobin, cross-matching and bedside clotting test before beginning IV infusion.						
3. Infuse IV fluid at the rate of 1 L in 15–20 minutes.						
4. Do a bedside clotting test.						
5. If the woman is not breathing, or is not breathing well, perform endotracheal intubation and ventilate with a self-inflating bag.						
6. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.						
7. Remove gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.						

CHECKLIST FOR ADULT RESUSCITATION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
8. Use antiseptic handrub or wash hands thoroughly and put on new examination or high-level disinfected surgical gloves.					
9. Catheterize the bladder.					
10. Remove gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.					
11. Use antiseptic handrub or wash hands thoroughly.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
REASSESSMENT AND FURTHER MANAGEMENT					
1. Reassess the woman's response to IV fluids and adjust rate accordingly.					
2. Continue to monitor vital signs every 15 minutes and intake and output every hour.					
3. Check for bleeding and transfuse blood if necessary.					
4. Perform history, physical examination and tests to determine cause of shock.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

CASE STUDY 1A: VAGINAL BLEEDING IN EARLY PREGNANCY

Directions

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

Case Study

Mrs. A. is a 20-year-old para 1 who presents with the complaint of vaginal bleeding that began yesterday as light bleeding, but has increased today. She reports passing a single clot. She also reports lower abdominal pain, as well as tiredness and “feeling sick” since yesterday. Mrs. A. reports 3 months of amenorrhea.

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

1. What will you include in your initial assessment of Mrs. A., and why?
2. What particular aspects of Mrs. A.’s physical examination will help you make a diagnosis or identify her problems/needs, and why?
3. What causes of bleeding do you need to rule out?

Diagnosis (identification of problems/needs)

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

History:

Mrs. A. admits that she “may have seen” some tissue expelled this morning. She also reports regular menses with periods lasting approximately 5 days, and some nausea for the past 2½ months. She denies other signs of pregnancy.

She had spontaneous vaginal delivery of a full-term infant 2 years ago.

She is using no contraception.

Physical Examination:

Mrs. A. is conscious and alert with no signs of pallor.

Temperature is 37°C, pulse is 100 beats per minute, blood pressure is 110/70 and respirations are 20 breaths per minute.

Abdominal exam shows no tenderness or masses. The uterus is not palpable. Vaginal exam shows heavy bleeding with clots, tissue is visualized in the cervix, the cervix is 2 cm dilated; there is no cervical motion nor adnexal tenderness. Uterus is 8 weeks size.

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

Care Provision (planning and intervention)

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

Evaluation

Three hours after the procedure, Mrs. A. has recovered well from the procedure. Her temperature is 37°C, pulse is 90 beats per minute, blood pressure is 112/74 and respirations are 18 per minute. Vaginal bleeding has decreased to spotting only. She is now ready to be discharged.

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

CASE STUDY 1B: VAGINAL BLEEDING IN EARLY PREGNANCY

Directions

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

Case Study

Mrs. B. is a 30-year-old para 4 who presents with a history of vaginal bleeding for 4 days. She reports 3 months of amenorrhea. She also reports that she went to a local health worker who prescribed some tablets. Mrs. B. reports that vaginal bleeding started after taking the tablets. Bleeding has increased since yesterday. She has passed products of conception and has cramping lower abdominal pain. She feels tired and ill.

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

1. What will you include in your initial assessment of Mrs. B., and why?
2. What particular aspects of Mrs. B.'s physical examination will help you make a diagnosis or identify her problems/needs, and why?

Diagnosis (identification of problems/needs)

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

History:

Mrs. B. reports that she does not know what medication she was given. During her visit to the health center, a vaginal exam was performed and some "medicine" was inserted vaginally.

Physical Examination:

Mrs. B. is conscious and alert with mild pallor. Her temperature is 38.5°C, pulse is 120 beats per minute, blood pressure is 100/60 and respiration rate is 24. Her lower abdomen is tender. On vaginal exam, a foul-smelling, blood-stained vaginal discharge is noted. The cervix is 2–3 cm dilated and products of conception visible at the os. The uterus is 8 weeks size and tender.

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

Care Provision (planning and intervention)

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

Evaluation

Mrs. B.'s post-procedure condition was unremarkable. The vaginal discharge decreased progressively after treatment. On postoperative day two, her temperature is 37°C, pulse is 86, blood pressure is 110/72 and respirations are 18, and there is no abdominal tenderness.

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

SKILLS PRACTICE SESSION: POSTABORTION CARE (MANUAL VACUUM ASPIRATION [MVA]) AND POSTABORTION FAMILY PLANNING COUNSELING

PURPOSE

The purpose of this activity is to enable participants to practice MVA, achieve competency in the skills required and develop skills in postabortion family planning counseling.

INSTRUCTIONS

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

Participants should review the Learning Guide for Postabortion Care (MVA) before beginning the activity and the Learning Guide for Postabortion Family Planning Counseling.

The trainer should demonstrate the preliminary steps (medical evaluation, explaining the procedure, pelvic examination), followed by the steps in the MVA procedure for participants. Under the guidance of the trainer, participants should then work in pairs to practice the steps/tasks and observe each other's performance, using the Learning Guide for Postabortion Care (MVA).

The trainer should then demonstrate the steps/tasks in providing postabortion family planning counseling. Under the guidance of the trainer, participants should then work in groups of three to practice the steps/tasks and observe each other's performance; one participant should take the role of the postabortion woman, the second should practice counseling skills and the third should observe performance using the Learning Guide for Postabortion Family Planning Counseling. Participants should then reverse roles until each has had an opportunity to practice counseling skills.

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

Finally, following supervised practice at a clinical site, the trainer should assess the skill competency of each participant, using the Checklist for Postabortion Care (MVA) and Checklist for Postabortion Family Planning Counseling.¹

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

Learning Guide for Postabortion Care (MVA)

Learning Guide for Postabortion Family Planning Counseling

Learning Guide for Postabortion Care (MVA)

Learning Guide for Postabortion Family Planning Counseling

Checklist for Postabortion Care (MVA)

Checklist for Postabortion Family Planning Counseling

Checklist for Postabortion Care (MVA)

Checklist for Postabortion Family Planning Counseling

¹ If patients are not available at clinical sites for participants to practice postabortion care in relation to obstetric emergencies, the skills should be taught, practiced and assessed in a simulated setting.

LEARNING GUIDE FOR POSTABORTION CARE (MANUAL VACUUM ASPIRATION [MVA]) (To be completed by **Participants**)

Rate the performance of each step or task observed using the following rating scale:

- 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)

LEARNING GUIDE FOR POSTABORTION CARE (MVA) (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
INITIAL ASSESSMENT					
1. Greet the woman respectfully and with kindness.					
2. Assess patient for shock and other life-threatening conditions.					
3. If any complications are identified, stabilize patient and transfer, if necessary.					
MEDICAL EVALUATION					
1. Take a reproductive health history.					
2. Perform limited physical (heart, lungs and abdomen) and pelvic examinations.					
3. Perform indicated laboratory tests.					
4. Give the woman information about her condition and what to expect.					
5. Discuss her reproductive goals, as appropriate.					
6. If she is considering an IUD: <ul style="list-style-type: none"> • She should be fully counseled regarding IUD use. • The decision to insert the IUD following the MVA procedure will be dependent on the clinical situation. 					
GETTING READY					
1. Tell 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. Tell her she may feel discomfort during some of the steps of the procedure and you will tell her in advance.					
4. Give paracetamol 500 mg by mouth to the woman 30 minutes before the procedure.					
5. Ask about allergies to antiseptics and anesthetics.					

LEARNING GUIDE FOR POSTABORTION CARE (MVA) (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
6. Determine that the necessary equipment and supplies are present: <ul style="list-style-type: none"> Make sure that the required sterile or high-level disinfected instruments are present. Make sure that the appropriate size cannula and adapters are available. 					
7. Check the MVA syringe and charge it (establish vacuum).					
8. Check that patient has recently emptied her bladder.					
9. Check that patient has thoroughly washed and rinsed her perineal area.					
10. Put on personal protective equipment.					
11. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a sterile cloth or air dry.					
12. Put high-level disinfected or sterile surgical gloves on both hands.					
13. Arrange sterile or high-level disinfected instruments on sterile tray or in high-level disinfected container.					
PREPROCEDURE TASKS					
1. Inform patient of each step in the procedure prior to performing it.					
2. If patient is in second trimester of pregnancy, give oxytocin 10 units IM or ergometrine 0.2 mg IM.					
3. Perform bimanual pelvic examination, checking the size and position of uterus and degree of cervical dilatation.					
4. Insert the speculum and remove blood or tissue from vagina using sponge forceps and gauze.					
5. Apply antiseptic solution to cervix and vagina three times using gauze or cotton sponge.					
6. Remove any products of conception (POC) from the cervical os and check cervix for tears.					
Administering Paracervical Block (when necessary)					
7. Prepare 20 mL 0.5% lignocaine solution without adrenaline.					
8. Draw 10 mL of 0.5% lignocaine solution into a syringe.					
9. If using a single-toothed tenaculum, inject 1 mL of lignocaine solution into the anterior or posterior lip of the cervix (the 10 o'clock or 12 o'clock position is usually used).					
10. Gently grasp anterior lip of the cervix with a single-toothed tenaculum or vulsellum forceps (preferably, use ring or sponge forceps if incomplete abortion).					
11. 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.					
12. 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.					

LEARNING GUIDE FOR POSTABORTION CARE (MVA) (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
13. Inject about 2 mL of a 0.5% lignocaine solution just under the epithelium, not deeper than 3 mm, at 3, 5, 7 and 9 o'clock.					
14. Wait 2 minutes and then pinch the cervix with the forceps. (If the patient feels the pinch, wait 2 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 10 cm). 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.					
7a. 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.					
7b. 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.					
7c. Push the plunger to empty POC into the strainer.					
7d. Recharge syringe, attach to cannula and release pinch valve(s).					
8. 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.					
9. Remove cannula from the MVA syringe and push the plunger to empty POC into the strainer.					
10. Remove tenaculum or forceps from the cervix before removing the speculum.					
11. Perform bimanual examination to check size and firmness of uterus.					
12. Rinse the tissue with water or saline, if necessary.					
13. Quickly inspect the tissue removed from the uterus to be sure the uterus is completely evacuated.					
14. If no POC are seen, reassess situation to be sure it is not an ectopic pregnancy.					
15. Gently insert speculum and check for bleeding.					
16. If uterus is still soft or bleeding persists, repeat steps 3–10.					
POSTPROCEDURE TASKS					
1. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					

LEARNING GUIDE FOR POSTABORTION CARE (MVA) (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
2. Place all instruments in 0.5% chlorine solution for 10 minutes for decontamination.					
3. Decontaminate or dispose of needle or syringe: <ul style="list-style-type: none"> • If reusing needle or syringe, fill syringe (with needle attached) with 0.5% chlorine solution and submerge in solution for 10 minutes for decontamination. • If disposing of needle and syringe, flush needle and syringe with 0.5% chlorine solution three times, then place in a puncture-proof container. 					
4. Attach used cannula to MVA syringe and flush both with 0.5% chlorine solution.					
5. Detach cannula from syringe and soak them in 0.5% chlorine solution for 10 minutes for decontamination.					
6. Empty POC into utility sink, flushable toilet, latrine or container with tight-fitting lid.					
7. Immerse both gloved hands in 0.5% chlorine solution. Remove gloves by turning them inside out. <ul style="list-style-type: none"> • If disposing of gloves, place them in a leakproof container or plastic bag. • If reusing surgical gloves, submerge them in 0.5% chlorine solution for 10 minutes for decontamination. 					
8. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.					
9. Allow the patient to rest comfortably for at least 60 minutes where her recovery can be monitored.					
10. Check for bleeding and ensure that cramping has decreased before discharge.					
11. Instruct patient regarding postabortion care and warning signs.					
12. Tell her when to return if followup is needed and that she can return anytime she has concerns.					
13. Discuss reproductive goals and, as appropriate, provide family planning.					

CHECKLIST FOR POSTABORTION CARE (MANUAL VACUUM ASPIRATION [MVA])

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

Place a “✓” in case box if step/task is performed **satisfactorily**, an “X” if it is **not** performed **satisfactorily**, or N/O if not observed.

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

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

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

PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR POSTABORTION CARE (MVA) (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
INITIAL ASSESSMENT					
1. Greet woman respectfully and with kindness.					
2. Assess patient for shock or complications.					
MEDICAL EVALUATION					
1. Take a reproductive history and perform physical examination and laboratory tests.					
2. Give her information about her condition.					
3. Discuss her reproductive goals.					
GETTING READY					
1. Tell 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 procedure.					
4. Ask about allergies to antiseptics and anesthetics.					
5. Determine that required sterile or high-level disinfected instruments are present.					
6. Ensure that appropriate size cannula and adapters are available. Check MVA syringe and charge it (establish vacuum).					
7. Check that patient has recently emptied her bladder and washed her perineal area.					
8. Put on personal protective equipment.					
9. Use antiseptic handrub or wash hands thoroughly and put on high-level disinfected or sterile surgical gloves.					
10. Arrange sterile or high-level disinfected instruments on sterile tray or in high-level disinfected container.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

CHECKLIST FOR POSTABORTION CARE (MVA) (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
PREPROCEDURE TASKS					
1. Explain each step of the procedure prior to performing it.					
2. If patient is in second trimester of pregnancy, give oxytocin 10 units IM or ergometrine 0.2 mg IM.					
3. Perform bimanual examination.					
4. Insert speculum.					
5. Apply antiseptic to cervix and vagina three times.					
6. Remove any products of conception (POC) and check for any cervical tears.					
MVA PROCEDURE					
1. Put single-toothed tenaculum or vulsellum forceps on lower lip of cervix.					
2. Administer paracervical block (if necessary).					
3. Apply traction on cervix.					
4. Dilate the cervix (if needed).					
5. Insert the cannula gently through the cervix into the uterine cavity.					
6. Attach the prepared syringe to the cannula.					
7. Evacuate contents of the uterus.					
8. When signs of completion are present, withdraw cannula and MVA syringe. Empty contents of MVA syringe into a strainer.					
9. Remove tenaculum or forceps and speculum.					
10. Perform bimanual examination.					
11. Inspect tissue removed from uterus to ensure complete evacuation.					
12. Insert speculum and check for bleeding.					
13. If uterus is still soft or bleeding persists, repeat steps 5–10.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
POSTPROCEDURE TASKS					
1. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
2. Flush MVA syringe and cannula with 0.5% chlorine solution and submerge in solution for decontamination.					
3. If reusing needle or syringe, fill syringe (with needle attached) with 0.5% chlorine solution and submerge in solution for decontamination. If disposing of needle and syringe, place in puncture-proof container.					
4. Remove gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.					
5. Use antiseptic handrub or wash hands thoroughly.					
6. Check for bleeding and ensure cramping has decreased before discharge.					

CHECKLIST FOR POSTABORTION CARE (MVA) (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK					CASES
7. Instruct patient regarding postabortion care.					
8. Discuss reproductive goals and, as appropriate, provide family planning.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

LEARNING GUIDE FOR POSTABORTION FAMILY PLANNING COUNSELING

(To be completed by **Participants**)

Rate the performance of each step or task observed using the following rating scale:

- 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)

LEARNING GUIDE FOR POSTABORTION FAMILY PLANNING COUNSELING (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
INITIAL INTERVIEW					
1. Greet the woman respectfully and with kindness.					
2. Assess whether counseling is appropriate at this time (if not, arrange for her to be counseled at another time and be sure she understands that she can become pregnant before her next menses).					
3. Assure necessary privacy.					
4. Obtain biographic information (name, address, etc.).					
5. Ask if she was using contraception before she became pregnant. If she was, find out if she: <ul style="list-style-type: none"> • Used the method correctly • Discontinued use • Had any trouble using the method • Has any concerns about the method 					
6. Provide general information about family planning.					
7. Explore any attitudes or religious beliefs that either favor or rule out one or more methods.					
8. Give the woman information about the contraceptive choices available and the benefits and limitations of each: <ul style="list-style-type: none"> • 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. 					
9. Discuss the woman's needs, concerns and fears in a thorough and sympathetic manner.					
10. Help the woman begin to choose an appropriate method.					
SCREENING					
1. Screen the woman carefully to make sure there is no medical condition that would be a problem (complete Screening Checklist).					

LEARNING GUIDE FOR POSTABORTION FAMILY PLANNING COUNSELING (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK		CASES			
2.	Explain potential side effects and make sure that each is fully understood.				
3.	Perform further evaluation (physical examination), if indicated. (Nonmedical counselors must refer woman for further evaluation.)				
4.	Discuss what to do if the woman experiences any side effects or problems.				
5.	Provide followup visit instructions.				
6.	Assure woman she can return to the same clinic at any time to receive advice or medical attention.				
7.	Ask the woman to repeat instructions.				
8.	Answer the woman's questions.				

CHECKLIST FOR POSTABORTION FAMILY PLANNING COUNSELING

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

Place a “✓” in case box if step/task is performed **satisfactorily**, an “X” if it is **not** performed **satisfactorily**, or **N/O** if not observed.

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

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

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

PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR POSTABORTION FAMILY PLANNING COUNSELING (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
INITIAL INTERVIEW					
1. Greet woman respectfully and with kindness.					
2. Assess whether counseling is appropriate at this time (if not, arrange for counseling at another time).					
3. Assure necessary privacy.					
4. Obtain biographic information (name, address, etc.).					
5. Ask about her previous experience with contraception. Provide general information about family planning.					
6. Give the woman information about the contraceptive choices available and the benefits and limitations of each.					
7. Discuss woman's needs, concerns and fears. Help her begin to choose an appropriate method.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
SCREENING					
1. Screen woman carefully to make sure there is no medical condition that would be a problem (complete Screening Checklist).					
2. Perform physical examination, if indicated. (Nonmedical counselors must refer woman for further evaluation.)					
3. Discuss what to do if the woman experiences any side effects or problems.					
4. Provide followup visit instructions and assure woman that she can return to the same clinic at any time.					
5. Ask the woman to repeat instructions and answer any questions.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

CASE STUDY 2: PREGNANCY-INDUCED HYPERTENSION

Directions

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

Case Study

Mrs. C. is a 23-year-old gravida 3 para 2 at 37 weeks gestation who is brought to the emergency department of the district hospital complaining of a severe headache and blurred vision. Mrs. C has had four prenatal care visits during this pregnancy. Her prenatal course has been unremarkable. She was last seen 1 week ago, at which time she was counseled about danger signs in pregnancy and what to do about them.

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

1. What will you include in your initial assessment of Mrs. C., and why?
2. What particular aspects of Mrs. C.'s physical examination will help you make a diagnosis or identify her problems/needs, and why?
3. What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. C., and why?

Diagnosis (identification of problems/needs)

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

History:

Mrs. C. reports onset of severe headache 3 hours prior to admission, and blurred vision that began 2 hours after onset of headache. She denies upper abdominal pain, decreased urine output, convulsions or loss of consciousness. She reports normal fetal movement.

Physical Examination:

Mrs. C. is conscious and alert. Her blood pressure is 160/110. There is no abdominal tenderness. Uterus is 37 weeks size. Fetal movements are normal and fetal heart rate is 120/minute.

Laboratory Tests:

Urine shows 3+ protein.

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

Care Provision (planning and intervention)

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

Evaluation

Two hours following the initiation of treatment, Mrs. C.'s diastolic blood pressure is 100. Patient reports that headache persists. Fetal heart rate has ranged between 120 and 140/minute. Reflexes are normal. Lungs are clear on auscultation. Clotting time is 6 minutes by bedside clotting test (clotting within 7 minutes is normal). Urine output has dropped to 20 mL/hour.

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

EXERCISE: USING THE PARTOGRAPH

PURPOSE

The purpose of this exercise is to enable participants to practice using the partograph to manage labor.

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 fetal head was 4/5 palpable above the symphysis pubis and the cervix was 2 cm dilated

Q: What should be recorded on the partograph?

Note: The woman is not in active labor. Record only the details of her history, i.e., first 4 bullets, not the descent and cervical dilatation.

STEP 2

- 09.00:
 - The fetal head is 3/5 palpable above the symphysis pubis
 - The cervix is 5 cm dilated

Q: What should you now record on the partograph?

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

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

Q: What steps should be taken?

Q: What advice should be given?

Q: What do you expect to find at 13.00?

STEP 3

Plot the following information on the partograph:

09.30 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, Temp 37
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, Temp 37

- 13.00:
 - The fetal head is 0/5 palpable above the symphysis pubis
 - The cervix is fully dilated
 - Amniotic fluid clear
 - Sutures apposed
 - Blood pressure 100/70 mm Hg
 - Urine output 150 mL; negative protein and acetone

Q: What steps should be taken?

Q: What advice should be given?

Q: What do you expect to happen next?

STEP 4

Record the following information on the partograph:

- 13.20: Spontaneous delivery of a live female infant, Wt. 2.850 g

Answer the following questions:

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

Q: How long was the second stage of labor?

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

Q: What is your diagnosis?

Q: 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, Temp 36.2

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

Q: What is your diagnosis?

Q: 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, Temp 36.8, Blood pressure 100/70

- The fetal head is 5/5 palpable above the symphysis pubis
- Urine output 300 mL; negative protein and acetone
- Membranes intact

Q: What is your diagnosis?

Q: What will you do?

Plot the following information on the partograph:

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

STEP 4

Plot the following information on the partograph:

- 14.30:
 - 2 contractions in 10 minutes each lasting 30 seconds
 - Infusion rate increased to 20 dpm
 - FH 140, Pulse 88
- 15.00:
 - 3 contractions in 10 minutes each lasting 30 seconds
 - Infusion rate increased to 30 dpm
 - FH 140, Pulse 90
- 15.30:
 - 3 contractions in 10 minutes each lasting 30 seconds
 - Infusion rate increased to 40 dpm
 - FH 140, Pulse 88
- 16.00:
 - The fetal head is 2/5 palpable above the symphysis pubis
 - The cervix is 6 cm dilated; sutures apposed
 - 3 contractions in 10 minutes each lasting 30 seconds
 - Infusion rate increased to 50 dpm
 - 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 50 dpm
17.30	FH 140, Pulse 94, Contractions 3/10 each 45 sec, Maintain at 50 dpm
18.00	FH 140, Pulse 96, Contractions 4/10 each 50 sec, Maintain at 50 dpm
18.30	FH 144, Pulse 94, Contractions 4/10 each 50 sec, Maintain at 50 dpm

STEP 6

Plot the following information on the partograph:

- 19.00:
 - The fetal 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, Wt. 2.654 g

Answer the following questions:

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

Q: How long was the second stage of labor?

Q: Why was labor 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 fetal head is 3/5 palpable above the symphysis pubis
- The cervix is 4 cm dilated
- There are 3 contractions in 10 minutes, each lasting 30 seconds
- FH 140
- Amniotic fluid clear
- Sutures apposed
- Blood pressure 120/70 mm Hg
- Temperature 36.8°C
- Pulse 80 per minute
- Urine output 200 mL; negative protein and acetone

STEP 2

Plot the following information in 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, Temp 37, 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, Temp 37, Blood pressure 100/70

- The fetal head is 3/5 palpable above the symphysis pubis
- The cervix is 6 cm 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, Temp 37
16.30	FH 90, Contractions 4/10 each 50 sec, Pulse 110, Head 3/5 up, Meconium liquor

- The fetal head is 3/5 palpable above the symphysis pubis
- The cervix is 6 cm dilated
- Amniotic fluid meconium stained
- Sutures overlapped and not reducible
- Urine output 100 mL; protein negative, acetone 1+

STEP 4

Record the following information on the partograph:

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

Answer the following questions:

Q: What is the final diagnosis?

Q: What action was indicated at 14.00, and why?

Q: What action was indicated at 16.00, and why?

Q: At 16.30, a decision was taken to do a cesarean section, and this was done. Was this a correct action?

Q: What problems may be expected in the newborn?

SKILLS PRACTICE SESSION: CONDUCTING A CHILDBIRTH

PURPOSE

The purpose of this activity is to enable participants to practice conducting a 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 fetal models.

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

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 practice the steps/tasks and observe each other's performance, using the 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.

Finally, following supervised practice at a clinical site, the trainer should assess the skill competency of each participant, using the Checklist for Conducting a Childbirth.¹

RESOURCES

The following equipment or representations thereof:

- Childbirth simulator and placenta/cord/amnion model
- Fetal model (with hard skull)
- Plastic or rubber apron
- High-level disinfected or sterile surgical gloves
- Childbirth kit
- Receptacle for placenta

Learning Guide for Conducting a Childbirth

Learning Guide for Conducting a Childbirth

Checklist for Conducting a Childbirth

Checklist for Conducting a Childbirth

¹ If patients are not available at clinical sites for participants to practice conducting a childbirth, the skills should be taught, practiced and assessed in a simulated setting.

LEARNING GUIDE FOR CONDUCTING A CHILDBIRTH

(To be completed by **Participants**)

Rate the performance of each step or task observed using the following rating scale:

- 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)

LEARNING GUIDE FOR CONDUCTING A CHILDBIRTH (Many of the following steps/tasks should be performed simultaneously.)						
STEP/TASK	CASES					
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. Tell 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						
6. Place fingers of one hand on the advancing head to sustain flexion and control birth of the head.						
7. Use the other hand to support the perineum with a pad, cloth, or compress.						
8. As the perineum distends, decide whether an episiotomy is necessary (e.g., if the perineum is very tight). If needed, provide perineal infiltration with lignocaine and perform an episiotomy (see Learning Guide for Episiotomy and Repair).						
9. Maintain firm but gentle pressure on the head to encourage flexion.						
10. Ask the woman to gently blow out each breath in order to avoid pushing.						
11. After crowning, allow the head to gradually extend under your hand.						

LEARNING GUIDE FOR CONDUCTING A CHILDBIRTH (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
12. Using a clean cloth, wipe the mucus (and membranes if needed) from the baby's mouth and nose.					
13. Gently feel around the newborn's neck for the cord: <ul style="list-style-type: none"> • 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 3 cm apart, and cut the cord between the two clamps. 					
14. Allow restitution and external rotation of the head to occur.					
Delivery of the Shoulders					
15. Place one hand on either side of the newborn's head, over the ears.					
16. Apply gentle downward traction to allow the anterior shoulder to slip beneath the symphysis pubis.					
17. 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.					
18. Grasp the newborn around the chest to aid the birth of the trunk and lift the newborn toward the woman's abdomen.					
19. Note the time of birth.					
Immediate Care of the Newborn					
20. Dry the newborn quickly and thoroughly with a clean, dry towel/cloth immediately after birth.					
21. Wipe the newborn's eyes with a clean piece of cloth.					
22. Place the newborn in skin-to-skin contact on the mother's abdomen and cover with a clean, dry towel/cloth.					
23. Observe the newborn's breathing while completing steps 1 and 2: <ul style="list-style-type: none"> • 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					
24. Place two clamps on the cord with enough room between them to allow for easy cutting of the cord.					
25. Cut the cord, using sterile scissors under cover of a gauze swab to prevent blood spurting.					
26. Tie the cord tightly 2.5 cm from the newborn's abdomen.					
27. Leave the newborn in skin-to-skin contact on the mother's abdomen or chest, covered by a clean, dry towel/cloth.					
28. Palpate the mother's abdomen to rule out the presence of another baby.					
29. Give 10 IU oxytocin intramuscularly.					

LEARNING GUIDE FOR CONDUCTING A CHILDBIRTH (Many of the following steps/tasks should be performed simultaneously.)						
STEP/TASK				CASES		
ACTIVE MANAGEMENT OF THE THIRD STAGE						
Getting Ready						
1. Tell 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						
4. Clamp the cord close to the perineum with forceps.						
5. Wait for the uterus to contract.						
6. Use one hand to grasp the forceps with the clamped end of the cord.						
7. 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 toward the mother’s umbilicus and gently apply counter-traction in an upward direction.						
8. At the same time, firmly apply traction to the cord, in a downward direction, using the hand that is grasping the forceps.						
9. Apply steady tension by pulling the cord firmly and maintaining pressure (jerky movements and force must be avoided): <ul style="list-style-type: none">• If the maneuver is not successful within 30–40 seconds, stop pulling, wait for the next contraction and repeat.						
10. When the placenta is visible at the vaginal opening, hold it in both hands.						
11. Use a gentle upward and downward movement or twisting action to deliver the membranes.						
12. Hold the placenta in the palms of the hands, with maternal side facing upward.						
13. Immediately and gently massage the uterus through the woman’s abdomen until it is well contracted.						
14. Check whether all of the lobules are present and fit together						
15. Now hold the cord with one hand and allow the placenta and membranes to hang down.						
16. Insert the other hand inside the membranes, with fingers spread out.						
17. Inspect the membranes for completeness.						
18. Note the position of insertion of the cord.						
19. Inspect the cut end of the cord for the presence of two arteries and one vein.						
20. Place the placenta in the receptacle (e.g., kidney basin) provided.						
21. Show the mother how to massage her uterus to maintain contractions.						
Examining the Birth Canal						
22. Ask assistant to direct a strong light onto the perineum.						

LEARNING GUIDE FOR CONDUCTING A CHILDBIRTH (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
23. Gently separate the labia and inspect the lower vagina for lacerations/tears.					
24. Inspect the perineum for lacerations/tears.					
25. Repair episiotomy (if one was performed) (see Learning Guide for Episiotomy and Repair).					
26. Wash the vulva and perineum gently with warm water or an antiseptic solution and dry with a clean, soft cloth.					
27. Place a clean cloth or pad on the woman's perineum.					
28. Remove soiled bedding, make the woman comfortable, and cover her with a blanket.					
29. 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. Decontaminate or dispose of needle or syringe: <ul style="list-style-type: none"> • If reusing needle or syringe, fill syringe (with needle attached) with 0.5% chlorine solution and submerge in solution for 10 minutes for decontamination. • If disposing of needle and syringe, flush needle and syringe with 0.5% chlorine solution three times, then place in a puncture-proof container. 					
4. Immerse both gloved hands in 0.5% chlorine solution. Remove gloves by turning them inside out. <ul style="list-style-type: none"> • If disposing of gloves, place them in a leakproof container or plastic bag. • If reusing surgical gloves, submerge them in 0.5% chlorine solution for 10 minutes for decontamination. 					
5. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.					
6. Record all findings on woman's record.					

CHECKLIST FOR CONDUCTING A CHILDBIRTH

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

Place a “✓” in case box if step/task is performed **satisfactorily**, an “X” if it is **not** performed **satisfactorily**, or N/O if not observed.

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

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

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

PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR CONDUCTING A CHILDBIRTH (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
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. Tell 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.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
CONDUCTING THE CHILDBIRTH					
1. Put on personal protective equipment.					
2. Use antiseptic handrub or wash hands thoroughly and put on high-level disinfected or sterile surgical gloves.					
3. Clean the perineum with antiseptic solution.					
4. As the perineum distends, decide whether an episiotomy is necessary and perform as necessary.					
5. After crowning, allow the head to gradually extend and feel around the newborn's neck for the cord: <ul style="list-style-type: none"> • If found, slacken the cord and slip over head or allow the shoulders to pass through, or clamp and cut the cord. 					
6. Allow restitution and external rotation of the head to occur.					
7. Apply gentle downward traction on the head to allow the anterior shoulder to slip beneath the symphysis pubis.					
8. Guide the head and trunk in an upward curve to allow the posterior shoulder to escape over the perineum.					
9. Grasp the newborn around the chest to aid the birth of the trunk and lift it toward the woman's abdomen.					

CHECKLIST FOR CONDUCTING A CHILDBIRTH (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
10. Note the time of birth.					
11. Dry the newborn quickly and thoroughly with a clean, dry towel/cloth immediately after birth.					
12. Wipe the newborn's eyes with a clean piece of cloth.					
13. Place the newborn in skin-to-skin contact on the mother's abdomen and cover with a clean, dry towel/cloth.					
14. Observe the newborn's breathing (see Learning Guide for Newborn Resuscitation).					
15. Clamp and cut, or tie and cut, cord.					
16. Perform active management of the third stage of labor: Palpate the mother's abdomen to rule out presence of another baby and give 10 units of oxytocin intramuscularly.					
17. Apply gentle but firm traction to the cord during a contraction, while at the same time applying counter-traction to the uterus.					
18. If the placenta is not delivered with the first contraction, wait for the next contraction and repeat controlled cord traction with counter-traction to the uterus.					
19. Hold the placenta in both hands, when it is visible.					
20. Use a gentle upward and downward movement or twisting action to deliver the membranes.					
21. Examine the placenta and membranes for completeness and abnormalities					
22. Check that the uterus is well contracted.					
23. Massage uterus if it is not contracted.					
24. Inspect the lower vagina and perineum for lacerations/tears and repair, if necessary.					
25. Repair episiotomy, if one was performed.					
26. Wash and dry, and place clean cloth or pad on the perineum.					
27. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
28. Place all instruments in 0.5% chlorine solution for decontamination.					
29. If reusing needle and syringe, fill syringe (with needle attached) with 0.5% chlorine solution and submerge in solution for decontamination. If disposing of needle and syringe, place in puncture-proof container.					
30. Remove gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing					
31. Use antiseptic handrub or wash hands thoroughly.					
32. Record all findings on woman's record.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

SKILLS PRACTICE SESSION: EPISIOTOMY AND REPAIR

PURPOSE

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

INSTRUCTIONS

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

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

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 practice the steps/tasks and observe each other's performance, using the 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.

Finally, following supervised practice at a clinical site, the trainer should assess the skill competency of each participant, using the Checklist for Episiotomy and Repair.¹

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 anesthetic
- Needles and syringes
- Suture materials

Learning Guide for Episiotomy and Repair

Learning Guide for Episiotomy and Repair

Checklist for Episiotomy and Repair

Checklist for Episiotomy and Repair

¹ If patients are not available at clinical sites for participants to practice episiotomy and repair, the skills should be taught, practiced and assessed in a simulated setting.

LEARNING GUIDE FOR EPISIOTOMY AND REPAIR

(To be completed by **Participants**)

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

Rate the performance of each step or task observed using the following rating scale:

- 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)

LEARNING GUIDE FOR EPISIOTOMY AND REPAIR (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
GETTING READY					
1. Prepare the necessary equipment.					
2. Tell 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 anesthetics.					
5. Put on personal protective equipment.					
ADMINISTERING LOCAL ANESTHETIC					
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 10 mL of 0.5% lignocaine into a syringe.					
5. Place two fingers into the vagina along the proposed incision line.					
6. Insert the needle beneath the skin for 4–5 cm 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 lignocaine solution into the vaginal mucosa, beneath the skin of the perineum and into the perineal muscle.					
8. Wait 2 minutes and then pinch the incision site with forceps. (If the woman feels the pinch, wait 2 more minutes and then retest.)					

LEARNING GUIDE FOR EPISIOTOMY AND REPAIR (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
MAKING THE EPISIOTOMY					
1. Wait to perform episiotomy until: <ul style="list-style-type: none">• The perineum is thinned out.• 3–4 cm 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 3–4 cm long in a mediolateral direction (45° angle to the midline toward a point midway between the ischial tuberosity and the anus).					
5. Use scissors to cut 2–3 cm up the middle of the posterior vagina.					
6. If delivery of the head does not follow immediately, apply pressure to the episiotomy site between contractions, using a piece of gauze, to minimize 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 toward the lower end of the bed or table (use stirrups if available).					
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 anesthetic, draw 10 mL of 0.5% lignocaine into a syringe.					
5. Insert the needle along one side of the vaginal incision and inject the lignocaine 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 2 minutes to allow the lignocaine solution to take effect.					
8. Using 2/0 chromic catgut, insert the suture needle just above (1 cm) 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 2/0 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.					

LEARNING GUIDE FOR EPISIOTOMY AND REPAIR (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK			CASES		
POSTPROCEDURE 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. Decontaminate or dispose of needle or syringe: <ul style="list-style-type: none">• If reusing needle or syringe, fill syringe (with needle attached) with 0.5% chlorine solution and submerge in solution for 10 minutes for decontamination.• If disposing of needle and syringe, flush needle and syringe with 0.5% chlorine solution three times, then place in a puncture-proof container.					
4. Immerse both gloved hands in 0.5% chlorine solution. Remove gloves by turning them inside out. <ul style="list-style-type: none">• If disposing of gloves, place them in a leakproof container or plastic bag.• If reusing surgical gloves, submerge them in 0.5% chlorine solution for 10 minutes for decontamination.					
5. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.					
6. Record the procedure on woman's record.					

CHECKLIST FOR EPISIOTOMY AND REPAIR

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

Place a “✓” in case box if step/task is performed **satisfactorily**, an “X” if it is **not** performed **satisfactorily**, or N/O if not observed.

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

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

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

PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR EPISIOTOMY AND REPAIR (Many of the following steps/tasks should be performed simultaneously.)						
STEP/TASK	CASES					
GETTING READY						
1. Prepare the necessary equipment.						
2. Tell 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 anesthetics.						
5. Put on personal protective equipment.						
SKILL/ACTIVITY PERFORMED SATISFACTORILY						
MAKING THE EPISIOTOMY						
1. Use antiseptic handrub or wash hands thoroughly and put on high-level disinfected or sterile surgical gloves.						
2. Clean the perineum with antiseptic solution.						
3. Administer local anesthetic.						
4. Perform episiotomy when perineum is thinned out and newborn's head is visible during a contraction.						
5. Insert two fingers into the vagina between the newborn's head and the perineum.						
6. Insert the open blade of the scissors between the perineum and the fingers. Make a single cut in a mediolateral direction.						
7. If delivery of the head does not follow immediately, apply pressure to the episiotomy site between contractions.						
8. Control delivery of the head to avoid extension of the episiotomy.						
SKILL/ACTIVITY PERFORMED SATISFACTORILY						

CHECKLIST FOR EPISIOTOMY AND REPAIR (Many of the following steps/tasks should be performed simultaneously.)						
STEP/TASK	CASES					
REPAIRING THE EPISIOTOMY						
1. Clean the woman's perineum with antiseptic solution.						
2. Repeat local anesthetic, if necessary.						
3. Use a continuous suture from the apex downward to repair the vaginal incision.						
4. At the vaginal opening, bring the cut edges together.						
5. Bring the needle under the vaginal opening and out through the incision and tie.						
6. Use interrupted sutures to repair the perineal muscle, working from the top of the perineal incision downward and to bring the skin edges together.						
7. Place a clean cloth or pad on the woman's perineum.						
POSTPROCEDURE TASKS						
1. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.						
2. Place all instruments in 0.5% chlorine solution for decontamination.						
3. If reusing needle or syringe, fill syringe (with needle attached) with 0.5% chlorine solution and submerge in solution for decontamination. If disposing of needle and syringe, place in puncture-proof container.						
4. Remove gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.						
5. Use antiseptic handrub or wash hands thoroughly.						
6. Record procedure on woman's record.						
SKILL/ACTIVITY PERFORMED SATISFACTORILY						

SKILLS PRACTICE SESSION: REPAIR OF CERVICAL TEARS

PURPOSE

The purpose of this activity is to enable participants to practice 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.

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

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 practice the steps/tasks and observe each other's performance, using the 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.

Finally, following supervised practice at a clinical site, the trainer should assess the skill competency of each participant, using the Checklist for Repair of Cervical Tears.¹

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

Learning Guide for Repair of Cervical Tears

Learning Guide for Repair of Cervical Tears

Checklist for Repair of Cervical Tears

Checklist for Repair of Cervical Tears

¹ If patients are not available at clinical sites for participants to practice repair of cervical tears, the skills should be taught, practiced and assessed in a simulated setting.

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:

- 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)

LEARNING GUIDE FOR REPAIR OF CERVICAL TEARS (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
GETTING READY					
1. Prepare the necessary equipment.					
2. Tell 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 anesthesia (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: <ul style="list-style-type: none">Hold the cervix steady by gently pulling the forceps toward you.					
10. Place the first suture at the top (the apex) of the tear.					
11. Close the tear with a continuous suture: <ul style="list-style-type: none">Be sure to include the whole thickness of the cervix each time the suture needle is inserted.					

LEARNING GUIDE FOR REPAIR OF CERVICAL TEARS (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
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: <ul style="list-style-type: none"> Grasp it with artery or ring forceps. Leave the forceps in place for 4 hours. After 4 hours, open the forceps partially but do not remove. After another 4 hours, remove the forceps completely. 					
POSTPROCEDURE 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. Immerse both gloved hands in 0.5% chlorine solution. Remove gloves by turning them inside out. <ul style="list-style-type: none"> If disposing of gloves, place them in a leakproof container or plastic bag. If reusing surgical gloves, submerge them in 0.5% chlorine solution for 10 minutes for decontamination. 					
4. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.					
5. Record the procedure on the woman's record.					

CHECKLIST FOR REPAIR OF CERVICAL TEARS

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

Place a “✓” in case box if step/task is performed **satisfactorily**, an “X” if it is **not** performed **satisfactorily**, or N/O if not observed.

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

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

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

PARTICIPANT _____ **Date Observed** _____

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

CHECKLIST FOR REPAIR OF CERVICAL TEARS (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK		CASES			
3. Remove gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.					
4. Use antiseptic handrub or wash hands thoroughly.					
5. Record procedure on woman's record.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

SKILLS PRACTICE SESSION: BREECH DELIVERY

PURPOSE

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

INSTRUCTIONS

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

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

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 practice the steps/tasks and observe each other's performance, using the 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.

Finally, following supervised practice at a clinical site, the trainer should assess the skill competency of each participant, using the Checklist for Breech Delivery.¹

RESOURCES

The following equipment or representations thereof:

- Childbirth simulator and placenta/cord/amnion model
- High-level disinfected or sterile surgical gloves
- Personal protective equipment

Learning Guide for Breech Delivery

Learning Guide for Breech Delivery

Checklist for Breech Delivery

Checklist for Breech Delivery

¹ If patients are not available at clinical sites for participants to practice breech delivery, the skills should be taught, practiced and assessed in a simulated setting.

LEARNING GUIDE FOR BREECH DELIVERY

(To be completed by **Participants**)

Rate the performance of each step or task observed using the following rating scale:

- 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)

LEARNING GUIDE FOR BREECH DELIVERY (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK					
GETTING READY					
1. Prepare the necessary equipment.					
2. Tell 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: <ul style="list-style-type: none"> Complete or frank breech Adequate clinical pelvimetry, especially that sacral promontory is not tipped Fetus is not too large No previous cesarean section for cephalopelvic disproportion Flexed head 					
5. Put on personal protective equipment.					
6. Start an IV infusion.					
PREPROCEDURE 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. Catheterize 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 lignocaine and perform an episiotomy (see Learning Guide for Episiotomy and Repair).					

LEARNING GUIDE FOR BREECH DELIVERY (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
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: <ul style="list-style-type: none"> • 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.					
Delivery of the Arms					
7. If the arms are felt on the chest, allow them to disengage spontaneously: <ul style="list-style-type: none"> • After spontaneous delivery of the first arm, lift the buttocks toward the mother's abdomen to enable the second arm to deliver spontaneously. • If the arm does not deliver spontaneously, place one or two fingers in the elbow and bend the arm, bringing the hand down over the newborn's face. 					
8. If the arms are stretched above the head or folded around the neck, use Lovset's maneuver: <ul style="list-style-type: none"> • 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. 					
9. If the newborn's body cannot be turned to deliver the arm that is anterior first, deliver the arm that is posterior: <ul style="list-style-type: none"> • Hold and lift the newborn up by the ankles. • Move the newborn's chest toward 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. 					

LEARNING GUIDE FOR BREECH DELIVERY (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK		CASES			
Delivery of the Head					
10. Deliver the head by the Mauriceau Smellie Veit maneuver: <ul style="list-style-type: none">• 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 toward 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.					
11. Perform active management of the third stage of labor to deliver the placenta: <ul style="list-style-type: none">• Give 10 IU oxytocin intramuscularly.• Control cord traction.• Massage uterus.					
12. Check the birth canal for tears following childbirth and repair, if necessary.					
13. Repair the episiotomy, if one was performed (see Learning Guide for Episiotomy and Repair).					
14. Provide immediate postpartum and newborn care, as required.					
POSTPROCEDURE 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. Immerse both gloved hands in 0.5% chlorine solution. Remove gloves by turning them inside out. <ul style="list-style-type: none">• If disposing of gloves, place them in a leakproof container or plastic bag.• If reusing surgical gloves, submerge them in 0.5% chlorine solution for 10 minutes for decontamination.					
4. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.					
5. Record the procedure and findings on woman’s record.					

CHECKLIST FOR BREECH DELIVERY

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

Place a “✓” in case box if step/task is performed **satisfactorily**, an “X” if it is **not** performed **satisfactorily**, or N/O if not observed.

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

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

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

PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR BREECH DELIVERY (Many of the following steps/tasks should be performed simultaneously.)						
STEP/TASK	CASES					
GETTING READY						
1. Prepare the necessary equipment.						
2. Tell the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.						
3. Provide continual emotional support and reassurance, as feasible.						
4. Ensure that the conditions for breech delivery are present.						
5. Put on personal protective equipment.						
SKILL/ACTIVITY PERFORMED SATISFACTORILY						
PREPROCEDURE TASKS						
1. Use antiseptic handrub or wash hands thoroughly and put on high-level disinfected or sterile surgical gloves.						
2. Clean the vulva with antiseptic solution.						
3. Catheterize the bladder, if necessary.						
SKILL/ACTIVITY PERFORMED SATISFACTORILY						
BREECH DELIVERY						
Delivery of the Buttocks and Legs						
1. When the buttocks have entered the vagina and the cervix is fully dilated, tell the woman she can bear down with contractions.						
2. Perform an episiotomy, if necessary.						
3. Let the buttocks deliver until the lower back and shoulder blades are seen.						
4. Gently hold the buttocks in one hand.						
5. If the legs do not deliver spontaneously, deliver one leg at a time.						
6. Hold the newborn by the hips.						

CHECKLIST FOR BREECH DELIVERY (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
Delivery of the Arms					
7. If the arms are felt on the chest, allow them to disengage spontaneously.					
8. If the arms are stretched above the head or folded around the neck, use Lovset's maneuver.					
9. If the newborn's body cannot be turned to deliver the arm that is anterior first, deliver the arm that is posterior.					
Delivery of the Head					
10. Deliver the head using the Mauriceau Smellie Veit maneuver.					
11. Complete steps for active management of the third stage of labor.					
12. Following childbirth, check the birth canal for tears and repair, if necessary. Repair the episiotomy, if one was performed.					
13. Provide immediate postpartum and newborn care, as required.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
POSTPROCEDURE TASKS					
1. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
2. Place all instruments in 0.5% chlorine solution for decontamination.					
3. Remove gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.					
4. Use antiseptic handrub or wash hands thoroughly.					
5. Record procedure and findings on woman's record.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

SKILLS PRACTICE SESSION: VACUUM EXTRACTION

PURPOSE

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

INSTRUCTIONS

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

Participants should review the Learning Guide for Vacuum Extraction before beginning the activity.

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 practice the steps/tasks and observe each other's performance, using the 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.

Finally, following supervised practice at a clinical site, the trainer should assess the skill competency of each participant, using the Checklist for Vacuum Extraction.¹

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

Learning Guide for Vacuum Extraction

Learning Guide for Vacuum Extraction

Checklist for Vacuum Extraction

Checklist for Vacuum Extraction

¹ If patients are not available at clinical sites for participants to practice vacuum extraction, the skills should be taught, practiced and assessed in a simulated setting.

LEARNING GUIDE FOR VACUUM EXTRACTION

(To be completed by **Participants**)

Rate the performance of each step or task observed using the following rating scale:

- 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)

LEARNING GUIDE FOR VACUUM EXTRACTION (Many of the following steps/tasks should be performed simultaneously.)						
STEP/TASK	CASES					
GETTING READY						
1. Prepare the necessary equipment.						
2. Tell 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: <ul style="list-style-type: none"> • Vertex presentation • Term fetus • 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.						
PREPROCEDURE 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. Catheterize 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 fetal 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 center of the cup over the flexion point, 1 cm anterior to the posterior fontanelle.						

LEARNING GUIDE FOR VACUUM EXTRACTION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
4. Perform an episiotomy, if necessary, for proper placement of the cup (see Learning Guide for Episiotomy and Repair):					
<ul style="list-style-type: none"> 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:					
<ul style="list-style-type: none"> If necessary, release pressure and reapply cup. 					
6. Have the assistant create a vacuum of 0.2 kg/cm ² negative pressure with the pump and check the application of the cup.					
7. Increase the vacuum to 0.8 kg/cm ² negative pressure and check the application of the cup.					
8. After maximum negative pressure has been applied, start traction in the line of the pelvic axis and perpendicular to the cup:					
<ul style="list-style-type: none"> If the fetal 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:					
<ul style="list-style-type: none"> 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:					
<ul style="list-style-type: none"> Fetal heart rate Application of the cup 					
11. With progress, and in the absence of fetal 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 labor to deliver the placenta:					
<ul style="list-style-type: none"> Give 10 IU oxytocin intramuscularly. 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.					
POSTPROCEDURE 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.					

LEARNING GUIDE FOR VACUUM EXTRACTION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK		CASES			
3. Immerse both gloved hands in 0.5% chlorine solution. Remove gloves by turning them inside out. <ul style="list-style-type: none"> • If disposing of gloves, place them in a leakproof container or plastic bag. • If reusing surgical gloves, submerge them in 0.5% chlorine solution for 10 minutes for decontamination. 					
4. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.					
5. Record the procedure and findings on woman's record.					

CHECKLIST FOR VACUUM EXTRACTION

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

Place a “✓” in case box if step/task is performed **satisfactorily**, an “X” if it is **not** performed **satisfactorily**, or N/O if not observed.

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

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

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

PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR VACUUM EXTRACTION (Many of the following steps/tasks should be performed simultaneously.)						
STEP/TASK	CASES					
GETTING READY						
1. Prepare the necessary equipment.						
2. Tell the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.						
3. Provide continual emotional support and reassurance, as feasible.						
4. Ensure that the conditions for vacuum extraction are present.						
5. Make sure an assistant is available.						
6. Put on personal protective equipment.						
SKILL/ACTIVITY PERFORMED SATISFACTORILY						
PREPROCEDURE TASKS						
1. Use antiseptic handrub or wash hands thoroughly and put on high-level disinfected or sterile surgical gloves.						
2. Clean the vulva with antiseptic solution.						
3. Catheterize the bladder, if necessary.						
4. Check all connections on the vacuum extractor and test the vacuum.						
SKILL/ACTIVITY PERFORMED SATISFACTORILY						
VACUUM EXTRACTION						
1. Assess the position of the fetal head and identify the posterior fontanelle.						
2. Apply the largest cup that will fit.						
3. Perform an episiotomy, if necessary, for placement of the cup.						
4. Check the application and ensure that there is no maternal soft tissue within the rim of the cup.						
5. Have assistant create a vacuum of negative pressure and check the application of the cup.						

CHECKLIST FOR VACUUM EXTRACTION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
6. Increase the vacuum to the maximum and then apply traction. Correct the tilt or deflexion of the head.					
7. With each contraction, apply traction in a line perpendicular to the plane of the cup rim and assess potential slippage and descent of the vertex.					
8. Between each contraction, have assistant check fetal heart rate and application of the cup.					
9. Continue the “guiding” pulls for a maximum of 30 minutes. Release the vacuum when the head has been delivered.					
10. Complete birth of newborn and delivery of placenta.					
11. Following childbirth, check the birth canal for tears and repair, if necessary. Repair the episiotomy, if one was performed.					
12. Provide immediate postpartum and newborn care, as required.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
POSTPROCEDURE TASKS					
1. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
2. Place all instruments in 0.5% chlorine solution for decontamination.					
3. Remove gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.					
4. Use antiseptic handrub or wash hands thoroughly.					
5. Record procedure and findings on woman’s record.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

Week 2

SKILLS PRACTICE SESSION: BIMANUAL COMPRESSION OF THE UTERUS

PURPOSE

The purpose of this activity is to enable participants to practice bimanual 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.

Participants should review the Learning Guide for Bimanual Compression of the Uterus before beginning the activity.

The trainer should demonstrate the steps/tasks in the procedure of bimanual compression of the uterus for participants. Under the guidance of the trainer, participants should then work in pairs to practice the steps/tasks and observe each other's performance, using the Learning Guide for Bimanual Compression of the Uterus.

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

Finally, following supervised practice at a clinical site, the trainer should assess the skill competency of each participant, using the Checklist for Bimanual Compression of the Uterus.¹

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

Learning Guide for Bimanual Compression of the Uterus

Learning Guide for Bimanual Compression of the Uterus

Checklist for Bimanual Compression of the Uterus

Checklist for Bimanual Compression of the Uterus

¹ If patients are not available at clinical sites for participants to practice bimanual compression of the uterus, the skills should be taught, practiced and assessed in a simulated setting.

LEARNING GUIDE FOR BIMANUAL COMPRESSION OF THE UTERUS

(To be completed by **Participants**)

Rate the performance of each step or task observed using the following rating scale:

- 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)

LEARNING GUIDE FOR BIMANUAL COMPRESSION OF THE UTERUS (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
GETTING READY					
1. Tell 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.					
BIMANUAL 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.					
POSTPROCEDURE TASKS					
1. Immerse both gloved hands in 0.5% chlorine solution. Remove gloves by turning them inside out. <ul style="list-style-type: none"> • If disposing of gloves, place them in a leakproof container or plastic bag. • If reusing surgical gloves, submerge them in 0.5% chlorine solution for 10 minutes for decontamination. 					
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: <ul style="list-style-type: none"> • Every 15 minutes for 1 hour • Then every 30 minutes for 2 hours 					
4. Make sure that the uterus is firmly contracted					

CHECKLIST FOR BIMANUAL COMPRESSION OF THE UTERUS

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

Place a “✓” in case box if step/task is performed **satisfactorily**, an “X” if it is **not** performed **satisfactorily**, or N/O if not observed.

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

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

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

PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR BIMANUAL COMPRESSION OF THE UTERUS (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
GETTING READY					
1. Tell 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.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
BIMANUAL COMPRESSION					
1. Use antiseptic handrub or wash hands thoroughly and put on high-level disinfected or sterile surgical gloves.					
2. Clean the vulva and perineum with antiseptic solution.					
3. Insert fist into anterior vaginal fornix and apply pressure against the anterior wall of the uterus.					
4. Place other hand on abdomen behind uterus, press the hand deeply into the abdomen and apply pressure against the posterior wall of the uterus.					
5. Maintain compression until bleeding is controlled and the uterus contracts.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
POSTPROCEDURE TASKS					
1. Remove gloves and discard them in leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.					
2. Use antiseptic handrub or wash hands thoroughly.					
3. Monitor vaginal bleeding, take the woman’s vital signs and make sure that the uterus is firmly contracted.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

SKILLS PRACTICE SESSION: COMPRESSION OF THE ABDOMINAL AORTA

PURPOSE

The purpose of this activity is to enable participants to practice 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.

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

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 practice 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.

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.

Finally, following supervised practice at a clinical site, the trainer should assess the skill competency of each participant, using the Checklist for Compression of the Abdominal Aorta.¹

RESOURCES

The following equipment or representations thereof:

- Childbirth simulator and placenta/cord/amnion model

Learning Guide for Compression of the Abdominal Aorta

Learning Guide for Compression of the Abdominal Aorta

Checklist for Compression of the Abdominal Aorta

Checklist for Compression of the Abdominal Aorta

¹ If patients are not available at clinical sites for participants to practice compression of the abdominal aorta, the skills should be taught, practiced and assessed in a simulated setting.

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:

- 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)

LEARNING GUIDE FOR COMPRESSION OF THE ABDOMINAL AORTA (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
GETTING READY					
1. Tell 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.					
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: <ul style="list-style-type: none"> • 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 until bleeding is controlled.					
POSTPROCEDURE TASKS					
1. Monitor vaginal bleeding and take the woman's vital signs: <ul style="list-style-type: none"> • Every 15 minutes for 1 hour • Then every 30 minutes for 2 hours 					
2. Make sure that the uterus is firmly contracted.					

CHECKLIST FOR COMPRESSION OF THE ABDOMINAL AORTA

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

Place a “✓” in case box if step/task is performed **satisfactorily**, an “X” if it is **not** performed **satisfactorily**, or N/O if not observed.

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

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

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

PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR COMPRESSION OF THE ABDOMINAL AORTA (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
GETTING READY					
1. Tell 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.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
COMPRESSION OF THE ABDOMINAL AORTA					
1. Place a closed fist just above the umbilicus and slightly to the left.					
2. Apply downward pressure over the abdominal aorta directly through the abdominal wall.					
3. With the other hand, palpate the femoral pulse to check the adequacy of compression.					
4. Maintain compression until bleeding is controlled.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
POSTPROCEDURE TASKS					
1. Monitor vaginal bleeding, take the woman’s vital signs and make sure that the uterus is firmly contracted.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

SKILLS PRACTICE SESSION: MANUAL REMOVAL OF PLACENTA

PURPOSE

The purpose of this activity is to enable participants to practice 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.

Participants should review the Learning Guide for Manual Removal of Placenta before beginning the activity.

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 practice the steps/tasks and observe each other's performance, using the 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.

Finally, following supervised practice at a clinical site, the trainer should assess the skill competency of each participant, using the Checklist for Manual Removal of Placenta.¹

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

Learning Guide for Manual Removal of Placenta

Learning Guide for Manual Removal of Placenta

Checklist for Manual Removal of Placenta

Checklist for Manual Removal of Placenta

¹ If patients are not available at clinical sites for participants to practice manual removal of the placenta, the skills should be taught, practiced and assessed in a simulated setting.

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:

- 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)

LEARNING GUIDE FOR MANUAL REMOVAL OF PLACENTA (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
GETTING READY					
1. Prepare the necessary equipment.					
2. Tell 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 anesthesia (IV pethidine and diazepam, or ketamine).					
6. Give a single dose of prophylactic antibiotics: <ul style="list-style-type: none"> • Ampicillin 2 g IV PLUS metronidazole 500 mg IV, OR • Cefazolin 1 g IV PLUS metronidazole 500 mg 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.)					
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.					

LEARNING GUIDE FOR MANUAL REMOVAL OF PLACENTA (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
9. Gradually move the hand back and forth in a smooth lateral motion until the whole placenta is separated from the uterine wall: <ul style="list-style-type: none"> 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. 					
10. When the placenta is completely separated: <ul style="list-style-type: none"> 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 1 L IV fluid (normal saline or Ringer's lactate) at 60 drops/minute.					
12. Have an assistant massage the fundus to encourage atonic uterine contraction.					
13. If there is continued heavy bleeding, give ergometrine 0.2 mg 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.					
POSTPROCEDURE TASKS					
1. Immerse both gloved hands in 0.5% chlorine solution. Remove gloves by turning them inside out. <ul style="list-style-type: none"> If disposing of gloves, place them in a leakproof container or plastic bag. If reusing surgical gloves, submerge them in 0.5% chlorine solution for 10 minutes for decontamination. 					
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: <ul style="list-style-type: none"> Every 15 minutes for 1 hour Then every 30 minutes for 2 hours 					
4. Make sure that the uterus is firmly contracted.					
5. Record procedure and findings on woman's record.					

CHECKLIST FOR MANUAL REMOVAL OF PLACENTA

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

Place a “✓” in case box if step/task is performed **satisfactorily**, an “X” if it is **not** performed **satisfactorily**, or N/O if not observed.

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

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

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

PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR MANUAL REMOVAL OF PLACENTA (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
GETTING READY					
1. Prepare the necessary equipment.					
2. Tell the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.					
3. Provide continual emotional support and reassurance, as feasible.					
4. Have the woman empty her bladder or insert a catheter.					
5. Give anesthesia.					
6. Give prophylactic antibiotics.					
7. Put on personal protective equipment.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
MANUAL REMOVAL OF PLACENTA					
1. Use antiseptic handrub or wash hands and forearms thoroughly and put on high-level disinfected or sterile surgical gloves (use elbow-length gloves, if available).					
2. Hold the umbilical cord with a clamp and pull the cord gently.					
3. Place the fingers of one hand into the uterine cavity and locate the placenta.					
4. Provide counter-traction abdominally.					
5. Move the hand back and forth in a smooth lateral motion until the whole placenta is separated from the uterine wall.					
6. Withdraw the hand from the uterus, bringing the placenta with it while continuing to provide counter-traction abdominally.					
7. Give oxytocin in IV fluid.					
8. Have an assistant massage the fundus to encourage atonic uterine contraction.					
9. If there is continued heavy bleeding, give ergometrine by IM injection or prostaglandins.					

CHECKLIST FOR MANUAL REMOVAL OF PLACENTA (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
10. Examine the uterine surface of the placenta to ensure that it is complete.					
11. Examine the woman carefully and repair any tears to the cervix or vagina or repair episiotomy.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
POSTPROCEDURE TASKS					
1. Remove gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.					
2. Use antiseptic handrub or wash hands thoroughly.					
3. Monitor vaginal bleeding, take the woman's vital signs and make sure that the uterus is firmly contracted.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

CASE STUDY 1A: VAGINAL BLEEDING AFTER CHILDBIRTH

Directions

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

Case Study

Mrs. A. is a 20-year-old gravida 4 para 4 who presents 6 days postpartum at the hospital complaining that she feels weak, “light-headed” and “sick.” Mrs. A reports that the birth was without complication and that the baby is well. Mrs. A. admits to vaginal bleeding equal to a heavy period.

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

1. What will you include in your initial assessment of Mrs. A., and why?
2. What particular aspects of Mrs. A.’s physical examination will help you make a diagnosis or identify her problems/needs, and why?
3. What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. A., and why?

Diagnosis (identification of problems/needs)

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

History:

Mrs. A reports lessening of lochia during the first 4 days postpartum but increasing bright red blood during the past 2 days. She admits foul smell of lochia during past day.

Physical Examination:

Mrs. A.’s temperature is 37.2°C, her pulse rate is 90, her blood pressure is 120/80 and her respiration rate is 20 per minute.

Her uterus is soft, nontender, and almost to the level of her umbilicus. She has no signs of cervical, vaginal or perineal trauma. Lochia is red, moderate, without foul smell. She also has mild conjunctival pallor.

Laboratory Tests:

Hemoglobin is 9 g/dL.

Mrs. A.’s hospital record does not indicate blood loss after childbirth or whether the placenta was

complete.

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

Care Provision (planning and intervention)

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

Evaluation

Two hours following removal of clots and placental remnants, Mrs. A. is resting. Her temperature is 37°C, her pulse rate is 82, her blood pressure is 120/80 and her respirations are 20. Her uterus is well contracted, 3 cm below the umbilicus. Bleeding is minimal.

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

CASE STUDY 1B: VAGINAL BLEEDING AFTER CHILDBIRTH

Directions

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

Case Study

Mrs. B. is a 30-year-old, para four who experienced a normal spontaneous vaginal birth, at the health center, to a full-term healthy newborn weighing 4.2 kg. At the completion of second stage she was given ergometrine 0.2 mg. The placenta was delivered 5 minutes later, without complication. Thirty minutes later, Mrs. B. reports that she has heavy vaginal bleeding.

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

1. What will you include in your initial assessment of Mrs. B., and why?
2. What particular aspects of Mrs. B.'s physical examination will help you make a diagnosis or identify her problems/needs, and why?
3. What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. B., and why?

Diagnosis (identification of problems/needs)

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

Mrs. B.'s temperature is 37°C, her pulse rate is 88, her blood pressure is 110/80 and her respiration rate is 18 per minute.

Her uterus is firm and well contracted. The placenta is complete.

She has no perineal trauma. Examination of the vagina and cervix is difficult because she continues to have heavy vaginal bleeding; therefore, tears of the cervix and vagina have not yet been ruled out

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

Care Provision (planning and intervention)

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

Evaluation

A cervical tear was identified and repaired. One hour following the repair, Mrs. B.'s temperature is 37°C, her pulse rate is 86, her blood pressure is 110/80 and her respiration rate is 16 per minute. Her uterus remains well contracted. Bleeding is minimal.

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

CASE STUDY 2A: FEVER AFTER CHILDBIRTH

Directions

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

Case Study

Mrs. B. is a 22-year-old para 1 who has come to the health center complaining that her perineal wound has become increasingly tender during the past 12 hours. She also says that she feels hot and unwell. Mrs. B. reports that she gave birth to a full-term newborn 3 days ago at the health center. The newborn weighed 4 kg and Mrs. B. suffered a perineal laceration that required suturing. She was counseled about danger signs before leaving the health center, including the need to seek care early if any danger signs occur.

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

1. What will you include in your initial assessment of Mrs. B., and why?
2. What particular aspects of Mrs. B.'s physical examination will help you make a diagnosis or identify her problems/needs, and why?
3. What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. B., and 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 abdominal pain, frequent or painful urination, abdominal tenderness, foul-smelling lochia, or loss of consciousness.

Physical Examination:

Mrs. B.'s temperature is 38°C, her pulse rate is 88 beats per minute, her blood pressure is 120/80 and her respiration rate is 20 breaths per minute. There is no abdominal tenderness. Her lochia is of normal color and amount, and without offensive odor.

Her perineal wound is tender, with pus draining from the center. The wound is not edematous but there is slight erythema present extending beyond the edge of the incision.

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

Care Provision (planning and intervention)

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

Evaluation

Mrs. B. returns to the health center the next day. Her temperature is 37.6°C. Her perineal wound is slightly less tender and there is less discharge.

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

CASE STUDY 2B: FEVER AFTER CHILDBIRTH

Directions

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

Case Study

Mrs. D. is a pleasant 17-year-old para 1 who is 3 weeks postpartum. She comes to the health center today complaining of breast pain and tenderness, and feeling unwell. Her birth at the health center was uncomplicated and the newborn was healthy and weighed 2.9 kg. You had last seen Mrs. D. 2 days postpartum, when she and her newborn were found to be doing well.

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

1. What will you include in your initial assessment of Mrs. D., and why?
2. What particular aspects of Mrs. D.'s physical examination will help you make a diagnosis or identify her problems/needs, and why?
3. What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. D., and 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 for the first week or so after birth, her newborn seemed to have difficulty taking the nipple into his mouth, but more recently she thinks that he has been doing better. He feeds about 6 times in a 24-hour period and is given water between feedings. Mrs. D. had breastfed the newborn less than an hour before you examined her.

Physical Examination:

Her temperature is 38°C, her pulse rate is 120 per minute, her blood pressure is 120/80 and her respiration rate is 20 per minute.

She has pain and tenderness in her left breast, and there is a wedge-shaped area of redness in the outer upper quadrant of the left breast. There are no areas of fluctuant swelling and no cracks or lesions on her nipples.

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

Care Provision (planning and intervention)

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

Evaluation

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

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

SKILLS PRACTICE SESSION: NEWBORN RESUSCITATION

PURPOSE

The purpose of this activity is to enable participants to practice 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.

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

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 practice the steps/tasks and observe each other's performance, using the 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.

Finally, following supervised practice at a clinical site, the trainer should assess the skill competency of each participant, using the Checklist for Newborn Resuscitation.¹

RESOURCES

The following equipment or representations thereof:

- Examination table
- Newborn resuscitation model
- Suction equipment
- Self-inflating bag (newborn)
- Newborn face masks
- Clock

Learning Guide for Newborn Resuscitation

Learning Guide for Newborn Resuscitation

Checklist for Newborn Resuscitation

Checklist for Newborn Resuscitation

¹ If patients are not available at clinical sites for participants to practice newborn resuscitation, the skills should be taught, practiced and assessed in a simulated setting.

LEARNING GUIDE FOR NEWBORN RESUSCITATION

(To be completed by **Participants**)

Rate the performance of each step or task observed using the following rating scale:

- 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)

LEARNING GUIDE FOR NEWBORN RESUSCITATION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
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. Tell 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 : <ul style="list-style-type: none"> Introduce catheter 5 cm into the newborn's mouth and suction while withdrawing catheter. Introduce catheter 3 cm 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 slightly extended.					
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.					

LEARNING GUIDE FOR NEWBORN RESUSCITATION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
8. If the newborn's chest is rising: <ul style="list-style-type: none"> Ventilate at a rate of 40 breaths/minute. Observe the chest for an easy rise and fall. 					
9. If the newborn's chest is not rising: <ul style="list-style-type: none"> Check the position of the head again to make sure the neck is slightly extended. Reposition the mask on the newborn's face to improve the seal between mask and face. Squeeze the bag harder to increase ventilation pressure. Repeat suction of mouth and nose to remove mucus, blood or meconium from the airway. 					
10. Ventilate for 1 minute and then stop and quickly assess if the newborn is breathing spontaneously.					
11. If breathing is normal (30–60 breaths/minute) and there is no indrawing of the chest and no grunting: <ul style="list-style-type: none"> Put in skin-to-skin contact with mother. Observe breathing at frequent intervals. Measure the newborn's axillary temperature and rewarm if temperature is less than 36° C. Keep in skin-to-skin contact with mother if temperature is 36° C or less. Encourage mother to begin breastfeeding. 					
12. If newborn is not breathing, breathing is less than 30 breaths/minute or severe chest indrawing 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.					
POSTPROCEDURE TASKS					
1. Dispose of disposable suction catheters and mucus extractors in a leakproof container or plastic bag.					
2. For reusable catheters and mucus extractors: <ul style="list-style-type: none"> Place in 0.5% chlorine solution for 10 minutes for decontamination. Wash in water and detergent. Use a syringe to flush catheters/tubing. Boil or disinfect in an appropriate chemical solution. 					
3. Take the valve and mask apart and inspect for cracks and tears.					
4. Wash the valve and mask and check for damage with water and detergent and rinse.					
5. Select a method of sterilization or high-level disinfection: <ul style="list-style-type: none"> Silicone and rubber bags and patient 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). 					
6. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.					

LEARNING GUIDE FOR NEWBORN RESUSCITATION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
7. After chemical disinfection, rinse all parts with clean water and allow to air dry.					
8. Reassemble the bag.					
9. Test the bag to make sure that it is functioning: <ul style="list-style-type: none"> Block the valve outlet by making an airtight seal with the palm of your hand and observe if the bag reinflates when the seal is released. Repeat the test with the mask attached to the bag. 					
DOCUMENTING RESUSCITATION PROCEDURES					
1. Record the following details: <ul style="list-style-type: none"> 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 					

CHECKLIST FOR NEWBORN RESUSCITATION

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

Place a “✓” in case box if step/task is performed **satisfactorily**, an “X” if it is **not** performed **satisfactorily**, or N/O if not observed.

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

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

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

PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR NEWBORN RESUSCITATION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
GETTING READY					
1. Quickly wrap or cover the newborn and place on a clean, warm surface.					
2. Tell 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.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
RESUSCITATION USING BAG AND MASK					
1. Position the head in a slightly extended position to open the airway.					
2. Clear the airway by suctioning the mouth and nose.					
3. Position the newborn's neck and place the mask on the newborn's face so that it covers the chin, mouth and nose. Form a seal between mask and newborn's face.					
4. Ventilate at a rate of 40 breaths/minute for 1 minute and then stop and quickly assess if the newborn is breathing spontaneously.					
5. If breathing is normal, and there is no indrawing of the chest and no grunting, put in skin-to-skin contact with mother.					
6. If newborn is not breathing, breathing is less than 30 breaths/minute or severe chest indrawing is present, ventilate with oxygen if available. Arrange immediate transfer for special care.					
7. If there is no gasping or breathing at all after 20 minutes of ventilation, check heart sounds. If absent, stop ventilating.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
POSTPROCEDURE TASKS					
1. Dispose of disposable suction catheters and mucus extractors in a leakproof container or plastic bag. Place reusable catheters and mucus extractors in 0.5% chlorine solution for decontamination. Then, clean and process.					
2. Clean and decontaminate the valve and mask and check for damage.					

CHECKLIST FOR NEWBORN RESUSCITATION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK		CASES			
3. Use antiseptic handrub or wash hands thoroughly.					
4. Record pertinent information on the mother's/newborn's record.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

SKILLS PRACTICE SESSION: ENDOTRACHEAL INTUBATION

PURPOSE

The purpose of this activity is to enable participants to practice endotracheal intubation and achieve competency in the skills required.

INSTRUCTIONS

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

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

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 practice the steps/tasks and observe each other's performance, using the 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.

Finally, following supervised practice at a clinical site, the trainer should assess the skill competency of each participant, using the Checklist for Endotracheal Intubation.¹

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

Learning Guide for Endotracheal Intubation

Learning Guide for Endotracheal Intubation

Checklist for Endotracheal Intubation

Checklist for Endotracheal Intubation

¹ If patients are not available at clinical sites for participants to practice endotracheal intubation, the skills should be taught, practiced and assessed in a simulated setting or, if permitted, on cadavers.

LEARNING GUIDE FOR ENDOTRACHEAL INTUBATION

(To be completed by **Participants**)

Rate the performance of each step or task observed using the following rating scale:

- 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)

LEARNING GUIDE FOR ENDOTRACHEAL INTUBATION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK					
GETTING READY					
1. Prepare the necessary equipment.					
2. If the woman is conscious and responsive, tell 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 bag and mask for 5 minutes.					
4. Position the woman's head on a folded sheet, ensuring her neck is not extended.					
5. If the woman is conscious, give diazepam 5–10 mg IV slowly over 2 minutes.					
6. Ask an assistant to apply pressure to the cricoid against the esophagus.					
7. Open the woman's mouth and gently insert the laryngoscope over the tongue and toward the back of the throat.					
8. If necessary, suction out any secretions in the throat.					
9. Lift the blade of the laryngoscope upward and forward, using the wrist, to visualize the glottis.					
10. Insert the endotracheal tube and stylet through the glottis into the trachea.					
11. Remove the laryngoscope.					
12. Withdraw the stylet.					
13. Inflate the cuff of the endotracheal tube with 3–5 mL of air.					
14. Connect the endotracheal tube to the Ambu bag.					

LEARNING GUIDE FOR ENDOTRACHEAL INTUBATION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK		CASES			
ENSURING CORRECT PLACEMENT OF ENDOTRACHEAL TUBE					
1. Press the Ambu bag 2–3 times rapidly while observing the woman’s chest for inflation.					
1a. If the chest inflates while pressing the Ambu bag, auscultate the chest to confirm that air is entering both lungs equally. <ul style="list-style-type: none">If air entry into both lungs is unequal, deflate the cuff and gently withdraw the endotracheal tube slightly until air entry is heard equally on both sides. Re-inflate the cuff.					
1b. If the chest does not inflate: <ul style="list-style-type: none">Deflate the cuff and withdraw the endotracheal tube.Give 100% oxygen by bag and mask for 3 minutes.Attempt intubation again.					
2. Once the endotracheal tube is properly positioned, use adhesive tape to fix the tube to the woman’s face.					
3. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
4. Immerse both gloved hands in 0.5% chlorine solution. Remove gloves by turning them inside out. <ul style="list-style-type: none">If disposing of gloves, place them in a leakproof container or plastic bag.If reusing surgical gloves, submerge them in 0.5% chlorine solution for 10 minutes for decontamination.					
5. 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 endotracheal tube and gently remove the tube.					
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.					

LEARNING GUIDE FOR ENDOTRACHEAL INTUBATION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK		CASES			
9. Immerse both gloved hands in 0.5% chlorine solution. Remove gloves by turning them inside out. <ul style="list-style-type: none"> • If disposing of gloves, place them in a leakproof container or plastic bag. • If reusing surgical gloves, submerge them in 0.5% chlorine solution for 10 minutes for decontamination. 					
10. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.					

CHECKLIST FOR ENDOTRACHEAL INTUBATION

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

Place a “✓” in case box if step/task is performed **satisfactorily**, an “X” if it is **not** performed **satisfactorily**, or N/O if not observed.

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

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

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

PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR ENDOTRACHEAL INTUBATION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
GETTING READY					
1. Prepare the necessary equipment.					
2. If the woman is conscious and responsive, tell 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.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
INTUBATION					
1. Use antiseptic handrub or wash hands thoroughly and put on new examination or high-level disinfected surgical gloves.					
2. Give oxygen.					
3. Position the woman's head.					
4. Give diazepam, if necessary.					
5. Ask an assistant to apply pressure to the cricoid against the esophagus.					
6. Insert the laryngoscope. If necessary, suction out any secretions in the throat. Visualize the glottis.					
7. Insert the endotracheal tube, remove the laryngoscope and withdraw the stylet.					
8. Inflate the cuff of the endotracheal tube and connect it to the Ambu bag.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
ENSURING CORRECT PLACEMENT OF ENDOTRACHEAL TUBE					
1. Observe inflation of the chest and auscultate the chest to ensure correct placement of the endotracheal tube.					
2. Once the endotracheal tube is properly positioned, fix the tube to the woman's face.					
3. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					

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

SKILLS PRACTICE SESSION: CESAREAN SECTION

PURPOSE

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

INSTRUCTIONS

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

Participants should review the Learning Guide for Cesarean Section before beginning the activity.

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.

The trainer should then demonstrate each step of a cesarean section with a patient. One participant acts as second assistant. As second assistant, the participant observes the demonstration.

With another patient, 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.

With the next patient, the same participant now performs the procedure with the trainer as first assistant.

Finally, the same participant performs the procedure with a patient. The trainer acts as second assistant. The trainer should assess the skill competency of the participant, using the Checklist for Cesarean Section.

RESOURCES

The following equipment or representations thereof:

- High-level disinfected or sterile surgical gloves
- Pelvic model or foam block
- Needles and syringes
- Suture materials
- Fetal model (with hard skull)
- Receptacle for placenta
- Childbirth kit

Learning Guide for Cesarean Section

Learning Guide for Cesarean Section

Learning Guide for Cesarean Section

Learning Guide for Cesarean Section

Learning Guide for Cesarean Section

Checklist for Cesarean Section

LEARNING GUIDE FOR CESAREAN SECTION

(To be completed by **Participants**)

Rate the performance of each step or task observed using the following rating scale:

- 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)

LEARNING GUIDE FOR CESAREAN SECTION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK		CASES			
GETTING READY					
1. Prepare the necessary equipment.					
2. Tell 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 hemoglobin and blood type and cross-match 2 units of blood.					
5. Set up an IV line and infuse 500 cc of IV fluids (normal saline or Ringer’s lactate).					
6. Give premedication including: <ul style="list-style-type: none">• Atropine 0.6 mg IM (or IV if in theater)• Magnesium trisilicate 300 mg					
7. Catheterize the woman’s bladder.					
8. Help the woman to put on a gown and cap.					
9. Evaluate anesthetic options: <ul style="list-style-type: none">• General anesthetic• Local anesthetic• Spinal anesthetic					
PREPROCEDURE TASKS					
1. Put on theater 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.					

LEARNING GUIDE FOR CESAREAN SECTION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
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 anesthetized and the anesthesia has taken full effect.					
3. Apply antiseptic solution to the incision site and surrounding area three times. Allow to dry.					
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 toward 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 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 cauterize the tissue.					
5. Make a 2–3 cm 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 3 cm 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 3 cm transverse incision in the lower segment of the uterus. It should be about 1 cm below the level where the vesico-uterine serosa was incised to bring the bladder down.					

LEARNING GUIDE FOR CESAREAN SECTION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
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 fetal head.					
2. With your fingers, grasp and flex the head.					
3. Gently lift the fetal head through the incision, taking care not to extend the incision down toward 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 fetal 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.					
6. Suction the newborn's mouth and nose when delivered.					
7. If uterine tone is inadequate ask an assistant to check the blood pressure and give ergometrine 0.2 mg IV/IM if the blood pressure is < 160/110. If blood pressure is 160/110 or higher give oxytocin 20 units in 1 L IV at 60 drops per minute for 2 hours.					
8. Deliver the shoulders and body.					
9. Clamp the cord at two points and cut it.					
10. Hand the newborn to midwife or assistant.					
11. Ask an assistant to give a single dose of prophylactic antibiotics—ampicillin 2 g IV or cefazolin 1 g 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 0 chromic catgut suture. Take care not to touch the needle with fingers.					
4. Ensure hemostasis. 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.					

LEARNING GUIDE FOR CESAREAN SECTION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
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: <ul style="list-style-type: none"> • 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. • Take care not to touch 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 intraperitoneal contents are not included in the suture.					
10. Tie off the suture: <ul style="list-style-type: none"> • 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 1 cm 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. 					
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: <ul style="list-style-type: none"> • 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 2 cm 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.					
POSTPROCEDURE 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.					

LEARNING GUIDE FOR CESAREAN SECTION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
3. Decontaminate or dispose of needle or syringe: <ul style="list-style-type: none"> • If reusing needle or syringe, fill syringe (with needle attached) with 0.5% chlorine solution and submerge in solution for 10 minutes for decontamination. • If disposing of needle and syringe, flush needle and syringe with 0.5% chlorine solution three times, then place in a puncture-proof container. 					
4. Remove gown and then immerse both gloved hands in 0.5% chlorine solution. Remove gloves by turning them inside out. <ul style="list-style-type: none"> • If disposing of gloves, place them in a leakproof container or plastic bag. • If reusing surgical gloves, submerge them in 0.5% chlorine solution for 10 minutes for decontamination. 					
5. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.					
6. Write notes of the operation, postoperative observations and management instructions.					
7. Monitor pulse, blood pressure, respiration rate and bleeding, both from the wound and vaginally.					
8. Assess the woman before she is transferred out of the recovery area.					
9. Check woman on the ward daily or as frequently as necessary.					
10. Discuss reasons for cesarean section, family planning and future pregnancies before discharge.					
11. Schedule appointment for postpartum care.					

CHECKLIST FOR CESAREAN SECTION

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

Place a “✓” in case box if step/task is performed **satisfactorily**, an “X” if it is **not** performed **satisfactorily**, or N/O if not observed.

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

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

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

PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR CESAREAN SECTION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
GETTING READY					
1. Prepare the necessary equipment.					
2. Tell 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 hemoglobin and blood type and cross-match 2 units of blood.					
5. Set up an IV line and infuse 500 cc of IV fluids.					
6. Give premedication including: <ul style="list-style-type: none"> • Atropine 0.6 mg IM (or IV if in theater) • Magnesium trisilicate 300 mg 					
7. Catheterize the woman's bladder.					
8. Help the woman to put on a gown and cap.					
9. Evaluate anesthetic options: <ul style="list-style-type: none"> • General anesthetic • Local anesthetic • Spinal anesthetic 					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
PREPROCEDURE TASKS					
1. Put on theater clothes, protective footwear, cap, facemask, protective eyeglasses and a plastic apron.					
2. Perform a surgical handscrub and put on high-level disinfected or sterile surgical gloves and a sterile gown.					
3. Ensure that the instruments and supplies are available and arrange them on a sterile tray or in a high-level disinfected container. Conduct an instrument and swab count and ask an assistant to note on board.					
4. Ensure that an assistant is scrubbed and dressed.					

CHECKLIST FOR CESAREAN SECTION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
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 anesthesia has taken full effect.					
3. Apply antiseptic solution to the abdomen, allow to dry, and place a drape over the woman.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
PROCEDURE					
1. Make a 2–3 cm midline vertical incision below the umbilicus to the pubic hair (or transverse incision if using Pfannenstiel's incision) through skin and fascia.					
2. Lengthen the incision and separate the rectus muscle.					
3. Open the lower part of the peritoneum.					
4. Place a bladder retractor over the pubic bone.					
5. Extend the incision by 3 cm on each side.					
6. Push the bladder downward off the lower uterine segment and replace the bladder retractor over the pubic bone to retract the bladder downward.					
7. Make a 3 cm transverse incision in the lower segment of the uterus.					
8. Widen the incision. Extend the incision, if necessary.					
9. If the membranes are intact, rupture them.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
DELIVERING THE NEWBORN					
1. Place one hand inside the uterine cavity between the uterus and the fetal head.					
2. Grasp and flex the head, and gently lift the fetal head through the incision.					
3. Gently press on the abdomen over the top of the uterus to help deliver the head. If necessary, ask an assistant to push the head up through the vagina from below.					
4. If uterine tone is inadequate, check the blood pressure and give ergometrine 0.2 mg IV/IM if blood pressure is <160/110. If the blood pressure is 160/110 or higher, give oxytocin 20 units in 1 L IV at 60 drops per minute for 2 hours.					
5. Suction the newborn's mouth and nose when delivered.					
6. Clamp the cord at two points and cut it.					
7. Ask an assistant to give a single dose of prophylactic antibiotics—ampicillin 2 g IV or cefazolin 1 g IV.					
8. Deliver the placenta and inspect it for completeness or abnormalities.					
9. Dilate cervix from above if necessary.					

CHECKLIST FOR CESAREAN SECTION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
10. Conduct an instrument and swab count.					
11. Repair the uterus and ensure hemostasis.					
12. Ensure that there is no further bleeding.					
13. Check the bladder for injury and repair injury, if necessary.					
14. Inspect the wall of the uterus and close the fascia with a running suture, using a cutting needle and 0 chromic catgut (or polyglycolic) suture, ensuring that the peritoneum and intraperitoneal contents are not included in the suture.					
15. If there are signs of infection, pack the subcutaneous tissue with gauze and place loose 0 catgut (or polyglycolic) sutures. Close the skin with a delayed closure after the infection has cleared. If there are no signs of infection, close the fat layer, if necessary, with an interrupted suture, using a round needle and plain catgut, and close the skin with interrupted mattress sutures about 2 cm apart, using a cutting needle and 3-0 nylon or silk.					
16. Ensure there is no bleeding, clean the wound with gauze moistened in antiseptic solution and apply a sterile dressing.					
17. Evacuate clots from vagina using forceps and swab and put on sterile pad.					
18. Assist in getting woman off operating table.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
POSTPROCEDURE TASKS					
1. Before removing gloves, remove blade from knife handle. Dispose of blade and all suture needles in sharps container, and dispose of waste materials in a leakproof container or plastic bag.					
2. Place all instruments in 0.5% chlorine solution for decontamination.					
3. If reusing needle or syringe, fill syringe (with needle attached) with 0.5% chlorine solution and submerge in solution for decontamination. If disposing of needle and syringe, place in puncture-proof container.					
4. Remove gown and gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.					
5. Use antiseptic handrub or wash hands thoroughly.					
6. Write operation notes and post-operative management instructions.					
7. Monitor pulse, blood pressure, respiration rate and bleeding, wound and vaginally.					
8. Assess the woman before she is transferred out of the recovery area.					
9. Check woman on the ward daily or as frequently as necessary.					

CHECKLIST FOR CESAREAN SECTION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK		CASES			
10. Discuss reasons for cesarean section, family planning and future pregnancies before discharge.					
11. Schedule appointment for postpartum care.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

LEARNING GUIDE FOR EMERGENCY LAPAROTOMY

(To be completed by **Participants**)

Rate the performance of each step or task observed using the following rating scale:

- 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)

LEARNING GUIDE FOR EMERGENCY LAPAROTOMY (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
GETTING READY					
1. Prepare the necessary equipment.					
2. Tell 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 hemoglobin and availability of cross-matched blood.					
5. Catheterize the woman's bladder.					
6. Arrange for anesthesia.					
7. Ask the anesthetist to give a single dose of prophylactic antibiotics: <ul style="list-style-type: none"> • Ampicillin 2 g IV PLUS metronidazole 500 mg IV, OR • Cefazolin 1 g IV PLUS metronidazole 500 mg IV 					
8. Put on personal protective equipment.					
PREPROCEDURE TASKS					
1. Put on theater 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.					

LEARNING GUIDE FOR EMERGENCY LAPAROTOMY (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
PREPARING THE WOMAN					
1. Place the woman in the supine position on the operating table.					
2. Ensure that the woman has been anesthetized and the anesthesia has taken full effect (ideally general anesthetic).					
3. Apply antiseptic solution to the incision site three times.					
4. Drape the abdomen, leaving the surgical area exposed, and then drape the woman.					
OPENING THE ABDOMEN					
1. Ask the instrument nurse to stand with the instrument tray toward 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, 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 cauterize the tissue.					
5. Make a 2–3 cm vertical 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. Repeat steps 7–9 until the fascia is opened to the end of the skin incision.					
10. 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.					
11. 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.					
12. Lift the peritoneum up using forceps.					
13. 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.					
14. Legate the active bleeders.					
15. Place a bladder retractor over the pubic bone.					
16. Place self-retaining abdominal retractors.					

LEARNING GUIDE FOR EMERGENCY LAPAROTOMY (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
INSPECTING THE ABDOMEN					
1. Conduct a general examination of the peritoneal cavity to detect any abnormality and operative diagnosis; treat accordingly.					
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.					
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: <ul style="list-style-type: none">• 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: <ul style="list-style-type: none">• 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 1 cm 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: <ul style="list-style-type: none">• 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 2 cm 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.					
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.					

LEARNING GUIDE FOR EMERGENCY LAPAROTOMY (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
10. Decontaminate or dispose of needle or syringe: <ul style="list-style-type: none"> • If reusing needle or syringe, fill syringe (with needle attached) with 0.5% chlorine solution and submerge in solution for 10 minutes for decontamination. • If disposing of needle and syringe, flush needle and syringe with 0.5% chlorine solution three times, then place in a puncture-proof container. 					
11. Immerse both gloved hands in 0.5% chlorine solution. Remove gloves by turning them inside out. <ul style="list-style-type: none"> • If disposing of gloves, place them in a leakproof container or plastic bag. • If reusing surgical gloves, submerge them in 0.5% chlorine solution for 10 minutes for decontamination. 					
12. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.					
POSTPROCEDURE 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 followup 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.					

CHECKLIST FOR EMERGENCY LAPAROTOMY

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

Place a “✓” in case box if step/task is performed **satisfactorily**, an “X” if it is **not** performed **satisfactorily**, or N/O if not observed.

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

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

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

PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR EMERGENCY LAPAROTOMY (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
GETTING READY					
1. Prepare the necessary equipment.					
2. Tell the woman (and her support person) what is going to be done, listen to her, respond attentively to her questions and concerns and obtain informed consent.					
3. Examine the woman, assess her condition and examine the medical record for information and completeness.					
4. Set up an IV line and infuse IV fluids.					
5. Catheterize the woman's bladder.					
6. Have anesthetist give anesthesia and prophylactic antibiotics.					
7. Put on personal protective equipment.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
PREPROCEDURE TASKS					
1. Put on theater clothes, protective footwear, cap, facemask, protective eyeglasses and a plastic apron.					
2. Perform a surgical handscrub and put on high-level disinfected or sterile surgical gloves and a sterile gown.					
3. Ensure that the instruments and supplies are available and arrange them on a sterile tray or in a high-level disinfected container. Conduct an instrument and swab count and ask an assistant to note on board.					
4. Ensure that an assistant is scrubbed and dressed.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
PREPARING THE WOMAN					
1. Place the woman in the supine position on the operating table.					
2. Ensure that the anesthesia has taken full effect.					

CHECKLIST FOR EMERGENCY LAPAROTOMY (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
3. Apply antiseptic solution to the abdomen and place a drape over the woman.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
OPENING THE ABDOMEN					
1. Make a 2–3 cm midline vertical incision below the umbilicus to the pubic hair through skin and fascia.					
2. Lengthen the incision and separate the rectus muscle.					
3. Place a bladder retractor and self-retaining abdominal retractors.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
INSPECTING THE ABDOMEN					
1. Conduct a general examination of the peritoneal cavity to detect any abnormality and operative diagnosis; treat accordingly.					
2. Check the bladder for injury and repair injury, if necessary.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
CLOSING THE ABDOMEN					
1. Conduct an instrument and swab count.					
2. Close the fascia with a running suture, using a cutting needle and 0 chromic catgut (or polyglycolic) suture, ensuring that the peritoneum and intraperitoneal contents are not included in the suture.					
3. If there are signs of infection, pack the subcutaneous tissue with gauze and place loose 0 catgut (or polyglycolic) sutures. Close the skin with a delayed closure after the infection has cleared. If there are no signs of infection, close the fat layer, if necessary, with an interrupted suture, using a round needle and plain catgut, and close the skin with interrupted mattress sutures about 2 cm apart, using a cutting needle and 3-0 nylon or silk.					
4. Ensure there is no bleeding, clean the wound with gauze moistened in antiseptic solution and apply a sterile dressing.					
5. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
6. Place all instruments in 0.5% chlorine solution for decontamination.					
7. If reusing needle or syringe, fill syringe (with needle attached) with 0.5% chlorine solution and submerge in solution for decontamination. If disposing of needle and syringe, place in puncture-proof container.					
8. Remove gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.					
9. Use antiseptic handrub or wash hands thoroughly.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

CHECKLIST FOR EMERGENCY LAPAROTOMY (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
POSTPROCEDURE CARE					
1. Do not leave the woman unattended until the effects of the anesthesia have worn off.					
2. Explain to the woman what was found at surgery and what procedures have been done.					
3. Ensure the woman has written postoperative instructions, necessary medications before discharge and instructions regarding a followup visit.					
4. Provide counseling on prognosis for fertility and, if appropriate, provide family planning.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

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:

- 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)

LEARNING GUIDE FOR SALPINGECTOMY FOR ECTOPIC PREGNANCY (Many of the following steps/tasks should be performed simultaneously.)						
STEP/TASK				CASES		
GETTING READY						
1. Prepare the necessary equipment.						
2. Tell 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 hemoglobin and availability of cross-matched blood.						
5. Catheterize the woman’s bladder.						
6. Arrange for anesthesia.						
7. Ask the anesthetist to give a single dose of prophylactic antibiotics: <ul style="list-style-type: none">• Ampicillin 2 g IV PLUS metronidazole 500 mg IV, OR• Cefazolin 1 g IV PLUS metronidazole 500 mg IV						
8. Put on personal protective equipment.						
PREPROCEDURE TASKS						
1. Put on theater 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.						

LEARNING GUIDE FOR SALPINGECTOMY FOR ECTOPIC PREGNANCY (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
PREPARING THE WOMAN					
1. Place the woman in the supine position on the operating table.					
2. Ensure that the woman has been anesthetized and the anesthesia 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.					
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, 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 cauterize the tissue.					
5. Make a 2–3 cm vertical 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. Repeat steps 7–9 until the fascia is opened to the end of the skin incision.					
10. 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.					
11. Use fingers to make an opening in the peritoneum near the umbilicus.					
12. Lift the peritoneum up using forceps.					
13. 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.					
14. Place a bladder retractor over the pubic bone.					
15. 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.					

LEARNING GUIDE FOR SALPINGECTOMY FOR ECTOPIC PREGNANCY (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
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 2-0 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.					
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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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 1 cm 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. 					

LEARNING GUIDE FOR SALPINGECTOMY FOR ECTOPIC PREGNANCY (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
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: <ul style="list-style-type: none"> • 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 2 cm 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.					
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. Decontaminate or dispose of needle or syringe: <ul style="list-style-type: none"> • If reusing needle or syringe, fill syringe (with needle attached) with 0.5% chlorine solution and submerge in solution for 10 minutes for decontamination. • If disposing of needle and syringe, flush needle and syringe with 0.5% chlorine solution three times, then place in a puncture-proof container. 					
11. Immerse both gloved hands in 0.5% chlorine solution. Remove gloves by turning them inside out. <ul style="list-style-type: none"> • If disposing of gloves, place them in a leakproof container or plastic bag. • If reusing surgical gloves, submerge them in 0.5% chlorine solution for 10 minutes for decontamination. 					
12. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.					
POSTPROCEDURE CARE					
1. Transfer the woman to the 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.					

LEARNING GUIDE FOR SALPINGECTOMY FOR ECTOPIC PREGNANCY (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK		CASES			
6. Tell her when to return if followup 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.					

CHECKLIST FOR SALPINGECTOMY FOR ECTOPIC PREGNANCY

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

Place a “✓” in case box if step/task is performed **satisfactorily**, an “X” if it is **not** performed **satisfactorily**, or N/O if not observed.

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

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

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

PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR SALPINGECTOMY FOR ECTOPIC PREGNANCY (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
GETTING READY					
1. Prepare the necessary equipment.					
2. Tell the woman (and her support person) what is going to be done, listen to her, respond attentively to her questions and concerns and obtain informed consent.					
3. Examine the woman, assess her condition and examine the medical record for information and completeness.					
4. Infuse IV fluids.					
5. Catheterize the woman's bladder.					
6. Have anesthetist give anesthesia and prophylactic antibiotics.					
7. Put on personal protective equipment.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
PREPROCEDURE TASKS					
1. Put on theater clothes, protective footwear, cap, facemask, protective eyeglasses and a plastic apron.					
2. Perform a surgical handscrub and put on high-level disinfected or sterile surgical gloves and a sterile gown.					
3. Ensure that the instruments and supplies are available and arrange them on a sterile tray or in a high-level disinfected container. Conduct an instrument and swab count and ask an assistant to note on board.					
4. Ensure that an assistant is scrubbed and dressed.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
PREPARING THE WOMAN					
1. Place the woman in the supine position on the operating table.					
2. Ensure that the anesthesia has taken full effect.					

CHECKLIST FOR SALPINGECTOMY FOR ECTOPIC PREGNANCY (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
3. Apply antiseptic solution to the abdomen and place a drape over the woman.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
OPENING THE ABDOMEN					
1. Make a 2–3 cm midline vertical incision below the umbilicus to the pubic hair through skin and fascia.					
2. Lengthen the incision and separate the rectus muscle.					
3. Place a bladder retractor and self-retaining abdominal retractors.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
SALPINGECTOMY					
1. Identify and bring to view the affected fallopian tube and its ovary.					
2. Clamp the mesosalpinx to stop bleeding, aspirate blood from the abdomen and remove any blood clots.					
3. Use moist gauze to pack away the bowel and omentum from the operative field.					
4. Divide the mesosalpinx using a series of clamps and tie the mesosalpinx with 2-0 chromic catgut (or polyglycolic) suture.					
5. Place a proximal suture around the tube at the isthmus end and excise the tube.					
6. Ensure that there is no bleeding.					
7. Check the bladder for injury and repair injury, if necessary.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
CLOSING THE ABDOMEN					
1. Check instruments and swabs.					
2. Close the fascia with a running suture, using a cutting needle and 0 chromic catgut (or polyglycolic) suture, ensuring that the peritoneum and intraperitoneal contents are not included in the suture.					
3. If there are signs of infection, pack the subcutaneous tissue with gauze and place loose 0 catgut (or polyglycolic) sutures. Close the skin with a delayed closure after the infection has cleared. If there are no signs of infection, close the fat layer, if necessary, with an interrupted suture, using a round needle and plain catgut, and close the skin with interrupted mattress sutures about 2 cm apart, using a cutting needle and 3-0 nylon or silk.					
4. Ensure there is no bleeding, clean the wound with gauze moistened in antiseptic solution and apply a sterile dressing.					
5. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
6. Place all instruments in 0.5% chlorine solution for decontamination.					

CHECKLIST FOR SALPINGECTOMY FOR ECTOPIC PREGNANCY (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
7. If reusing needle or syringe, fill syringe (with needle attached) with 0.5% chlorine solution and submerge in solution for decontamination. If disposing of needle and syringe, place in puncture-proof container.					
8. Remove gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.					
9. Use antiseptic handrub or wash hands thoroughly.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
POSTPROCEDURE CARE					
1. Do not leave the woman unattended until the effects of the anesthesia have worn off.					
2. Explain to the woman what was found at surgery and what procedures have been done.					
3. Ensure the woman has written postoperative instructions, necessary medications before discharge and instructions regarding a followup visit.					
4. Provide counseling on prognosis for fertility and, if appropriate, provide family planning.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

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:

- 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)

LEARNING GUIDE FOR LAPAROTOMY AND REPAIR OF RUPTURED UTERUS (Many of the following steps/tasks should be performed simultaneously.)

STEP/TASK	CASES				
GETTING READY					
1. Prepare the necessary equipment.					
2. Tell 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 hemoglobin and availability of cross-matched blood.					
5. Catheterize the woman’s bladder.					
6. Arrange for anesthesia.					
7. Ask the anesthetist to give a single dose of prophylactic antibiotics: <ul style="list-style-type: none">• Ampicillin 2 g IV PLUS metronidazole 500 mg IV, OR• Cefazolin 1 g IV PLUS metronidazole 500 mg IV					
8. Put on personal protective equipment.					
PREPROCEDURE TASKS					
1. Put on theater 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.					

LEARNING GUIDE FOR LAPAROTOMYAND REPAIR OF RUPTURED UTERUS (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
PREPARING THE WOMAN					
1. Place the woman in the supine position on the operating table.					
2. Ensure that the woman has been anesthetized and the anesthesia 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.					
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, 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 cauterize the tissue.					
5. Make a 2–3 cm vertical 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. Repeat steps 7–9 until the fascia is opened to the end of the skin incision.					
10. 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.					
11. 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.					
12. Lift the peritoneum up using forceps.					
13. 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.					
14. Examine the abdomen and the uterus for the site of rupture.					
15. Aspirate blood from the lower abdomen and remove any blood clots.					
16. Place a bladder retractor over the pubic bone.					
17. Place self-retaining abdominal retractors.					

LEARNING GUIDE FOR LAPAROTOMYAND REPAIR OF RUPTURED UTERUS (Many of the following steps/tasks should be performed simultaneously.)						
STEP/TASK		CASES				
REPAIR OF UTERINE RUPTURE						
1.	Deliver the newborn and placenta.					
2.	Ask the anesthetist to infuse oxytocin 20 units in 1 L normal saline or Ringer’s lactate at 60 drops per minute.					
3.	Check for uterine contractions. After the uterus contracts, ask the anesthetist to reduce oxytocin infusion rate to 20 drops per minute.					
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 hematoma, and repair as necessary.					
8.	Repair the uterine tear using continuous locking sutures with 0 chromic catgut (or polyglycolic) suture, ensuring the ureter is not included in a stitch.					
9.	Place a second layer of sutures if bleeding is not controlled or if the upper segment of the uterus is involved in the rupture.					
10.	Check the fallopian tubes and ovaries. If tubal ligation was requested, perform the procedure.					
11.	If there is bleeding, control by clamping with long artery forceps and ligating. If the bleeding points are deep, use figure-of-eight sutures.					
12.	Place an abdominal drain: <ul style="list-style-type: none">• Make a stab incision in the lower abdomen about 3–4 cm 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 hematoma, drain the hematoma.					
14.	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.	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.					

LEARNING GUIDE FOR LAPAROTOMY AND REPAIR OF RUPTURED UTERUS
(Many of the following steps/tasks should be performed simultaneously.)

STEP/TASK	CASES				
3. Close the fascia: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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 1 cm 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: <ul style="list-style-type: none"> 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 2 cm 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.					
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. Decontaminate or dispose of needle or syringe: <ul style="list-style-type: none"> If reusing needle or syringe, fill syringe (with needle attached) with 0.5% chlorine solution and submerge in solution for 10 minutes for decontamination. If disposing of needle and syringe, flush needle and syringe with 0.5% chlorine solution three times, then place in a puncture-proof container. 					

LEARNING GUIDE FOR LAPAROTOMY AND REPAIR OF RUPTURED UTERUS
(Many of the following steps/tasks should be performed simultaneously.)

STEP/TASK	CASES				
11. Immerse both gloved hands in 0.5% chlorine solution. Remove gloves by turning them inside out. <ul style="list-style-type: none"> • If disposing of gloves, place them in a leakproof container or plastic bag. • If reusing surgical gloves, submerge them in 0.5% chlorine solution for 10 minutes for decontamination. 					
12. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.					
POSTPROCEDURE CARE					
1. Transfer the woman to the 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 followup is needed and that she can return anytime she has concerns.					
7. If tubal ligation was not performed, discuss reproductive goals, provide counseling on prognosis for fertility and, if appropriate, provide family planning. If the woman wishes to have more children, advise her to have an elective cesarean section for future pregnancies.					

CHECKLIST FOR LAPAROTOMY AND REPAIR OF RUPTURED UTERUS

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

Place a “✓” in case box if step/task is performed **satisfactorily**, an “X” if it is **not** performed **satisfactorily**, or N/O if not observed.

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

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

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

PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR LAPAROTOMY AND REPAIR OF RUPTURED UTERUS (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
GETTING READY					
1. Prepare the necessary equipment.					
2. Tell the woman (and her support person) what is going to be done, listen to her, respond attentively to her questions and concerns and obtain informed consent.					
3. Examine the woman, assess her condition and examine the medical record for information and completeness.					
4. Infuse IV fluids.					
5. Catheterize the woman's bladder.					
6. Have anesthetist give anesthesia and prophylactic antibiotics.					
7. Put on personal protective equipment.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
PREPROCEDURE TASKS					
1. Put on theater clothes, protective footwear, cap, facemask, protective eyeglasses and a plastic apron.					
2. Perform a surgical handscrub and put on high-level disinfected or sterile surgical gloves and a sterile gown.					
3. Ensure that the instruments and supplies are available and arrange them on a sterile tray or in a high-level disinfected container. Conduct an instrument and swab count and ask an assistant to note on board.					
4. Ensure that an assistant is scrubbed and dressed.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
PREPARING THE WOMAN					
1. Place the woman in the supine position on the operating table.					
2. Ensure that the anesthesia has taken full effect.					

CHECKLIST FOR LAPAROTOMY AND REPAIR OF RUPTURED UTERUS (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
3. Apply antiseptic solution to the abdomen and place a drape over the woman.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
OPENING THE ABDOMEN					
1. Make a 2–3 cm midline vertical incision below the umbilicus to the pubic hair through skin and fascia.					
2. Lengthen the incision and separate the rectus muscle.					
3. Examine the uterus for the site of rupture.					
4. Aspirate blood from the abdomen and remove any blood clots.					
5. Place a bladder retractor and self-retaining abdominal retractors.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
REPAIR OF UTERINE RUPTURE					
1. Deliver the newborn and placenta.					
2. Infuse oxytocin.					
3. Separate urinary bladder from uterus.					
4. Determine if the tear is through the cervix and vagina or laterally through the uterine artery or if there is a broad ligament hematoma, and repair as necessary.					
5. Repair uterine tear using continuous locking sutures with 0 chromic catgut (or polyglycolic) suture.					
6. Check the fallopian tubes and ovaries, and perform tubal ligation, if requested.					
7. Control bleeding by clamping and using figure-of-eight sutures.					
8. Place an abdominal drain.					
9. Check the bladder for injury and repair injury, if necessary.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
CLOSING THE ABDOMEN					
1. Conduct an instrument and swab count.					
2. Inspect the wall of the uterus and close the fascia with a running suture, using a cutting needle and 0 chromic catgut (or polyglycolic) suture, ensuring that the peritoneum and intraperitoneal contents are not included in the suture.					
3. If there are signs of infection, pack the subcutaneous tissue with gauze and place loose 0 catgut (or polyglycolic) sutures. Close the skin with a delayed closure after the infection has cleared. If there are no signs of infection, close the fat layer, if necessary, with an interrupted suture, using a round needle and plain catgut, and close the skin with interrupted mattress sutures about 2 cm apart, using a cutting needle and 3-0 nylon or silk.					
4. Ensure there is no bleeding, clean the wound with gauze moistened in antiseptic solution and apply a sterile dressing.					

CHECKLIST FOR LAPAROTOMY AND REPAIR OF RUPTURED UTERUS (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
5. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
6. Place all instruments in 0.5% chlorine solution for decontamination.					
7. If reusing needle or syringe, fill syringe (with needle attached) with 0.5% chlorine solution and submerge in solution for decontamination. If disposing of needle and syringe, place in puncture-proof container.					
8. Remove gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.					
9. Use antiseptic handrub or wash hands thoroughly.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
POSTPROCEDURE CARE					
1. Do not leave the woman unattended until the effects of the anesthesia have worn off.					
2. Explain to the woman what was found at surgery and what procedures have been done.					
3. Ensure the woman has written postoperative instructions, necessary medications before discharge and instructions regarding a followup visit.					
4. If tubal ligation was not performed, discuss reproductive goals, provide counseling on prognosis for fertility and, if appropriate, provide family planning. If the woman wishes to have more children, advise her to have an elective cesarean section for future pregnancies.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

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:

- 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)

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

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

STEP/TASK	CASES				
GETTING READY					
1. Prepare the necessary equipment.					
2. Tell 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 hemoglobin and availability of cross-matched blood.					
5. Catheterize the woman’s bladder.					
6. Arrange for anesthesia.					
7. Ask the anesthetist to give a single dose of prophylactic antibiotics: <ul style="list-style-type: none">• Ampicillin 2 g IV PLUS metronidazole 500 mg IV, OR• Cefazolin 1 g IV PLUS metronidazole 500 mg IV					
8. Put on personal protective equipment.					
PREPROCEDURE TASKS					
1. Put on theater 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.					

**LEARNING GUIDE FOR LAPAROTOMY AND SUBTOTAL HYSTERECTOMY FOR
REMOVAL OF RUPTURED UTERUS
(Many of the following steps/tasks should be performed simultaneously.)**

STEP/TASK	CASES				
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. Place the woman in the supine position on the operating table.					
2. Ensure that the woman has been anesthetized and the anesthesia 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.					
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, 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 cauterize the tissue.					
5. Make a 2–3 cm vertical 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. Repeat steps 7–9 until the fascia is opened to the end of the skin incision.					
10. 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.					
11. 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.					
12. Lift the peritoneum up using forceps.					
13. 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.					
14. Examine the abdomen and the uterus for the site of rupture.					

**LEARNING GUIDE FOR LAPAROTOMY AND SUBTOTAL HYSTERECTOMY FOR
REMOVAL OF RUPTURED UTERUS
(Many of the following steps/tasks should be performed simultaneously.)**

STEP/TASK	CASES				
15. Aspirate blood from the lower abdomen and remove any blood clots.					
16. Place a bladder retractor over the pubic bone.					
17. 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 hematoma, and repair as necessary.					
6. <ul style="list-style-type: none"> • 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. 					
7. Apply long artery forceps to the uterine rupture edge and divide untorn muscle between clamps, at the lower segment above the bladder.					
8. Free the uterus from the cervical stump and apply hemostatic sutures to the edge of the cut lower segment walls.					
9. Check to ensure hemostasis.					
10. If there is bleeding, control by clamping with long artery forceps and ligating. If the bleeding points are deep, use figure-of-eight sutures.					
11. Place an abdominal drain: <ul style="list-style-type: none"> • Make a stab incision in the lower abdomen about 3–4 cm 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 hematoma, drain the hematoma.					
13. 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					

**LEARNING GUIDE FOR LAPAROTOMY AND SUBTOTAL HYSTERECTOMY FOR
REMOVAL OF RUPTURED UTERUS**
(Many of the following steps/tasks should be performed simultaneously.)

STEP/TASK	CASES				
1. 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.					
2. Close the fascia: <ul style="list-style-type: none"> • 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. 					
3. 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.					
4. Tie off the suture: <ul style="list-style-type: none"> • 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 1 cm 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. 					
5. 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: <ul style="list-style-type: none"> • 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 2 cm apart to bring the skin layer together. 					
6. Ensure there is no bleeding, clean the wound with gauze moistened in antiseptic solution and apply a sterile dressing.					
7. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
8. Place all instruments in 0.5% chlorine solution for 10 minutes for decontamination.					
9. Decontaminate or dispose of needle or syringe: <ul style="list-style-type: none"> • If reusing needle or syringe, fill syringe (with needle attached) with 0.5% chlorine solution and submerge in solution for 10 minutes for decontamination. • If disposing of needle and syringe, flush needle and syringe with 0.5% chlorine solution three times, then place in a puncture-proof container. 					

**LEARNING GUIDE FOR LAPAROTOMY AND SUBTOTAL HYSTERECTOMY FOR
REMOVAL OF RUPTURED UTERUS
(Many of the following steps/tasks should be performed simultaneously.)**

STEP/TASK	CASES				
10. Immerse both gloved hands in 0.5% chlorine solution. Remove gloves by turning them inside out. <ul style="list-style-type: none"> • If disposing of gloves, place them in a leakproof container or plastic bag. • If reusing surgical gloves, submerge them in 0.5% chlorine solution for 10 minutes for decontamination. 					
11. Use antiseptic handrub or wash hands thoroughly with soap and water and dry with a clean, dry cloth or air dry.					
POSTPROCEDURE CARE					
1. Transfer the woman to the 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 followup is needed and that she can return anytime she has concerns.					
7. If tubal ligation was not performed, discuss reproductive goals, provide counseling on prognosis for fertility and, if appropriate, provide family planning. If the woman wishes to have more children, advise her to have an elective cesarean section for future pregnancies.					

CHECKLIST FOR LAPAROTOMY AND SUBTOTAL HYSTERECTOMY FOR REMOVAL OF RUPTURED UTERUS

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

Place a “✓” in case box if step/task is performed **satisfactorily**, an “X” if it is **not** performed **satisfactorily**, or N/O if not observed.

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

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

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

PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR LAPAROTOMY AND SUBTOTAL HYSTERECTOMY FOR REMOVAL OF RUPTURED UTERUS (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
GETTING READY					
1. Prepare the necessary equipment.					
2. Tell the woman (and her support person) what is going to be done, listen to her, respond attentively to her questions and concerns and obtain informed consent.					
3. Examine the woman, assess her condition and examine the medical record for information and completeness.					
4. Set up an IV line and infuse IV fluids.					
5. Catheterize the woman's bladder.					
6. Have anesthetist give anesthesia and prophylactic antibiotics.					
7. Put on personal protective equipment.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
PREPROCEDURE TASKS					
1. Put on theater clothes, protective footwear, cap, facemask, protective eyeglasses and a plastic apron.					
2. Perform a surgical handscrub and put on high-level disinfected or sterile surgical gloves and a sterile gown.					
3. Ensure that the instruments and supplies are available and arrange them on a sterile tray or in a high-level disinfected container. Conduct an instrument and swab count and ask an assistant to note on board.					
4. Ensure that an assistant is scrubbed and dressed.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

CHECKLIST FOR LAPAROTOMY AND SUBTOTAL HYSTERECTOMY FOR REMOVAL OF RUPTURED UTERUS (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
PREPARING THE WOMAN					
1. Place the woman in the supine position on the operating table.					
2. Ensure that the anesthesia has taken full effect.					
3. Apply antiseptic solution to the abdomen and place a drape over the woman.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
OPENING THE ABDOMEN					
1. Make a 2–3 cm midline vertical incision below the umbilicus to the pubic hair through skin and fascia.					
2. Lengthen the incision and separate the rectus muscle.					
3. Examine the uterus for the site of rupture.					
4. Aspirate blood from the abdomen and remove any blood clots.					
5. Place a bladder retractor and self-retaining abdominal retractors.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
SUBTOTAL HYSTERECTOMY					
1. Deliver the newborn and placenta.					
2. Separate urinary bladder from uterus.					
3. Determine if the tear is through the cervix and vagina or laterally through the uterine artery or if there is a broad ligament hematoma, and repair as necessary.					
4. <ul style="list-style-type: none"> • Apply 2 long clamps or artery forceps to tube, ovarian ligament and round ligament and divide between clamps. • Transfix the lateral pedicle. • Apply 2 long clamps to uterine vessels and divide between clamps. Transfix the lateral pedicle. 					
5. Apply long artery forceps to the uterine rupture edge and divide untorn muscle between clamps, at the lower segment above the bladder.					
6. Free the uterus from the cervical stump and apply hemostatic sutures to the edge of the cut lower segment walls.					
7. Check to ensure hemostasis.					
8. Control bleeding by clamping and using figure-of-eight sutures.					
9. Place an abdominal drain.					
10. Check the bladder for injury and repair injury, if necessary.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

CHECKLIST FOR LAPAROTOMY AND SUBTOTAL HYSTERECTOMY FOR REMOVAL OF RUPTURED UTERUS (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
CLOSING THE ABDOMEN					
1. Close the fascia with a running suture, using a cutting needle and 0 chromic catgut (or polyglycolic) suture, ensuring that the peritoneum and intraperitoneal contents are not included in the suture.					
2. If there are signs of infection, pack the subcutaneous tissue with gauze and place loose 0 catgut (or polyglycolic) sutures. Close the skin with a delayed closure after the infection has cleared. If there are no signs of infection, close the fat layer, if necessary, with an interrupted suture, using a round needle and plain catgut, and close the skin with interrupted mattress sutures about 2 cm apart, using a cutting needle and 3-0 nylon or silk.					
3. Ensure there is no bleeding, clean the wound with gauze moistened in antiseptic solution and apply a sterile dressing.					
4. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
5. Place all instruments in 0.5% chlorine solution for decontamination.					
6. If reusing needle or syringe, fill syringe (with needle attached) with 0.5% chlorine solution and submerge in solution for decontamination. If disposing of needle and syringe, place in puncture-proof container.					
7. Remove gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.					
8. Use antiseptic handrub or wash hands thoroughly.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
POSTPROCEDURE CARE					
1. Do not leave the woman unattended until the effects of the anesthesia have worn off.					
2. Explain to the woman what was found at surgery and what procedures have been done.					
3. Ensure the woman has written postoperative instructions, necessary medications before discharge and instructions regarding a followup visit.					
4. If tubal ligation was not performed, discuss reproductive goals, provide counseling on prognosis for fertility and, if appropriate, provide family planning. If the woman wishes to have more children, advise her to have an elective cesarean section for future pregnancies.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

Week 3

LEARNING GUIDE FOR POSTPARTUM ASSESSMENT

(To be completed by **Participants**)

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

Rate the performance of each step or task observed using the following rating scale:

- 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)

LEARNING GUIDE FOR POSTPARTUM ASSESSMENT (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
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. Tell the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.					
5. Make sure that Quick Check has been performed 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 not done, perform immediately. If danger signs are present, stabilize and manage or refer as appropriate.					
HISTORY					
1. Check the woman's record or ask for the following information and record her responses: <ul style="list-style-type: none"> • Name • Age • Reason for visit • Contact information • Financial and transportation situation • Parity • Number of living children 					
2. Ask the woman about her daily habits and lifestyle: <ul style="list-style-type: none"> • Workload • Diet • Harmful substances • Household support/composition • Potential gender violence 					

LEARNING GUIDE FOR POSTPARTUM ASSESSMENT (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
3. Check the woman's record or ask her about her childbirth and record her responses: <ul style="list-style-type: none"> • Date of baby's birth • Place of birth and birth attendant • Mode of childbirth (SVD, cesarean section, instrumental assistance) • Pregnancy complications (pre-eclampsia, convulsions, anemia, infection, syphilis, malaria) • Complications during or after birth (fever, heavy bleeding, convulsions, lacerations) • Condition of the baby at birth 					
4. Ask the woman about current postpartum period: <ul style="list-style-type: none"> • Pain, swelling or discharge from perineum • Bleeding/lochia • Breastfeeding (frequency, day-and-night, attachment and sucking, baby's satisfaction, problems) • Problems with passing or holding urine or stool • Neonatal complications • Thoughts and feelings about the baby • Other problems 					
5. Ask the woman about her previous postpartum experiences: <ul style="list-style-type: none"> • Previous breastfeeding experience • Previous physical or mental problems 					
6. Ask the woman about her medical history: <ul style="list-style-type: none"> • HIV status • Anemia • Chronic conditions such as tuberculosis, hepatitis B, diabetes • Drugs/medications she is using • Tetanus toxoid immunization 					
7. Check the woman's record or ask her about (according to local prevalence/protocols): <ul style="list-style-type: none"> • Iron-folate • Vitamin A • Malaria prophylaxis • Mebendazole 					
8. Ask the woman about family planning and record her responses: <ul style="list-style-type: none"> • Desire for more children • Methods used • Method preference 					
9. Ask the woman about social support and record her responses: <ul style="list-style-type: none"> • Main support persons (e.g., husband, mother, mother-in-law) • Availability of money for food and baby supplies 					
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.					

LEARNING GUIDE FOR POSTPARTUM ASSESSMENT (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
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 and blood pressure and record findings.					
6. Check the woman's conjunctiva for pallor.					
7. Examine breasts: <ul style="list-style-type: none"> • Engorgement • Cracked nipples • Local tenderness, redness or swelling 					
8. Examine abdomen: <ul style="list-style-type: none"> • Fresh scars • Firmness and size of uterus • Tenderness (lower abdomen) 					
9. Examine legs: <ul style="list-style-type: none"> • Localized pain or tenderness • Hot spots • Pain in calf when foot is forcibly dorsiflexed (Homan's sign) 					
10. Put new examination or high-level disinfected gloves on both hands.					
11. Examine perineum and genitalia: <ul style="list-style-type: none"> • Tears/ lesions • Swelling • Pus 					
12. Observe lochia: <ul style="list-style-type: none"> • Color • Odor • Amount 					
13. Immerse both gloved hands in 0.5% chlorine solution. Remove gloves by turning them inside out. <ul style="list-style-type: none"> • If disposing of gloves, place them in a leakproof container or plastic bag. • If reusing surgical gloves, submerge them in 0.5% chlorine solution for 10 minutes for decontamination. 					
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 (position, attachment, finishing feed, satisfaction).					
POST PHYSICAL 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.					

LEARNING GUIDE FOR POSTPARTUM ASSESSMENT (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK			CASES		
SCREENING PROCEDURES					
1. Do a hemoglobin test, if clinical signs of anemia.					
2. Do a RPR test (syphilis screening), if not done during pregnancy.					
3. Do HIV screening, if the woman agrees.					

LEARNING GUIDE FOR BASIC POSTPARTUM CARE

(To be completed by **Participants**)

Note: Participants should use this learning guide in conjunction with the **Learning Guide for Postpartum Assessment, Learning Guide for Postpartum Family Planning, and Learning Guide for Newborn Examination.**

Rate the performance of each step or task observed using the following rating scale:

- 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
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LEARNING GUIDE FOR BASIC POSTPARTUM CARE (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK					
GETTING READY					
1. Prepare the client care area and necessary equipment.					
2. Tell the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.					
IDENTIFYING PROBLEMS/NEEDS					
Note: Problem identification should be based on the findings of the postpartum history, physical examination and screening procedures. 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.					
PROVIDING CARE/TAKING ACTION					
Care for Mother					
1. Provide HIV voluntary counseling and testing: <ul style="list-style-type: none"> • Pre-test counseling • Post-test counseling 					
2. Provide breastfeeding and breast care counsel and support: <ul style="list-style-type: none"> • Importance of breastfeeding • Techniques for successful breastfeeding • Caring for breasts 					
3. Provide nutritional counsel and support: <ul style="list-style-type: none"> • Dietary counsel • Iron-folate • Vitamin A 					
3. Counsel on prevention of infection: <ul style="list-style-type: none"> • Genital hygiene • Hand hygiene • Malaria and hookworm 					
4. Counsel on rest and sleep.					

LEARNING GUIDE FOR BASIC POSTPARTUM CARE (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
5. Facilitate complication readiness planning: <ul style="list-style-type: none"> Recognition of danger signs: heavy vaginal bleeding, severe/persistent headache or blurred vision, convulsions, foul-smelling vaginal discharge, fever, severe abdominal pain, difficulty breathing, signs of depression/hallucinations. Planning response to danger signs. 					
6. Counsel on mother-newborn and family relationships.					
7. Counsel on sexual relations and safer sex.					
8. Counsel on family planning.					
9. Counsel on newborn care.					
10. Provide immunizations and preventive therapy: <ul style="list-style-type: none"> Tetanus toxoid Iron-folate Malaria prophylaxis (use of ITNs for self and baby according to local prevalence) Mebendazole (according to local policy) Vitamin A (according to local policy) 					
11. Treat syphilis if RPR positive and untreated during pregnancy.					
Care for Baby					
12. Provide breastfeeding counsel and support (can be provided while mother is breastfeeding baby during breastfeeding observation if possible). <ul style="list-style-type: none"> Provide guidance as needed about attachment, positioning, effective sucking, finishing the breastfeed. Encourage exclusive feeding on-demand. Answer questions and respond to concerns. 					
14. Provide counseling about warmth: <ul style="list-style-type: none"> Dressing and wrapping the baby Keeping the room warm 					
15. Provide counseling about hygiene: <ul style="list-style-type: none"> Handwashing Bathing Cord care 					
16. Facilitate complication readiness planning: <ul style="list-style-type: none"> Provide counseling about recognition of danger signs (breathing difficulties, blue color, floppy, not feeding, convulsions, pus or blood from cord, pus from eyes, convulsions, spasms, loss of consciousness, hotness/fever, coldness, bleeding, yellowness/jaundice, diarrhea, continuous vomiting). Planning response to danger signs 					
17. Counsel additionally concerning: <ul style="list-style-type: none"> Importance of immunizations Prevention of malaria (according to local prevalence/protocols) Sleep and other behaviors Feeding and elimination 					

LEARNING GUIDE FOR BASIC POSTPARTUM CARE (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
18. Provide newborn immunization, if not already immunized.					
19. Record the relevant details of care for mother and baby.					
20. Ask the mother if she has any further questions or concerns.					
21. Thank the mother for coming and tell her when she should come for her next postpartum visit, if necessary.					

CHECKLIST FOR POSTPARTUM ASSESSMENT AND BASIC CARE

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

Place a “✓” in case box if step/task is performed **satisfactorily**, an “X” if it is **not** performed **satisfactorily**, or N/O if not observed.

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

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

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

PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR POSTPARTUM ASSESSMENT AND BASIC CARE (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
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. Tell the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.					
5. Make sure that Quick Check has been performed to identify any danger signs, and stabilize and manage or refer if danger signs present.					
HISTORY					
1. Check the woman's record or ask for her name, age, reason for visit, contact information, financial and transportation situation, parity, and number of living children.					
2. Ask the woman about her daily habits and lifestyle, including workload, diet, harmful substances, household support/composition, potential gender violence.					
3. Check the woman's record or ask her about her childbirth and record her responses: <ul style="list-style-type: none"> • Date of baby's birth • Place of birth and birth attendant • Mode of childbirth (SVD, cesarean section, instrumental assistance) • Pregnancy complications (pre-eclampsia, convulsions, anemia, infection, syphilis, malaria) • Complications during or after birth (fever, heavy bleeding, convulsions, lacerations) • Condition of the baby at birth 					

CHECKLIST FOR POSTPARTUM ASSESSMENT AND BASIC CARE (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
4. Ask the woman about current postpartum period: <ul style="list-style-type: none"> • Pain, swelling or discharge from perineum • Bleeding/lochia • Breastfeeding (frequency, day-and-night, attachment and sucking, baby's satisfaction, problems) • Problems with passing or holding urine or stool • Neonatal complications • Thoughts and feelings about the baby • Other problems 					
5. Ask the woman about her previous postpartum experiences including breastfeeding and previous physical or mental problems.					
6. Ask the woman about her medical history including HIV status, anemia, chronic conditions, drugs/medications she is using, and tetanus toxoid immunization.					
7. Check the woman's record or ask her about (according to local prevalence/protocols) iron-folate, vitamin A, malaria prophylaxis, mebendazole.					
8. Ask the woman about family planning, including method preference.					
9. Ask the woman about social support , including support persons and resources to care for baby.					
PHYSICAL EXAMINATION					
1. Observe general appearance (gait, facial expression, hygiene, skin).					
2. Use antiseptic handrub or wash hands thoroughly.					
3. Explain each step of the physical examination.					
4. Take the woman's temperature, pulse and blood pressure.					
5. Check the woman's conjunctiva for pallor.					
6. Examine breasts for engorgement, cracked nipples, local tenderness, redness or swelling.					
7. Examine abdomen to check the uterus and detect tenderness.					
8. Examine legs for pain or tenderness.					
9. Put on new examination or high level-disinfected gloves.					
10. Examine perineum and genitalia for signs of trauma or infection.					
11. Observe color, odor and amount of lochia.					
12. Remove gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.					
13. Use antiseptic handrub or wash hands thoroughly.					

CHECKLIST FOR POSTPARTUM ASSESSMENT AND BASIC CARE (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
MOTHER-NEWBORN OBSERVATIONS					
1. Observe interaction/bonding.					
2. Observe breastfeeding (position, attachment, finishing feed, satisfaction).					
POST PHYSICAL 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.					
SCREENING PROCEDURES					
1. Do a hemoglobin test, if clinical signs of anemia.					
2. Do a RPR test (syphilis screening), if not done during pregnancy.					
3. Do HIV screening, if the woman agrees.					
PROVIDING CARE/TAKING ACTION					
Care for Mother					
1. Provide HIV voluntary counseling and testing.					
2. Treat according to results of RPR, if necessary.					
3. Facilitate complication readiness planning, including recognition of danger signs and what to do about them.					
4. Counsel on: <ul style="list-style-type: none"> • Nutrition and iron supplementation • Prevention of infection, including genital hygiene, hand hygiene, malaria, and hookworm • Rest and sleep • Sexual relations and safer sex • Mother-newborn and family relationships 					
5. Counsel on family planning: <ul style="list-style-type: none"> • Explain how lactational amenorrhea method (LAM) works. • Help the woman choose an appropriate method of contraception if she does not want to use LAM. • If the woman is not breastfeeding, explain the return of menstrual cycles and help her choose an appropriate method of contraception. • Provide method of choice and instructions for use. • Discuss what to do if side effects are experienced. • Provide followup instructions. 					
6. Provide immunizations and preventive therapy, including tetanus toxoid, iron-folate, malaria prophylaxis, mebendazole, and vitamin A.					

CHECKLIST FOR POSTPARTUM ASSESSMENT AND BASIC CARE (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
Care for Baby					
7. Provide breastfeeding counsel and support for good attachment, positioning, sucking, and feeding on-demand.					
8. Provide counseling about keeping the baby warm.					
9. Provide counseling about hygiene, including handwashing, bathing and cord care.					
10. Facilitate complication readiness planning including danger signs in the baby and what to do about them.					
11. Counsel additionally concerning: <ul style="list-style-type: none">• Importance of immunizations• Prevention of malaria (according to local prevalence/protocols)• Sleep and other behaviors• Feeding and elimination					
12. Provide newborn immunization, if not already immunized.					
13. Record the relevant details of care for mother and baby.					
14. Ask the mother if she has any further questions or concerns.					
15. Thank the mother for coming and tell her when she should come for her next postpartum visit, if necessary.					

LEARNING GUIDE FOR POSTPARTUM FAMILY PLANNING

(To be completed by **Participants**)

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

Rate the performance of each step or task observed using the following rating scale:

- 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)

LEARNING GUIDE FOR POSTPARTUM FAMILY PLANNING (Many of the following steps/tasks should be performed simultaneously.)						
STEP/TASK		CASES				
GETTING READY						
1. Prepare the client care area and necessary equipment.						
2. Tell the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.						
PROVIDING CARE/TAKING ACTION – BREASTFEEDING WOMEN						
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 6 weeks postpartum, and if using lactational amenorrhea method (LAM) not for up to 6 months.						
4. Explain how LAM works.						
5. Explain the possible problems related to LAM.						
6. If the woman is breastfeeding but wants to use a contraceptive method other than LAM, provide information about: <ul style="list-style-type: none">• 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						
7. Make sure that the woman does not have a medical condition that would contraindicate use of a particular method (see the <i>JHPIEGO PocketGuide for Family Planning Service Providers</i> , 2nd edition).						
8. Help the woman choose an appropriate method if she does not want to use LAM.						
9. Provide method of choice and instructions for use. (Assumes that the healthcare provider has the skills needed to do this.)						
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.						

LEARNING GUIDE FOR POSTPARTUM FAMILY PLANNING (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK		CASES			
12. Provide followup visit instructions, including assurance that the woman can return to the clinic at any time to receive advice and medical attention.					
13. Answer any questions that the woman has.					
PROVIDING CARE/TAKING ACTION – NON-BREASTFEEDING WOMEN					
1. If the woman is not breastfeeding, explain that her menstrual cycles will probably resume within 4–6 weeks after the birth.					
2. 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 sterilization) the first sexual intercourse.					
3. Explain the recommended time for the non-breastfeeding woman to start the various available methods.					
4. Explain the potential side effects of the available methods and make sure that each is understood.					
5. Make sure that the woman does not have a medical condition that would contraindicate use of a particular method (see the <i>JHPIEGO PocketGuide for Family Planning Service Providers</i> , 2nd edition).					
6. Help the woman to choose an appropriate method.					
7. Provide method of choice and instructions for use. (Assumes that the healthcare provider has the skills needed to do this.)					
8. Ask the woman to repeat instructions.					
9. Discuss what to do if the woman experiences side effects or problems with the method of choice.					
10. Provide followup visit instructions, including assurance that the woman can return to the clinic at any time to receive advice and medical attention.					
11. Answer any questions that the woman has.					

CHECKLIST FOR POSTPARTUM FAMILY PLANNING

(To be completed by **Participants**)

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

Place a “✓” in case box if step/task is performed **satisfactorily**, an “X” if it is **not** performed **satisfactorily**, or N/O if not observed.

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

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

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

CHECKLIST FOR POSTPARTUM FAMILY PLANNING (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
PROVIDING CARE/TAKING ACTION – BREASTFEEDING WOMEN					
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 6 weeks postpartum, and if using lactational amenorrhea method (LAM) not for up to 6 months.					
4. Explain how LAM works.					
5. Explain the possible problems related to LAM.					
6. If the woman is breastfeeding but wants to use a contraceptive method other than LAM, provide information about: <ul style="list-style-type: none"> • 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 					
7. Make sure that the woman does not have a medical condition that would contraindicate use of a particular method (see the <i>JHPIEGO PocketGuide for Family Planning Service Providers</i> , 2nd edition).					
8. Help the woman choose an appropriate method if she does not want to use LAM.					
9. Provide method of choice and instructions for use. (Assumes that the healthcare provider has the skills needed to do this.)					
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 followup visit instructions, including assurance that the woman can return to the clinic at any time to receive advice and medical attention.					
13. Answer any questions that the woman has.					

CHECKLIST FOR POSTPARTUM FAMILY PLANNING (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK		CASES			
PROVIDING CARE/TAKING ACTION – NON-BREASTFEEDING WOMEN					
1.	If the woman is not breastfeeding, explain that her menstrual cycles will probably resume within 4–6 weeks after the birth.				
2.	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 sterilization) the first sexual intercourse.				
3.	Explain the recommended time for the non-breastfeeding woman to start the various available methods.				
4.	Explain the potential side effects of the available methods and make sure that each is understood.				
5.	Make sure that the woman does not have a medical condition that would contraindicate use of a particular method (see the <i>JHPIEGO PocketGuide for Family Planning Service Providers</i> , 2nd edition).				
6.	Help the woman to choose an appropriate method.				
7.	Provide method of choice and instructions for use. (Assumes that the healthcare provider has the skills needed to do this.)				
8.	Ask the woman to repeat instructions.				
9.	Discuss what to do if the woman experiences side effects or problems with the method of choice.				
10.	Provide followup visit instructions, including assurance that the woman can return to the clinic at any time to receive advice and medical attention.				
11.	Answer any questions that the woman has.				

LEARNING GUIDE FOR NEWBORN EXAMINATION

(To be completed by **Participants**)

Rate the performance of each step or task observed using the following rating scale:

- 1 Needs Improvement:** Step or task not performed correctly or out of sequence (if necessary) or is omitted
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- 3 Proficiently Performed:** Step or task efficiently and precisely performed in the proper sequence (if necessary)

LEARNING GUIDE FOR NEWBORN EXAMINATION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK					
GETTING READY (Every visit)					
1. Prepare the client care area and necessary equipment.					
2. Greet the mother, acknowledge the newborn, and tell the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.					
HISTORY					
1. (1 st visit) Obtain personal information: <ul style="list-style-type: none"> Newborn's name and sex Contact information Date and time of birth Any problem that brought mother to healthcare provider 					
2. (1 st visit) Check the mother's record for risk of infection or ask her if: <ul style="list-style-type: none"> She had a uterine infection or a fever during labor or birth. Her membranes ruptured more than 18 hours before childbirth. She had a positive RPR test (syphilis screening) during this pregnancy. If so, was she treated adequately? She is known to be HIV positive. If so, is she receiving AIDS-associated retrovirus treatment? She has been diagnosed with tuberculosis. If so, has she been treated for at least 2 months? She is known to be Hepatitis B positive. 					
3. (1 st visit) Check the mother's record for other complications for her or the newborn such as: <ul style="list-style-type: none"> Shoulder dystocia, birth asphyxia, breech birth or instrumental assistance or eclampsia Weighed less than 2500 grams at birth 					
4. (1 st visit) Check the newborn's or mother's record or ask if the newborn has had the following immunizations: <ul style="list-style-type: none"> OPV-0 BCG Hepatitis B 					

LEARNING GUIDE FOR NEWBORN EXAMINATION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
5. (Every visit) Ask the mother about breastfeeding: <ul style="list-style-type: none"> • Frequency and duration of feedings • Attachment and sucking • Newborn's satisfaction with feedings Observe the newborn at the breast, if s/he is ready to feed.					
6. (Every visit) Ask how often the newborn: <ul style="list-style-type: none"> • Urinates • Passes stool 					
7. (Return visits) Ask if the newborn has had problems since last visit: <ul style="list-style-type: none"> • Has the newborn received care from another caregiver? • Has the mother been unable to carry out any part of the care plan? • Has the newborn has any untoward reactions to immunizations or other care? 					
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 exam gloves on both hands.					
2. Place the newborn on a clean, warm surface or examine her/him in the mother's arms. Remove the newborn's clothing as necessary, taking care to keep newborn as covered and warm as possible.					
3. (Every visit) Check: <ul style="list-style-type: none"> • Breathing (normal rate ranges from 30–60 breaths/minute), grunting, chest indrawing • Temperature (normal range 36.5–37.5) • Color • Skin • General alertness, movements, and muscle tone 					
4. (Every visit) Weigh the newborn.					
5. Examine the head, face, mouth and eyes: <ul style="list-style-type: none"> • (Every visit) Check general size and symmetry of the head. • (Every visit) Check the skull contours and feel for the normal sutures and fontanelles. • (Every visit) Open the eyelids and check that the eyes have a normal appearance and that there are no signs of infection. • (First visit) Check for any abnormalities of the face, especially for asymmetrical movement. • (First visit) Feel in the mouth to check that the palate is properly developed. 					
6. (Every visit) Examine the chest for symmetrical movement.					
7. (Every visit) Examine the umbilicus for bleeding and infection.					
8. (First visit) Examine the genitalia for abnormalities. (1 st visit only)					
9. (First visit) Examine the spine for abnormalities. (1 st visit only)					
10. (Every visit) Examine the upper and lower limbs: <ul style="list-style-type: none"> • Check the skin, soft tissues and bones for abnormalities. • Check for symmetry of movement. 					

LEARNING GUIDE FOR NEWBORN EXAMINATION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
POST PHYSICAL EXAMINATION TASKS					
1. Dress, or help the mother to dress, the newborn.					
2. Remove gloves and discard.					
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.					

CHECKLIST FOR NEWBORN EXAMINATION

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

Place a “✓” in case box if step/task is performed **satisfactorily**, an “X” if it is **not** performed **satisfactorily**, or N/O if not observed.

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

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

PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR NEWBORN EXAMINATION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
GETTING READY					
1. Prepare the necessary equipment.					
2. Greet the mother, acknowledge the newborn, tell the woman (and her support person) what is going to be done, and listen and respond to her questions and concerns.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
HISTORY					
1. Ask newborn's name, sex, contact information, date and time of birth, and any problem that brought mother to the healthcare provider.					
2. Check the mother's record or ask her about maternal and other conditions/factors that may affect the newborn.					
3. Ask the mother about breastfeeding.					
4. Ask about urination and stool.					
5. Check the mother's or newborn's record or ask if the newborn has had OPV, BCG, and HBV immunizations.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
PHYSICAL EXAMINATION					
1. Use antiseptic handrub or wash hands thoroughly.					
2. Remove the newborn's clothing.					
3. Check the newborn's general appearance and alertness, breathing, heart rate, temperature, skin, and muscle tone.					
4. Weigh the newborn.					
5. Examine the head, face, mouth and eyes.					
6. Examine the chest for symmetrical movement.					
7. Examine the umbilicus for bleeding and infection.					
8. Examine the genitalia.					

CHECKLIST FOR NEWBORN EXAMINATION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
9. Examine the spine.					
10. Examine the upper and lower limbs, checking the skin, soft tissues and bones and symmetrical movement.					
11. Use antiseptic handrub or wash hands thoroughly.					
12. Inform mother of findings and ask her if she has additional questions.					
13. Record all relevant findings.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

CASE STUDY 1: PREGNANCY-INDUCED HYPERTENSION

Directions

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

Case Study

Mrs. B. is a 16-year-old gravida 1 para 0 at 30 weeks gestation, who has come today for a followup visit as requested by her provider at her last visit 1 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 1 week if she noticed any danger signs. A review of her records shows that she has had three antenatal visits this pregnancy and that before her last visit all findings were within normal limits. At her last visit, it was found that her blood pressure was 130/90 mm Hg. Her urine was negative for protein. The fetal heart sounds were normal, the fetus 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., and why?
2. What particular aspects of Mrs. B.’s physical examination will help you make a diagnosis or identify her problems/needs, and why?
3. What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. B., and 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 fetal movement.

Physical Examination:

Mrs. B.’s blood pressure is 130/90 mm Hg, and she has proteinuria 1+. The fetus is active and fetal 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), and why?

Care Provision (planning and intervention)

5. Based on your diagnosis (problem/need identification), what is your plan of care for Mrs. B., and 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 fetal growth is normal. Four weeks later, however, her blood pressure is 130/100 mm 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 fetal movement. She finds it very tiring, however, to have to travel to the clinic by bus twice weekly for followup and wants to come only once a week.

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

CASE STUDY 2: VAGINAL BLEEDING IN EARLY PREGNANCY

Directions

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

Case Study

Mrs. B. is a 20-year-old para 2 who came to the health center 2 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. B. was advised to avoid strenuous activity and sexual intercourse and return immediately if her symptoms persisted. Mrs. B. returns to the health center today and reports that irregular vaginal bleeding has continued and she now has acute abdominal pain that started 2 hours ago.

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

1. What will you include in your initial assessment of Mrs. B., and why?
2. What particular aspects of Mrs. B.'s physical examination will help you make a diagnosis or identify her problems/needs, and why?
3. What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. B., and why?

Diagnosis (identification of problems/needs)

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

Mrs. B.'s temperature is 36.8°C, her pulse rate is 130 beats per minute and weak, her blood pressure is 85/60 and her respirations are 20 per minute.

Her skin is pale and sweaty.

Mrs. B. 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 6-week size uterus is softer than normal.

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

Care Provision (planning and intervention)

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

Evaluation

Mrs. B.'s postoperative course was without complications, and notable for patient tolerating oral intake, having minimal complaints of abdominal pain, ambulating well, and spontaneously voiding. She is now ready to be discharged; however, her hemoglobin is 9 g/dL.

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

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

CASE STUDY 3: ELEVATED BLOOD PRESSURE IN PREGNANCY

Directions

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

Case Study

Mrs. A. is a 34-year-old gravida 4 para 3 at 18 weeks gestation who has come to the antenatal clinic today for a followup visit as requested by her midwife at her last visit 1 week ago. She attended her first antenatal care visit 1 week ago, when it was found that her blood pressure was 140/100 mm Hg on two readings taken 4 hours apart. Mrs. A. reports that she has had high blood pressure for years, which has not been treated with antihypertensive drugs. She does not know what her blood pressure was before she became pregnant. She moved to the district 6 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. A., and why?
2. What particular aspects of Mrs. A.'s physical examination will help you make a diagnosis or identify her problems/needs, and why?
3. What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. A., and why?

Diagnosis (identification of problems/needs)

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

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

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

Care Provision (planning and intervention)

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

Evaluation

Mrs. A. returns to the antenatal clinic in 1 week. She feels well and denies headache, blurred vision, upper abdominal pain, convulsions, loss of consciousness or decreased fetal movement. Her blood pressure is 136/100 mm Hg. On abdominal exam, her uterus is 19-week size and fetal 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 140/100 mm Hg.

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

Weeks 4 and 5

CASE STUDY 1: UNSATISFACTORY PROGRESS IN LABOR

Directions

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

Case Study

Mrs. D. is a 20-year-old primigravida at term. She had antenatal care in a health center. She reports that labor 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., and why?
2. What particular aspects of Mrs. D.'s physical examination will help you make a diagnosis or identify her problems/needs, and why?

Diagnosis (identification of problems/needs)

You have completed your assessment of Mrs. 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 4–6 minutes for the past 4–5 hours. She admits that she felt a gush of water approximately 1 hour prior to admission. She reports normal fetal movement. She denies any danger signs.

Physical Examination:

Mrs. D.'s temperature is 37°C, her pulse rate is 84 per minute, her blood pressure is 112/70 and her respirations are 22 per minute. There are no signs of dehydration, ketosis or shock. She is moderately distressed by pain.

The fundal height is 40 cm. She has 3 contractions in 10 minutes, each lasting 30 seconds. The fetal head is 5/5 palpable above the symphysis pubis. The fetal heart rate is regular at 144 per minute. The cervix is 4 cm dilated. The membranes are not palpable and no amniotic fluid is visibly draining. There is no molding of the fetal skull.

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

Care Provision (planning and intervention)

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

Evaluation

Four hours later, Mrs. D.'s temperature is 37°C, her pulse rate is 88 per minute, and her blood pressure is 114/70. She is having 4 contractions in 10 minutes, each lasting 30 seconds. The cervix is 6 cm dilated. Scanty but clear amniotic fluid is draining. There is no moulding. The fetal head is 5/5 palpable above the symphysis pubis and the fetal heart rate is 144 beats per minute. She produced 200 mL of urine in the past 4 hours, negative for protein and acetone.

5. Based on these findings, what is Mrs. D.'s diagnosis (problem/need), and why?
6. Based on your diagnosis (problem/need identification), what is your plan of care for Mrs. D. and why?

Oxytocin infusion (2.5 units in 500 mL) is started. The infusion rate is titrated to ensure establishment of at least 3 uterine contractions in 10 minutes lasting at least 40 seconds.

7. When would you reassess Mrs. D. again, and why?

On reassessment 2½ hours later, Mrs. D.'s temperature is 37°C, her pulse rate is 90 per minute, and her blood pressure is 120/70. She is having 4 contractions in 10 minutes, each lasting 40–45 seconds. The fetal heart rate is 152 per minute. The fetal head is 4/5 palpable above the symphysis pubis. The cervix is 6 cm dilated and edematous. There is no amniotic fluid draining. Moulding is 2: sutures overlapping but reducible. She produced 160 mL of urine in the past 4 hours, negative for protein and acetone.

8. Based on these findings, what is Mrs. D.'s diagnosis (problem/need), and why?
9. Based on your diagnosis (problem/need identification), what is your plan of care for Mrs. D., and why?

CASE STUDY 2: FEVER AFTER CHILDBIRTH

Directions

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

Case Study

Mrs. C. is a 35-year-old para three. Mrs. C.'s husband has brought her to the health center 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). Labor lasted 2 days and the TBA inserted herbs into Mrs. C.'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. C., and why?
2. What particular aspects of Mrs. C.'s physical examination will help you make a diagnosis or identify her problems/needs, and why?
3. What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. C., and why?

Diagnosis (identification of problems/needs)

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

History:

Mrs. C. 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. C.'s temperature is 39.8°C, her pulse rate is 136 per minute, her blood pressure is 100/70 and her respiration rate is 24 per minute.

She appears pale and lethargic and slightly confused.

Abdominal exam shows a poorly contracted and tender uterus that is just 1 cm 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 2 cm dilated with cervical motion tenderness present.

It is not known whether the placenta was complete.

Mrs. C. is fully immunized against tetanus and had a booster 3 years ago.

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

Care Provision (planning and intervention)

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

Evaluation

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

Mrs. C.'s temperature is 38°C, her pulse rate is 96 beats per minute, her blood pressure is 110/70 and her respiration rate is 20 breaths per minute. She is less pale and no longer confused. Her uterus is less tender and is firm at 3 cm 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. C., and why?

CASE STUDY 3: VAGINAL BLEEDING AFTER CHILDBIRTH

Directions

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

Case Study

Mrs. A. is a 20-year-old para 1 who has been brought to the health center 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. A. and the TBA report that the duration of labor 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. A., and why?
2. What particular aspects of Mrs. A.'s physical examination will help you make a diagnosis or identify her problems/needs, and why?
3. What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. A., and why?

Diagnosis (identification of problems/needs)

You have completed your rapid assessment of Mrs. A., 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. A.'s temperature is 36.8°C, her pulse rate is 108 per minute, her blood pressure is 80/60 and her respirations are 24 per minute.

She is pale and sweating.

Her uterus is soft and does not contract with fundal massage. She has heavy, bright red vaginal bleeding. On inspection there is no evidence of perineal, vaginal or cervical tears.

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

Care Provision (planning and intervention)

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

ACTION PLAN FOR PARTICIPANTS

Participant Name: _____

Country of Residence: _____

Training Attended: _____

Name of Facility: _____

Date: _____

Based on what you learned during this training, please write down three things that you would like to change at your facility over the next year:

Goal #1 _____

Goal #2 _____

Goal #3 _____

Goal #1 _____

Activities/Steps	Date Planned	Contact/s	Date Completed
1.			
2.			
3.			

Goal #2 _____

Activities/Steps	Date Planned	Contact/s	Date Completed
1.			
2.			
3.			

Goal #3 _____

Activities/Steps	Date Planned	Contact/s	Date Completed
1.			
2.			
3.			

Section Two: Guide for Trainers

EMERGENCY OBSTETRIC CARE COURSE

TRAINER'S NOTEBOOK

SECTION TWO: GUIDE FOR TRAINERS

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MENTORING GUIDELINES FOR TRAINERS

Trainers are expected to visit participants at their respective worksites during the 3-month self-directed practicum to provide individual and team guidance and support and evaluate participants' knowledge and skills. The visits should be made in teams of two trainers (i.e., one midwife trainer and one physician trainer). The first visit should take place toward the end of the first month and the second visit toward the end of the third month of the practicum. Additional visits should be scheduled, if necessary, based on the individual and team needs of participants. Trainers should develop a schedule of visits before participants return to their worksites.

INDIVIDUAL GUIDANCE, SUPPORT AND EVALUATION

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

- Individual discussions
- Observation of clinical practice
- Case studies
- Clinical simulations
- Knowledge assessment questionnaire

Individual Discussions

Trainers should meet with each participant to:

- Review the Clinical Experience Log Book
- Discuss clients/patients for whom the participant has provided EmOC, including presenting symptom(s), diagnosis, treatment, outcome
- Discuss whether or not individual learning needs are being met
- Determine the best way to meet learning needs during the remainder of the practicum (first mentoring visit) and, if necessary, beyond completion of the practicum (second mentoring visit)
- Discuss factors that have facilitated clinical practice and factors that have made it difficult, including how to overcome difficulties
- Discuss other issues, as identified by the participant

Observation of Clinical Practice

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

- Management of Shock
 - Adult Resuscitation
 - Postabortion Care Clinical Skills
 - Postabortion Care Family Planning Skills
 - Clean and Safe Childbirth
 - Episiotomy and Repair
 - Repair of Cervical Tears
 - Breech Delivery
 - Vacuum Extraction
 - Bimanual Compression of the Uterus
 - Compression of the Abdominal Aorta
 - Manual Removal of Placenta
 - Newborn Resuscitation
 - Postpartum Physical Examination and Care
 - Newborn Examination
 - Endotracheal Intubation*
 - Cesarean Section*
 - Salpingectomy (Ectopic Pregnancy)*
 - Laparotomy (Ruptured Uterus)*
 - Postpartum Hysterectomy*
- (*doctors only)

Because obstetric emergencies are not common, opportunities to observe participants practicing the skills listed above may be limited. It may, therefore, be necessary to observe participants practicing specific skills with models. The skills to be practiced with models will depend on the learning needs of the participant and the need for the trainer to evaluate specific skills.

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

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

Case Studies and Clinical Simulations

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

Participants should work on the case studies individually. The trainer should then discuss the outcome of the case study with the participant, using the relevant case study answer key as a guide. Depending on the individual learning needs of a participant, case studies and clinical simulations should be selected from the following list:

Case Studies

- Vaginal Bleeding in Early Pregnancy (Incomplete Abortion)
- Vaginal Bleeding in Early Pregnancy (Incomplete/Septic Abortion)
- Vaginal Bleeding in Early Pregnancy (Ruptured Ectopic Pregnancy)
- Vaginal Bleeding After Childbirth (Delayed Postpartum Hemorrhage)
- Vaginal Bleeding After Childbirth (Genital Trauma)
- Vaginal Bleeding After Childbirth (Atonic Uterus)
- Pregnancy-induced Hypertension (Severe Pre-eclampsia)
- Pregnancy-induced Hypertension (Mild Pre-eclampsia)
- Elevated Blood Pressure in Pregnancy (Chronic Hypertension)
- Fever After Childbirth (Wound Abscess)
- Fever After Childbirth (Mastitis)
- Fever After Childbirth (Metritis)
- Unsatisfactory Progress in Labor (Obstructed Labor)
- Management of Headaches, Blurred Vision, Convulsions, Loss of Consciousness or Elevated Blood Pressure

- Management of Vaginal Bleeding in Early Pregnancy
- Management of Vaginal Bleeding After Childbirth
- Management of the Asphyxiated Newborn

Knowledge Assessment Questionnaire

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

TEAM GUIDANCE, SUPPORT AND EVALUATION

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

- Attending labor ward rounds with team members
- Attending team meetings
- Reviewing Action Plan Worksheets
- Observing activities in progress and/or the results of activities implemented to strengthen EmOC, as follows:
- Emergency drills
- Readiness of all areas of the hospital for obstetric emergencies
- Availability of equipment, supplies and drugs
- Maternal death review or audit

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
SESSION ONE: DAY 1, AM (270 MINUTES)			
10 minutes	Activity: Welcome the participants	Welcome by representatives from the organization(s) sponsoring the training course.	Course Equipment: Overhead projector, screen, flipchart with markers, videotape player and monitor, anatomic models, instruments and supplies (refer to Course Syllabus in the EmOC Trainer's Notebook for details)
20 minutes	Activity: Facilitate introductions of the participants	Have participants divide into pairs, interview and then introduce each other by name, position and any unique characteristics. The trainers should also be involved in this activity.	
10 minutes	Activity: Provide an overview of the course	Review the course syllabus and schedule. Discuss the goals of the course and the participant learning objectives.	EmOC Participant's Handbook: Syllabus and Schedule
10 minutes	Activity: Review course materials	Distribute, review and discuss materials used in this course.	MCPC Manual Infection Prevention Reference Manual EmOC Participant's Handbook and any supporting materials relevant to the course
10 minutes	Activity: Identify participant expectations	Ask participants to share their expectations of the course and write their responses on a flipchart. Attach the flipchart page to the wall for reference throughout the course.	
40 minutes	Activity: Assess participants' precourse knowledge	Ask participants to turn to the Precourse Knowledge Questionnaire in their handbook and answer each of the questions.	EmOC Participant's Handbook: Precourse Knowledge Questionnaire
10 minutes	Activity: Review clinical experience	Ask participants to fill out Confidential Clinical Experience Questionnaire. Trainers will use this information to monitor progress in training.	EmOC Participant's Handbook: Confidential Clinical Experience Questionnaire
20 minutes	Break		

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
CONTINUATION OF SESSION ONE: DAY 1, AM (270 MINUTES)			
20 minutes	Activity: Identify individual and group learning needs	Have participants grade questionnaires and complete the Individual and Group Assessment Matrix. Follow the directions in the EmOC Trainer's Notebook.	EmOC Trainer's Notebook: Precourse Knowledge Questionnaire Answer Key and directions for using the Individual and Group Assessment Matrix
75 minutes	Activity: Present and discuss site assessment findings	Ask one person from each team of participants (e.g., each team should consist of one or two midwives/nurses with midwifery skills and one doctor per district hospital) to present site assessment findings based on completion of the Pre-training Site Assessment Form. Allocate 10 minutes to each team of participants for the presentation. During each presentation, the trainer should note the main findings on a flipchart and then discuss these immediately following the presentation. Allow approximately 10 minutes for discussion following each presentation. The findings should be discussed with respect to performance improvement and quality of care and the use of a team approach to the provision of EmOC.	
45 minutes	Objective: Describe the aim and basic premise of the Averting Maternal Death and Disability (AMDD) program and the potential impact on maternal mortality Objective: Define basic and comprehensive EmOC	Illustrated Lecture and Discussion: Use the relevant presentation graphics to explain the origins, aim and basic premise of the AMDD program and define basic and comprehensive EmOC. Pause at appropriate intervals to emphasize particular points and encourage discussion. Note that a selection of the transparencies from the package of presentation graphics can be used, rather than the package as a whole. This applies whenever presentation graphics are used in this course.	EmOC Trainer's Notebook: Illustrated Lectures Presentation Graphics: Averting Maternal Death and Disability, Program Orientation

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
SESSION TWO: DAY 1, PM (210 MINUTES)			
75 minutes	Objective: Describe recent changes in obstetric and midwifery practice and the basis for and implications of these changes	Illustrated Lecture and Discussion: Use the relevant presentation graphics to highlight recent changes in obstetric and midwifery practice. Pause at appropriate intervals to emphasize particular points and encourage discussion. For example, ask participants to consider these changes in relation to their own practice and share their experiences with respect to the need for and introduction of change, especially with respect to EmOC.	EmOC Trainer's Notebook: Illustrated Lectures Presentation Graphics: Changing Obstetric and Midwifery Practice
20 minutes	Break		
70 minutes	Objective: Describe human rights and EmOC	Illustrated Lecture and Discussion: Use the relevant presentation graphics to provide an overview of the human rights and EmOC: <ul style="list-style-type: none"> • Feeling a sense of urgency • Accountability for one's actions • Respect for human life • Recognizing women's right to life, health, privacy and dignity Pause at appropriate intervals to emphasize particular points. For example, when providing EmOC, how much information do participants give to the woman about her condition? Do they listen to the woman's concerns? How do they ensure privacy and comfort?	EmOC Trainer's Notebook: Illustrated Lectures Presentation Graphics: Human Rights and Emergency Obstetric Care MCPC Manual: Section 1, C-5 to C-8
30 minutes	Activity: Role play to demonstrate the use of appropriate interpersonal skills when providing EmOC	Role Play: The purpose of the role play is to demonstrate the use of appropriate interpersonal skills when providing EmOC. Follow the directions provided in Role Play: Interpersonal Communication During EmOC and use the Answer Key to guide discussion after the role play.	EmOC Trainer's Notebook: Role Plays Role Play: Interpersonal Communication During EmOC and Answer Key
15 minutes	Activity: Review of the day's activities	Involve participants in review and discussion of the topics and activities covered during the day. Ask a participant to volunteer to write the agenda for the next day on a flipchart, in preparation for the opening session. The schedule in the EmOC Participant's Handbook should be used to do this. Ask one or more of the other participants to plan an opening activity or warmup for the next day.	
Reading Assignment: Infection Prevention Manual: Sections 1 to 6; Infection Prevention Supplement: 1–12; MCPC Manual: Section 1, C-1 to C-4, C-23 to C-29; Section 2, S-1 to S-5			

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
SESSION THREE: DAY 2, AM (270 MINUTES)			
10 minutes	Activity: Agenda and opening activity	Review the agenda with participants, as outlined on the flipchart. Have the participant(s) who volunteered for the opening activity or warmup conduct it.	
60 minutes	Objective: Describe infection prevention principles and practices	Illustrated Lecture and Discussion: Use the relevant presentation graphics to explain and discuss infection prevention principles and practices and their application, with particular emphasis on EmOC. Pause at appropriate intervals to emphasize particular points and encourage discussion. For example, ask participants to compare the principles and practices presented with those currently used at their worksites.	EmOC Trainer's Notebook: Illustrated Lectures Presentation Graphics: Universal Precautions in Infection Prevention Infection Prevention Manual: Sections 1 to 6; Infection Prevention Supplement: 1–12
100 minutes	Activity: Apply infection prevention practices for care during pregnancy and childbirth	Demonstration: The demonstration should be carried out in the classroom using the appropriate equipment. Drawing a tap on a piece of flipchart paper can simulate running water. Demonstrate each of the following practices, provide an explanation of the steps involved and encourage participants to ask questions at any point during the demonstration: <ul style="list-style-type: none"> • Hand washing • Decontamination • Sharps handling • Waste disposal • Instrument handling and preparation 	Flipchart paper and marker Soap/antiseptic hand cleanser Nail brush Gloves Plastic apron Instruments Needles and syringes Plastic receptacles Chlorine solution
20 minutes	Break		
80 minutes	Objective: Describe the process and implementation of rapid initial assessment of the woman who presents with a complication during pregnancy Objective: Describe the recognition and management of shock Objective: Describe the principles of adult resuscitation Objective: Describe how to monitor a blood transfusion	Illustrated Lecture and Discussion: Use the relevant presentation graphics to: <ul style="list-style-type: none"> • Review and discuss the process of rapid assessment • Review and discuss the recognition and management of shock • Explain the principles of adult resuscitation • Describe the principles/process for monitoring a blood transfusion Pause at appropriate intervals to emphasize particular points and encourage discussion, and provide a brief summary at the end of each of the above topics.	EmOC Trainer's Notebook: Illustrated Lectures Presentation Graphics: Rapid Initial Assessment and Management of Shock MCPC Manual: Section 1, C-1 to C-4, C-23 to C-29; Section 2, S-1 to S-5

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
SESSION FOUR: DAY 2, PM (210 MINUTES)			
100 minutes	<p>Activity: Practice adult resuscitation</p>	<p>Skill Demonstration and Practice: The skill is to be demonstrated by trainers and practiced by participants in a simulated setting using the relevant model, learning guide and checklist, as described in Skills Practice Session: Adult Resuscitation.</p> <p>Before beginning the skill demonstration, explain to participants how learning guides and checklists will be used for this and the other skills included in the course.</p> <p>Participants who do not have an opportunity to practice the skill during this session should do so at a forthcoming session (e.g., Session 12 on Day 6); alternatively, opportunities to practice with the model could be provided in the evening or on the weekend.</p>	<p>EmOC Trainer's Notebook: Humanistic Training Techniques; Learning Guides and Checklists; Skills Practice Sessions</p> <p>Skill Demonstration and Practice: Adult Resuscitation and Learning Guide and Checklist for Adult Resuscitation</p>
20 minutes	Break		
40 minutes	<p>Activity: Emergency drill</p>	<p>Clinical Simulation: The purpose of this activity is to provide participants with the opportunity to observe and participate in an emergency drill. The simulation can be conducted in the classroom, using the guidelines for conducting an emergency drill.</p>	<p>EmOC Trainer's Notebook: Emergency Drills</p>
35 minutes	<p>Activity: Relate views about responding appropriately to emergency situations</p>	<p>Discussion: Use the following points to encourage participants to share their views about being prepared for an obstetric emergency:</p> <ul style="list-style-type: none"> • Roles and responsibilities of team members and working together as a team • Keeping emergency resuscitation skills current • Inculcating the notion of and need for “emergency” response • Daily monitoring of equipment and supplies and ensuring consistent availability • Ensuring readiness of causality, labor room and operating room for obstetric emergencies 	

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
CONTINUATION OF SESSION FOUR: DAY 2, PM (210 MINUTES)			
15 minutes	Activity: Review of the day's activities	Involve participants in review and discussion of the topics and activities covered during the day. Ask a participant to volunteer to write the agenda for the next day on a flipchart, in preparation for the opening session. The schedule in the EmOC Participant's Handbook should be used to do this. Ask one or more of the other participants to plan an opening activity or warmup for the next day.	
Reading Assignment: MCPC Manual: Section 2, S-7 to S-23; Section 3, P-65 to P-68; Section 2, S-35 to S-50, S-97 to S-98			

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
SESSION FIVE: DAY 3, AM (270 MINUTES)			
10 minutes	Activity: Agenda and opening activity	Review the agenda with participants, as outlined on the flipchart. Have the participant(s) who volunteered for the opening activity or warmup conduct it.	
50 minutes	Objective: Describe best practices for identifying and managing vaginal bleeding in early and later pregnancy and labor	Illustrated Lecture and Discussion: Use the relevant presentation graphics to review and discuss bleeding in early and later pregnancy and labor. Pause at appropriate intervals to emphasize particular points and encourage discussion. For example, ask participants to cite the possible causes of bleeding in early and later pregnancy and labor, and describe the way in which they manage each of these. If there are differences between the recommended “best practices” for management and current practices at their work sites, discuss the reasons for this. Is there a need to change current practices? If so, how?	EmOC Trainer’s Notebook: Illustrated Lectures Presentation Graphics: Vaginal Bleeding in Early Pregnancy; Vaginal Bleeding in Later Pregnancy and Labor MCPC Manual: Section 2, S-7 to S-23
50 minutes	Activity: Case studies on vaginal bleeding in early pregnancy	Case Study: Introduce participants to case studies in general and explain how they will be used during the course to facilitate the development of problem-solving and decision-making skills. In particular, explain the common framework used for case studies (i.e., assessment, diagnosis, care provision, evaluation). Use the case studies on vaginal bleeding in early pregnancy (incomplete and incomplete/septic abortion). Divide participants into groups of three or four. Allow approximately 20 minutes for the groups to work on each case study, then allow five to ten minutes for one participant from each group to report back to the class as a whole. Use the case study answer keys to guide discussion.	EmOC Trainer’s Notebook: Case Studies Tips for Trainers: Teaching Clinical Decision-Making Case Studies: Vaginal Bleeding in Early Pregnancy (Incomplete and Incomplete/septic Abortion) and Answer Keys MCPC Manual: Section 2, S-7 to S-23
20 minutes	Break		

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
CONTINUATION OF SESSION FIVE: DAY 3, AM (270 MINUTES)			
30 minutes	Objective: Describe the elements of postabortion care services	Illustrated Lecture and Discussion: Use the relevant presentation graphics to review and discuss: <ul style="list-style-type: none"> • Emergency treatment of incomplete abortion and potentially life-threatening complications • Postabortion family planning counseling and services • Links between postabortion emergency services and other reproductive health services Pause at appropriate intervals to emphasize particular points and encourage discussion.	EmOC Trainer's Notebook: Illustrated Lectures Presentation Graphics: Postabortion Care
110 minutes	Activity: Practice manual vacuum aspiration	Skill Demonstration and Practice: The skill is to be demonstrated by trainers and practiced by participants in a simulated setting using the relevant model, learning guides and checklists, as described in Skills Practice Session: Postabortion Care (Manual Vacuum Aspiration [MVA]) and Postabortion Family Planning Counseling, and the Postabortion Care Video Photocast. Participants who do not have an opportunity to practice the skill during this session should do so at a forthcoming session (e.g., Session 12 on Day 6); alternatively, opportunities to practice with the model could be provided in the evening or on the weekend.	EmOC Trainer's Notebook: Humanistic Training Techniques; Learning Guides and Checklists; Skills Practice Sessions Skill Demonstration and Practice: Postabortion Care and Learning Guides and Checklists for Postabortion Care and Checklists for Postabortion Care (Manual Vacuum Aspiration [MVA]) and Postabortion Family Planning Counseling, Postabortion Care Video Photocast MCPC Manual: Section 3, P-65 to P-68
SESSION SIX: DAY 3, PM (210 MINUTES)			
20 minutes	Activity: Discuss attitudes and opinions related to postabortion care	Discussion: Use the following points to encourage participants to share their attitudes and opinions about postabortion care: <ul style="list-style-type: none"> • Making postabortion services available and accessible to all women • Including postabortion family planning counseling and services as an integral part of postabortion care • National laws and policies on abortion • Doctors and midwives/nurses as providers of postabortion services • Changing attitudes and practices at participant's worksites 	

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
CONTINUATION OF SESSION SIX: DAY 3, PM (210 MINUTES)			
75 minutes	<p>Objective: Describe best practices for identifying and managing pregnancy-induced hypertension</p>	<p>Illustrated Lecture and Discussion: Use the relevant presentation graphics to review and discuss:</p> <ul style="list-style-type: none"> • Best practices for identifying and managing hypertension, pre-eclampsia, eclampsia • Strategies for controlling hypertension • Strategies for preventing and treating convulsions, with particular emphasis on the use of magnesium sulphate <p>Pause at appropriate intervals to emphasize particular points and encourage discussion. For example, ask participants if there are differences between the management described and current practices. Is there a need to change current practices? If so, how?</p>	<p>EmOC Trainer's Notebook: Illustrated Lectures</p> <p>Presentation Graphics: Headache, Blurred Vision, Convulsions, Loss of Consciousness or Elevated Blood Pressure</p> <p>MCPC Manual: Section 1, S-35 to S-50</p>
20 minutes	Break		
60 minutes	<p>Activity: Case study on pregnancy-induced hypertension</p>	<p>Case Study: Use the case study on pregnancy-induced hypertension (severe pre-eclampsia). Divide participants into groups of three or four. Allow approximately 20 minutes for the groups to work on the case study, then allow five to ten minutes for one participant from each group to report back to the class as a whole. Use the case study answer key to guide discussion.</p>	<p>EmOC Trainer's Notebook: Case Studies</p> <p>Tips for Trainers: Teaching Clinical Decision-Making</p> <p>Case Study: Pregnancy-induced Hypertension (Severe Pre-eclampsia) and Answer Key</p> <p>MCPC Manual: Section 2, S-35 to S-50</p>
20 minutes	<p>Objective: Describe the management of prolapsed cord</p>	<p>Illustrated Lecture and Discussion: Review and discuss the management of prolapsed cord. Ask participants to share their experiences in managing prolapsed cord. How did they intervene? What was the outcome?</p>	<p>EmOC Trainer's Notebook: Illustrated Lectures</p> <p>MCPC Manual: Section 2, S-97 to S-98</p>
15 minutes	<p>Activity: Review of the day's activities</p>	<p>Involve participants in review and discussion of the topics and activities covered during the day. Ask a participant to volunteer to write the agenda for the next day on a flipchart, in preparation for the opening session. The schedule in the EmOC Participant's Handbook should be used to do this. Ask one or more of the other participants to plan an opening activity or warmup for the next day.</p>	
Reading Assignment: MCPC Manual: Section 1, C-57 to C-76; Section 2, S-57 to S-67			

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
SESSION SEVEN: DAY 4, AM (270 MINUTES)			
10 minutes	Activity: Agenda and opening activity	Review the agenda with participants, as outlined on the flipchart. Have the participant(s) who volunteered for the opening activity or warmup conduct it.	
30 minutes	Objective: Describe best practices for care during labor and childbirth	Illustrated Lecture and Discussion: Select the relevant transparencies from the presentation graphics on normal labor and childbirth and use them to review and discuss best practices for care during labor, with particular emphasis on supportive care. Pause at appropriate intervals to emphasize particular points and encourage discussion. For example, ask participants about the supportive care provided by them for women in labor. Is there a need for change? Is so, why and how?	EmOC Trainer's Notebook: Illustrated Lectures Presentation Graphics: Normal Labor and Childbirth MCPC Manual: Section 1, C-57 to C-59
90 minutes	Objective: Describe use of the partograph	Illustrated Lecture and Discussion: Use the relevant presentation graphics to review and discuss: <ul style="list-style-type: none"> • The components of the partograph • How to plot progress in labor • How to identify normal labor • How to identify unsatisfactory progress in labor, prolonged active phase and obstructed labor Pause at appropriate intervals to emphasize particular points and encourage discussion. For example, ask participants if they have been using the partograph. How has its use affected care during labor? Have they experienced problems using it? How have the problems been resolved?	EmOC Trainer's Notebook: Illustrated Lectures Presentation Graphics: Managing Labor Using the Partograph MCPC Manual: Section 1, C-65 to C-70; Section 2, S-57 to S-67
20 minutes	Break		
120 minutes	Activity: Practice using the partograph	Exercise: Follow the directions in the Exercise, Using the Partograph. Trainers should keep in mind that some participants may be able to use the partograph more proficiently than others. Progress should therefore be monitored closely to make sure that participants are able to complete the various steps involved in the exercise. Participants who experience difficulties should be provided additional help during the exercise.	Exercise: Using the Partograph and Answer Key Partograph forms Poster-size laminated partograph and markers

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
SESSION EIGHT: DAY 4, PM (210 MINUTES)			
75 minutes	Objective: Describe best practices for care during second stage of labor, active management of the third stage and immediate postpartum care	<p>Illustrated Lecture and Discussion: Select the relevant transparencies from the presentation graphics on normal labor and childbirth and use them to review and discuss:</p> <ul style="list-style-type: none"> Assessing descent, dilatation, position Managing second stage Active management of third stage Episiotomy and repair Immediate postpartum care <p>Pause at appropriate intervals to emphasize particular points and encourage discussion. For example, ask participants about management of third stage. Do they use active management? If not, why?</p>	<p>EmOC Trainer's Notebook: Illustrated Lectures</p> <p>Presentation Graphics: Normal Labor and Childbirth</p> <p>MCPC Manual: Section 1, C-60 to C-65</p>
20 minutes	Break		
100 minutes	Activity: Practice clean and safe childbirth	<p>Skill Demonstration and Practice: The skill is to be demonstrated by trainers and practiced by participants in a simulated setting using the relevant models, learning guide and checklist, as described in Skills Practice Session: Conducting a Childbirth.</p> <p>Participants who do not have an opportunity to practice the skill during this session should do so at a forthcoming session (e.g., Session 12 on Day 6); alternatively, opportunities to practice with the models could be provided in the evening or on the weekend.</p>	<p>EmOC Trainer's Notebook: Humanistic Training Techniques; Learning Guides and Checklists; Skills Practice Sessions</p> <p>Skill Demonstration and Practice: Conducting a Childbirth and Learning a Guide and Checklist for Conducting a Childbirth</p> <p>MCPC Manual: Section 1, C-57 to C-76</p>
15 minutes	Activity: Review of the day's activities	Involve participants in review and discussion of the topics and activities covered during the day. Ask a participant to volunteer to write the agenda for the next day on a flipchart, in preparation for the opening session. The schedule in the EmOC Participant's Handbook should be used to do this. Ask one or more of the other participants to plan an opening activity or warmup for the next day.	
Reading Assignment: MCPC Manual: Section 1, C-13 to C-14; Section 2, S-74, S-79 to S-80; Section 3, P-27 to P-31, P-37 to P-42, P-71 to P-75, P-81			

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
SESSION NINE: DAY 5, AM (270 MINUTES)			
10 minutes	Activity: Agenda and opening activity	Review the agenda with participants, as outlined on the flipchart. Have the participant(s) who volunteered for the opening activity or warmup conduct it.	
40 minutes	Objective: Describe the essential elements of and best practices for postpartum care	Illustrated Lecture and Discussion: Use the relevant presentation graphics to review and discuss the essential elements of and best practices for postpartum care. Pause at appropriate intervals to emphasize particular points and encourage discussion. For example, ask participants if there are differences between the management described and current practices at their work sites. Is there a need to change current practices? If so, how?	EmOC Trainer's Notebook: Illustrated Lectures Presentation Graphics: Postpartum Care
110 minutes	Activity: Practice episiotomy and repair and repair of cervical tears	Skill Demonstration and Practice: The skill is to be demonstrated by trainers and practiced by participants in a simulated setting using the relevant learning aid, learning guide and checklist, as described in Skills Practice Session: Episiotomy and Repair and Skills Practice Session: Repair of Cervical Tears. Participants who do not have an opportunity to practice during this session should do so during Session 10 or at a forthcoming session (e.g., Session 12 on Day 6); alternatively, opportunities to practice with the learning aid could be provided in the evening or on the weekend.	EmOC Trainer's Notebook: Humanistic Training Techniques; Learning Guides and Checklists; Skills Practice Sessions Skill Demonstration and Practice: Episiotomy and Repair and Learning Guide and Checklist for Episiotomy and Repair Skill Demonstration and Practice: Repair of Cervical Tears and Learning Guide and Checklist for Repair of Cervical Tears MCPC Manual: Section 3, P-71 to P-75
20 minutes	Break		
30 minutes	Objective: Describe the diagnosis and management of breech presentation	Illustrated Lecture and Discussion: Use the videotape on breech delivery to present and discuss the diagnosis and management of breech presentation. Ask participants to share their experiences with respect to breech delivery. How did they manage? What was the outcome for mother and newborn?	EmOC Trainer's Notebook: Illustrated Lectures Videotape: <i>Malpresentation and Vaginal Breech Delivery</i> MCPC Manual: Section 2, S-74, S-79 to S-80

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
CONTINUATION OF SESSION NINE: DAY 5, AM (270 MINUTES)			
60 minutes	Activity: Practice breech delivery	<p>Skill Demonstration and Practice: The skill is to be demonstrated by trainers and practiced by participants in a simulated setting using the relevant model, learning guide and checklist, as described in Skills Practice Session: Breech Delivery.</p> <p>Participants who do not have an opportunity to practice the skill during this session should do so during Session 10 or at a forthcoming session (e.g., Session 12 on Day 6); alternatively, opportunities to practice with the model could be provided in the evening or on the weekend.</p> <p>Show video on breech delivery.</p>	<p>EmOC Trainer's Notebook: Humanistic Training Techniques; Learning Guides and Checklists; Skills Practice Sessions</p> <p>Skill Demonstration and Practice: Breech Delivery and Learning Guide and Checklist for Breech Delivery</p> <p>MCPC Manual: Section 3, P-37 to P-42</p> <p>Videotape: <i>Malpresentation and Vaginal Breech Delivery</i></p>
SESSION TEN: DAY 5, PM (210 MINUTES)			
45 minutes	Objective: Describe the procedure of vacuum extraction	<p>Illustrated Lecture and Discussion: Use the videotape on vacuum extraction to present and discuss the procedure. Describe the conditions for vacuum extraction and the equipment used for the procedure. Ask participants to share their experiences with respect to vacuum extraction. Have they used the procedure or observed someone else using it? What was the outcome for mother and newborn?</p>	<p>EmOC Trainer's Notebook: Lectures</p> <p>Videotape: <i>Vacuum Delivery: Reducing Risk</i></p> <p>MCPC Manual: Section 3, P-27 to P-31</p>
60 minutes	Activity: Practice vacuum extraction delivery	<p>Skill Demonstration and Practice: The skill is to be demonstrated by trainers and practiced by participants in a simulated setting using the relevant model, learning guide and checklist, as described in Skills Practice Session: Vacuum Extraction.</p> <p>Participants who do not have an opportunity to practice the skill during this session should do so later in the session or at a forthcoming session (e.g., Session 12 on Day 6); alternatively, opportunities to practice with the model could be provided in the evening or on the weekend.</p> <p>Show video on vacuum extraction.</p>	<p>EmOC Trainer's Notebook: Humanistic Training Techniques; Learning Guides and Checklists; Skills Practice Sessions</p> <p>Skill Demonstration and Practice: Vacuum Extraction and Learning Guide and Checklist for Vacuum Extraction</p> <p>MCPC Manual: Section 3, P-27 to P-31</p> <p>Videotape: <i>Vacuum Delivery: Reducing Risk</i></p>
20 minutes	Break		

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
CONTINUATION OF SESSION TEN: DAY 5, PM (210 MINUTES)			
70 minutes	Activity: Skills practice with models	Trainers should provide guidance for participants to use the models to practice the skills demonstrated during Sessions 9 and 10 (i.e., episiotomy and repair, repair of cervical tears, breech delivery and vacuum extraction).	
15 minutes	Activity: Review of the day's activities	Involve participants in review and discussion of the topics and activities covered during the day. Ask a participant to volunteer to write the agenda for the next day on a flipchart, in preparation for the opening session. The schedule in the EmOC Participant's Handbook should be used to do this. Ask one or more of the other participants to plan an opening activity or warmup for the next day.	
Reading Assignment: MCPC Manual: Section 2, S-25 to S-34, S-107 to S-114; Section 3, P-77 to P-79, P-91 to P-94			

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
SESSION ELEVEN: DAY 6, AM (270 MINUTES)			
10 minutes	Activity: Agenda and opening activity	Review the agenda with participants, as outlined on the flipchart. Have the participant(s) who volunteered for the opening activity or warmup conduct it.	
60 minutes	Objective: Describe best practices for managing vaginal bleeding after childbirth	Illustrated Lecture and Discussion: Use the relevant presentation graphics to review and discuss best practices for managing vaginal bleeding after childbirth. Pause at appropriate intervals to emphasize particular points and encourage discussion. For example, ask participants to cite the possible causes of vaginal bleeding after childbirth and describe the way in which they manage each of these. If there are differences between the recommended “best practices” for management and current practices at their work sites, discuss the reasons for this. Is there a need to change current practices? If so, how?	EmOC Trainer’s Notebook: Illustrated Lectures Presentation Graphics: Vaginal Bleeding After Childbirth MCPC Manual: Section 2, S-25 to S-34
120 minutes	Activity: Practice bimanual compression of the uterus, abdominal aortic compression and manual removal of placenta	Skill Demonstration and Practice: The skills are to be demonstrated by trainers and practiced by participants in a simulated setting using the relevant models, learning guides and checklists, as described in Skills Practice Session: Bimanual Compression of the Uterus, Skills Practice Session: Compression of the Abdominal Aorta and Skills Practice Session: Manual Removal of Placenta. Participants who do not have an opportunity to practice the skill during this session should do so in the next session (Session 12) or during Session 17 or 18 on Day 9; alternatively, opportunities to practice with the models could be provided in the evening or on the weekend.	EmOC Trainer’s Notebook: Humanistic Training Techniques; Learning Guides and Checklists; Skills Practice Sessions Skill Demonstration and Practice: Bimanual Compression of the Uterus and Learning Guide and Checklist for Bimanual Compression of the Uterus Skill Demonstration and Practice: Compression of the Abdominal Aorta and Learning Guide and Checklist for Compression of the Abdominal Aorta Skill Demonstration and Practice: Manual Removal of Placenta and Learning Guide and Checklist for Manual Removal of Placenta MCPC Manual: Section 2, S-25 to S-34; Section 3, P-77 to P-79
20 minutes	Break		

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
CONTINUATION OF SESSION ELEVEN: DAY 6, AM (270 MINUTES)			
60 minutes	<p>Activity: Case studies on vaginal bleeding after childbirth</p>	<p>Case Studies: Use the case studies on vaginal bleeding after childbirth. Divide participants into groups of three or four. The groups can be given different case studies or they can all work on the same one. Allow approximately 20 minutes for the groups to work on the case study, then allow five to ten minutes for one participant from each group to report back to the class as a whole. Use the case study answer keys to guide discussion.</p>	<p>EmOC Trainer's Notebook: Case Studies Tips for Trainers: Teaching Clinical Decision-Making Case Studies: Vaginal Bleeding After Childbirth (Genital Trauma); Vaginal Bleeding After Childbirth (Delayed Postpartum Hemorrhage) and Answer Keys MCPC Manual: Section 2, S-25 to S-34</p>
SESSION TWELVE: DAY 6, PM (210 MINUTES)			
65 minutes	<p>Objective: Describe best practices for managing fever during and after childbirth</p>	<p>Illustrated Lecture and Discussion: Use the relevant presentation graphics to review and discuss the best practices for managing fever during and after childbirth, strategies to prevent infection, and prophylactic and therapeutic use of antibiotics. Pause at appropriate intervals to emphasize particular points and encourage discussion. For example, ask participants to cite the possible causes of fever during and after childbirth, and the obstetric, medical and health service factors affecting postpartum sepsis. What do they do to prevent postpartum sepsis? If there are differences between the recommended "best practices" for management and current practices at their worksites, discuss the reasons for this. Is there a need to change current practices? If so, how?</p>	<p>EmOC Trainer's Notebook: Illustrated Lectures Presentation Graphics: Fever During and After Childbirth MCPC Manual: Section 2, S-107 to S-114</p>
60 minutes	<p>Activity: Case studies on fever after childbirth</p>	<p>Case Studies: Use the case studies on fever after childbirth. Divide participants into groups of three or four. The groups can be given different case studies or they can all work on the same one. Allow approximately 20 minutes for the groups to work on the case study, then allow five to ten minutes for one participant from each group to report back to the class as a whole. Use the case study answer keys to guide discussion.</p>	<p>EmOC Trainer's Notebook: Case Studies Tips for Trainers: Teaching Clinical Decision-Making Case Studies: Fever After Childbirth (Wound Abscess); Fever After Childbirth (Mastitis) and Answer Keys MCPC Manual: Section 2, S-107 to S-114</p>
20 minutes	Break		

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
CONTINUATION OF SESSION TWELVE: DAY 6, PM (210 MINUTES)			
50 minutes	Activity: Skills practice with models	Trainers should provide guidance for participants to use the relevant models and learning guides to practice the skills demonstrated during Sessions 4 through 11.	
15 minutes	Activity: Review of the day's activities	Involve participants in review and discussion of the topics and activities covered during the day. Ask a participant to volunteer to write the agenda for next day on a flipchart, in preparation for the opening session. The schedule in the EmOC Participant's Handbook should be used to do this. Ask one or more of the other participants to plan an opening activity or warmup for next day.	
Reading Assignment: MCPC Manual: Section 1, C-75 to C-80; Section 2, S-141 to S-150; Section 1, C-37 to C-55; Section 3, P-7 to P-14			

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
SESSION THIRTEEN: DAY 7, AM (270 MINUTES)			
10 minutes	Activity: Agenda and opening activity	Review the agenda with participants, as outlined on the flipchart. Have the participant(s) who volunteered for the opening activity or warmup conduct it.	
60 minutes	Objective: Define the essential elements of early newborn care and describe best practices for promoting newborn health	Illustrated Lecture and Discussion: Use the relevant presentation graphics to review and discuss prevention of infection, thermal protection, basic newborn resuscitation, breastfeeding and best practices for promoting newborn health. Pause at appropriate intervals to emphasize particular points and encourage discussion. For example, ask participants to share their experiences with respect to newborn resuscitation. If there are differences between the recommended “best practices” for newborn resuscitation and current practices at their work sites, discuss the reasons for this. Is there a need to change current practices? If so, how?	EmOC Trainer’s Notebook: Illustrated Lectures Presentation Graphics: Normal Newborn Care MCPC Manual: Section 1, C-75 to C-80; Section 2, S-141 to S-150
80 minutes	Activity: Practice newborn resuscitation	Skill Demonstration and Practice: The skill is to be demonstrated by trainers and practiced by participants in a simulated setting using the relevant model, learning guide and checklist, as described in Skills Practice Session: Newborn Resuscitation. Participants who do not have an opportunity to practice the skill during this session should do so after the break or during Session 17 or 18 on Day 9; alternatively, opportunities to practice with the model could be provided in the evening or on the weekend.	EmOC Trainer’s Notebook: Humanistic Training Techniques; Learning Guides and Checklists; Skills Practice Sessions Skill Demonstration and Practice: Newborn Resuscitation and Learning Guide and Checklist for Newborn Resuscitation MCPC Manual: Section 2, S-141 to S-146
20 minutes	Break		
100 minutes	Activity: Skills practice with models	Trainers should provide guidance for participants to use the relevant models and learning guides to practice the skills demonstrated during Sessions 4 through 13.	

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
SESSION FOURTEEN: DAY 7, PM (210 MINUTES)			
115 minutes	Objective: Explain the general principles for and methods of obstetric analgesia and anesthesia	Illustrated Lecture and Discussion: Use the relevant presentation graphics to review and discuss the general principles for and methods of obstetric analgesia and anesthesia applicable to EmOC. Pause at appropriate intervals to emphasize particular points and encourage discussion. For example, ask participants to share their experiences with respect to the provision of pain relief for women during labor and following obstetric surgery.	EmOC Trainer's Notebook: Illustrated Lectures Presentation Graphics: Analgesia and Anesthesia in Emergency Obstetric Care MCPC Manual: Section 1, C-37 to C-46
20 minutes	Break		
60 minutes	Objective: Explain the operative care principles applicable to emergency obstetric surgery	Illustrated Lecture and Discussion: Use the relevant presentation graphics to review and discuss the pre-operative, intra-operative and postoperative care principles that apply to emergency obstetric surgery. Pause at appropriate intervals to emphasize particular points and encourage discussion. For example, ask participants whether they currently apply these principles at their worksites. If they do not apply the principles, what are the barriers and how can they be overcome?	EmOC Trainer's Notebook: Illustrated Lectures Presentation Graphics: Operative Care Principles MCPC Manual: Section 1, C-47 to C-55
15 minutes	Activity: Review of the day's activities	Involve participants in review and discussion of the topics and activities covered during the day. Ask a participant to volunteer to write the agenda for the next day on a flipchart, in preparation for the opening session. The schedule in the EmOC Participant's Handbook should be used to do this. Ask one or more of the other participants to plan an opening activity or warmup for the next day.	
Reading Assignment: MCPC Manual: Section 3, P-43 to P-52, P-95 to P-111, P-57 to P-60			

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
SESSION FIFTEEN: DAY 8, AM (270 MINUTES)			
10 minutes	Activity: Agenda and opening activity	Review the agenda with participants, as outlined on the flipchart. Have the participant(s) who volunteered for the opening activity or warmup conduct it.	
20 minutes	Objective: Describe the principles for and practice of endotracheal intubation	Illustrated Lecture and Discussion: Describe and discuss endotracheal intubation. Note that all participants (i.e., both doctors and midwives/nurses) should attend the lecture and discussion.	EmOC Trainer's Notebook: Illustrated Lectures
100 minutes	Activity: Practice endotracheal intubation	Skill Demonstration and Practice: The skill is to be demonstrated by trainers and practiced by participants (i.e., doctors only) in a simulated setting using the relevant model, learning guide and checklist, as described in Skills Practice Session: Endotracheal Intubation. Participants who do not have an opportunity to practice the skill during this session should do so during Session 17 or 18 on Day 9; alternatively, opportunities to practice with the model could be provided in the evening or on the weekend. Note that during the skill demonstration and practice for endotracheal intubation, midwife/nurse participants should practice the skills learned during previous sessions.	EmOC Trainer's Notebook: Humanistic Training Techniques; Learning Guides and Checklists; Skills Practice Sessions Skill Demonstration and Practice: Endotracheal Intubation and Learning Guide and Checklist for Endotracheal Intubation
20 minutes	Break		
120 minutes	Objective: Describe obstetric surgical procedures for cesarean section, laparotomy, salpingectomy and hysterectomy	Illustrated Lecture and Discussion (Part I): Use the relevant presentation graphics to review and discuss obstetric surgical practices. Pause at appropriate intervals to emphasize particular points and encourage discussion. Note that all participants (i.e., both doctors and midwives/nurses) should attend the lecture and discussion.	EmOC Trainer's Notebook: Illustrated Lectures Presentation Graphics: Obstetric Surgery MCPC Manual: Section 3, P-43 to P-52, P-95 to P-111

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
SESSION SIXTEEN: DAY 8, PM (210 MINUTES)			
90 minutes	Objective: Describe obstetric surgical procedures for cesarean section, laparotomy, salpingectomy and hysterectomy	Illustrated Lecture and Discussion (Part II): Describe and discuss obstetric surgical procedures for cesarean section, laparotomy, salpingectomy and hysterectomy. Note that all participants (i.e., both doctors and midwives/nurses) should attend the lecture and discussion.	EmOC Trainer's Notebook: Illustrated Lectures MCPC Manual: Section 3, P-43 to P-52, P-95 to P-111
20 minutes	Break		
60 minutes	See Above	Continuation of Illustrated Lecture and Discussion: See above.	As above
25 minutes	Objective: Describe the procedure for craniotomy	Illustrated Lecture and Discussion: Describe and discuss the procedure for craniotomy. Note that all participants (i.e., both doctors and midwives/nurses) should attend the lecture and discussion.	EmOC Trainer's Notebook: Illustrated Lectures MCPC Manual: Section 3, P-57 to P-60
15 minutes	Activity: Review of the day's activities	Involve participants in review and discussion of the topics and activities covered during the day. Ask a participant to volunteer to write the agenda for the next day on a flipchart, in preparation for the opening session. The schedule in the EmOC Participant's Handbook should be used to do this. Ask one or more of the other participants to plan an opening activity or warmup for the next day.	
Assignment:			

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
SESSION SEVENTEEN: DAY 9, AM (270 MINUTES)			
10 minutes	Activity: Agenda and opening activity	Review the agenda with participants, as outlined on the flipchart. Have the participant(s) who volunteered for the opening activity or warmup conduct it.	
120 minutes	Activity: Skills practice with models	Trainers should provide guidance for participants to use the relevant models and learning guides to practice the skills demonstrated during Sessions 4 through 15.	
20 minutes	Break		
120 minutes	Activity: Skills practice with models	Trainers should provide guidance for participants to use the relevant models and learning guides to practice the skills demonstrated during Sessions 4 through 15.	
SESSION EIGHTEEN: DAY 9, PM (210 MINUTES)			
120 minutes	Activity: Skills practice with models	Trainers should provide guidance for participants to use the relevant models and learning guides to practice the skills demonstrated during Sessions 4 through 15.	
20 minutes	Break		
55 minutes	Activity: Skills practice with models	Trainers should provide guidance for participants to use the relevant models and learning guides to practice the skills demonstrated during Sessions 4 through 15.	
15 minutes	Activity: Review of the day's activities	Involve participants in review and discussion of the topics and activities covered during the day. Ask a participant to volunteer to write the agenda for next day on a flipchart, in preparation for the opening session. The schedule in the EmOC Participant's Handbook should be used to do this. Ask one or more of the other participants to plan an opening activity or warmup for next day.	
Assignment: Review and become familiar with Clinical Experience Log Book.			

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
SESSION NINETEEN: DAY 10, AM (270 MINUTES)			
10 minutes	Activity: Agenda and opening activity	Review the agenda with participants, as outlined on the flipchart. Have the participant(s) who volunteered for the opening activity or warmup conduct it.	
60 minutes	Activity: Assess participants' midcourse knowledge	Make copies of the Midcourse Knowledge Questionnaire and distribute to participants. Review the instructions for completing the questionnaire with participants. Have participants complete the questionnaire. Trainers should score the Midcourse Knowledge Questionnaires during the break and review the results with the entire group (time is allocated for this later in the session).	EmOC Trainer's Notebook: Midcourse Knowledge Questionnaire and Answer Key
20 minutes	Break		
60 minutes	Activity: Provide instructions for clinical practice	Trainers should explain to participants how the forthcoming three weeks of clinical practice are structured and what is expected of them as individual practitioners and as team members. Each team consists of one doctor and two midwives/nurses. Trainers should be identified for each of the four teams so that participants are clear about who will provide guidance during clinical practice.	
60 minutes	Activity: Review Clinical Experience Log Book	Trainers should review the Clinical Experience Log Book with participants and ensure that they understand how it will be used during the 3-week guided clinical practice and the 3-month self-directed practicum.	Clinical Experience Log Book
60 minutes	Activity: Review the results of the Midcourse Knowledge Questionnaire	The results of the Midcourse Knowledge Questionnaire should be reviewed with the class as a whole, emphasizing collective strengths and weaknesses. Trainers must allocate time to meet with participants who scored less than 85% and discuss missed items and/or incorrect responses. Participants should then spend time studying the relevant topics and complete the Midcourse Knowledge Questionnaire again to achieve a score of at least 85%.	

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
SESSION TWENTY: DAY 10, PM (210 MINUTES)			
195 minutes	Activity: Tour of clinical facilities	All of the participants should visit both of the hospital facilities that will be used for clinical practice. Each trainer should take responsibility for one team of participants and guide them through the various wards and departments in which they are to practice. Hospital staff members should be introduced to participants and invited to provide information about their respective work areas.	
15 minutes	Activity: Review of the day's activities	Involve participants in review and discussion of the topics and activities covered during the day.	
Assignment: Participants who scored less than 85% on the Midcourse Knowledge Questionnaire should study the relevant sections of the reference manual(s).			

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
SESSION TWENTY-ONE: DAY 11, AM (270 MINUTES)			
First Clinical Practice Session 270 minutes	<p>Activity: Participate in tour of “model” district hospital EmOC facilities</p> <p>Activity: Participate in ward rounds, case reviews and discussion</p>	<p>Clinical Experience with Clients/Patients Under Guidance of Trainers:</p> <p>Teams 1 & 2 go on a guided tour of “model” district hospital EmOC facilities. This should include observation of and discussion about staff requirements and responsibilities, supervision and management, essential equipment, supplies and drugs, labor ward organization and management, and operating room organization and management.</p> <p>Teams 3 & 4 go to the Antenatal Ward for ward rounds, case reviews and discussion about early pregnancy bleeding, elevated blood pressure and late pregnancy bleeding.</p>	MCPC Manual: Section 2, S-7 to S-23, S-35 to S-56
SESSION TWENTY-TWO: DAY 11, PM (210 MINUTES)			
Second Clinical Practice Session 180 minutes	<p>Activity: Perform postpartum and postoperative physical examination</p> <p>Activity: Perform newborn examination</p> <p>Activity: Participate in ward rounds, case reviews and discussion</p> <p>Activity: Perform rapid assessment and manage shock</p>	<p>Clinical Experience with Clients/Patients Under Guidance of Trainers:</p> <p>Teams 1 & 2 go to the postnatal ward, where clinical trainers demonstrate postpartum and postoperative physical examination and care, and newborn examination. Participants then perform the activities in pairs and assess each other’s performance using the Learning Guides for Postpartum Assessment, Basic Care and Family Planning and Newborn Examination. Ultimately, trainers should assess participant’s competency using the Checklist for Postpartum Assessment, Basic Care and Family Planning and Checklists for Newborn Examination. Where applicable (i.e., depending on client/patient availability) discussion of postoperative care and management of fever after childbirth should be undertaken.</p> <p>Teams 3 & 4 go to the emergency reception area (Casualty), where trainers demonstrate rapid assessment and management of shock. Where possible (i.e., depending on client/patient availability), participants then perform the activities in pairs and assess each other’s performance using the Learning Guide for Adult Resuscitation. Ultimately, trainers should assess participant’s competency using the Checklist for Adult Resuscitation.</p>	<p>Learning Guides and Checklist for Postpartum Assessment, Basic Care and Family Planning; Learning Guides and Checklists for Newborn Examination; Learning Guide and Checklist for Adult Resuscitation</p> <p>MCPC Manual: Section 1, C-1 to C-3; Section 2, S-1 to S-5</p>
30 minutes	Activity: Review of the day’s activities	<p>Involve participants in review and discussion of their clinical experience. If there was an especially interesting client/patient, ask the participants involved to share their experience. Also discuss factors that facilitated and barriers that hindered the provision of care.</p>	
Reading Assignment: MCPC Manual: Section 2, S-7 to S-23, S-35 to S-56; Section 1, C-1 to C-3; Section 2, S-1 to S-5			

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
SESSION TWENTY-THREE: DAY 12, AM (270 MINUTES)			
Third Clinical Practice Session 270 minutes	<p>Activity: Participate in tour of “model” district hospital EmOC facilities</p> <p>Activity: Participate in ward rounds, case reviews and discussion</p>	<p>Clinical Experience with Clients/Patients Under Guidance of Trainers:</p> <p>Teams 3 & 4 go on a guided tour of “model” district hospital EmOC facilities. This should include observation of and discussion about staff requirements and responsibilities, supervision and management, essential equipment, supplies and drugs, labor ward organization and management, and operating room organization and management.</p> <p>Teams 1 & 2 go to the Antenatal Ward for ward rounds, case reviews and discussion about early pregnancy bleeding, elevated blood pressure and late pregnancy bleeding.</p>	MCPC Manual: Section 2, S-7 to S-23, S-35 to S-56
SESSION TWENTY-FOUR: DAY 12, PM (210 MINUTES)			
Fourth Clinical Practice Session 180 minutes	<p>Activity: Perform rapid assessment and manage shock</p>	<p>Clinical Experience with Clients/Patients Under Guidance of Trainers:</p> <p>Teams 1 & 2 go to the emergency reception area (Casualty), where trainers demonstrate rapid assessment and management of shock. Where possible (i.e., depending on client/patient availability), participants then perform the activities in pairs and assess each other’s performance using the Learning Guide for Adult Resuscitation. Ultimately, trainers should assess participant’s competency using the Checklist for Adult Resuscitation.</p> <p>Teams 3 & 4 go to the emergency reception area (District Hospital Casualty), where trainers demonstrate rapid assessment and management of shock. Where possible (i.e., depending on client/patient availability), participants then perform the activities in pairs and assess each other’s performance using the Learning Guide for Adult Resuscitation. Ultimately, trainers should assess participant’s competency using the Checklist for Adult Resuscitation.</p>	<p>Learning Guide and Checklist for Adult Resuscitation</p> <p>MCPC Manual: Section 1, C-1 to C-3; Section 2, S-1 to S-5</p>
30 minutes	<p>Activity: Review of the day’s activities</p>	<p>Involve participants in review and discussion of their clinical experience. If there was an especially interesting client/patient, ask the participants involved to share their experience. Also discuss factors that facilitated and barriers that hindered the provision of care.</p>	
Reading Assignment: MCPC Manual: Section 3: P-13 to P-14; Section 1, C-1 to C-3, C-43 to C-47; Section 2, S-1 to S-5; Infection Prevention Manual: Sections 1 to 6; Infection Prevention Supplement: 1–12			

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
SESSION TWENTY-FIVE: DAY 13, AM (270 MINUTES)			
100 minutes	<p>Activity: Observe administration of anesthesia</p> <p>Activity: Observe infection prevention procedures in the operating room</p>	<p>Teams 1 & 2 observe administration of Ketamine infusion and spinal anesthesia, where possible.</p> <p>Teams 3 & 4 observe procedures for instrument and linen preparation, high-level disinfection and sterilization of surgical instruments.</p>	<p>MCPC Manual: Section 3, P-13 to P-14</p> <p>Infection Prevention Manual: Sections 1 to 6; Infection Prevention Supplement: 1–12</p>
20 minutes	Break		
100 minutes	<p>Activity: Observe administration of anesthesia</p> <p>Activity: Observe infection prevention procedures in the operating room</p>	<p>Teams 3 & 4 observe administration of Ketamine infusion and spinal anesthesia, where possible.</p> <p>Teams 1 & 2 observe procedures for instrument and linen preparation, high-level disinfection and sterilization of surgical instruments</p>	<p>MCPC Manual: Section 3, P-13 to P-14</p> <p>Infection Prevention Manual: Sections 1 to 6; Infection Prevention Supplement: 1–12</p>
50 minutes	Activity: Describe operating room readiness for obstetric emergencies	<p>Discussion: Use the following points to guide participants in the discussion of maintaining operating room readiness:</p> <ul style="list-style-type: none"> • Ensuring cleanliness and availability of clean clothing and linens • Ensuring availability of necessary supplies, equipment and drugs • Ensuring emergency equipment is available and in working order • Ensuring sterile supplies are available and not beyond expiry date 	<p>MCPC Manual: Section 1, C-47</p>
SESSION TWENTY-SIX: DAY 13, PM (210 MINUTES)			
<p>Fifth Clinical Practice Session 180 minutes</p>	<p>Activity: Perform rapid assessment and manage shock</p>	<p>Clinical Experience with Clients/Patients Under Guidance of Trainers:</p> <p>Teams 1 & 2 go to the emergency reception area (District Hospital Casualty), where trainers demonstrate rapid assessment and management of shock. Where possible (i.e., depending on client/patient availability), participants then perform the activities in pairs and assess each other's performance using the Learning Guide for Adult Resuscitation. Ultimately, trainers should assess participant's competency using the Checklist for Adult Resuscitation.</p> <p>Teams 3 & 4 see next page.</p>	<p>Learning Guide and Checklist for Adult Resuscitation</p> <p>MCPC Manual: Section 1, C-1 to C-3; Section 2, S-1 to S-5</p>

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
CONTINUATION OF SESSION TWENTY-SIX: DAY 13, PM (210 MINUTES)			
Continuation of Fifth Clinical Practice Session 180 minutes	<p>Activity: Perform postpartum and postoperative physical examination</p> <p>Activity: Perform newborn examination</p> <p>Activity: Participate in ward rounds, case review and discussion</p>	<p>Teams 3 & 4 go to the postnatal ward, where clinical trainers demonstrate postpartum and postoperative physical examination and care, and newborn examination. Participants then perform the activities in pairs and assess each other's performance using the Learning Guides for Postpartum Assessment, Basic Care and Family Planning and Newborn Examination. Ultimately, trainers should assess participant's competency using the Checklist for Postpartum Assessment, Basic Care and Family Planning and Checklists for Newborn Examination. Where applicable (i.e., depending on client/patient availability) discussion of postoperative care and management of fever after childbirth should be undertaken.</p>	Learning Guides and Checklist for Postpartum Assessment, Basic Care and Family Planning; Learning Guides and Checklists for Newborn Examination
30 minutes	Activity: Review of the day's activities	<p>Involve participants in review and discussion of their clinical experience. If there was an especially interesting client/patient, ask the participants involved to share their experience. Also discuss factors that facilitated and barriers that hindered the provision of care.</p>	
Reading Assignment: MCPC Manual: Section 2, S-35 to S-50			

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
SESSION TWENTY-SEVEN: DAY 14, AM (270 MINUTES)			
Sixth Clinical Practice Session 270 minutes	<p>Activity: Take part in labor ward rounds</p> <p>Activity: Monitor and manage normal and complicated labor</p> <p>Activity: Perform MVA and obstetric surgery</p> <p>Activity: Case study on pregnancy-induced hypertension (mild pre-eclampsia)</p>	<p>Clinical Practice with Clients/Patients Under Guidance of Trainers: Teams 1 & 2 go to the labor ward in the main hospital. Trainers should first involve participants in ward rounds and discussion of client/patient needs. Participants should then be assigned, in pairs, to provide care during labor and childbirth. Where possible (i.e., depending on the availability of clients/patients), participants should, under the guidance of a trainer, practice the skills learned earlier. In addition, participant doctors should observe/assist with obstetric surgery and, when appropriate, perform surgery under the guidance of a trainer. The relevant learning guides and checklists should be used to assess performance.</p> <p>Teams 3 & 4 go to the labor ward at the district hospital and do the same as described for Teams 1 & 2 above.</p> <p>During periods of “downtime”, participants should work on a case study on pregnancy-induced hypertension. When participants have completed the case study, the trainer should discuss the outcome, using the case study answer key as a guide. Alternatively, an actual case of mild pre-eclampsia/eclampsia could be reviewed and discussed.</p>	<p>Learning guides and checklists for the skills learned during the first two weeks of the training program and for obstetric surgical procedures</p> <p>EmOC Trainer’s Notebook: Case Studies</p> <p>Tips for Trainers: Teaching Clinical Decision-Making</p> <p>Case Study: Pregnancy-induced Hypertension (Mild Pre-eclampsia) and Answer Key</p> <p>MCPC Manual: Section 2, S-35 to S-50</p>
SESSION TWENTY-EIGHT: DAY 14, PM (210 MINUTES)			
Seventh Clinical Practice Session 180 minutes	<p>As above</p>	<p>Continuation of Clinical Practice with Clients/Patients Under Guidance of Trainers: As described above</p>	
30 minutes	<p>Activity: Review of the day’s activities</p>	<p>Review and discuss participants’ clinical experience, with particular emphasis on emergency interventions. Also discuss factors that facilitated and barriers that hindered the provision of care.</p> <p>The review of the day’s activities for Teams 1 & 2 will take place at the main hospital and for Teams 3 & 4 at the district hospital.</p> <p>Members of Teams 1 & 3 should be reminded that they are assigned to stay on for “late duty” together with one of the trainers.</p>	
Reading Assignment: MCPC Manual: Section 2, S-7 to S-16			

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
SESSION TWENTY-NINE: DAY 15, AM (270 MINUTES)			
Eighth Clinical Practice Session 270 minutes	<p>Activity: Take part in labor ward rounds</p> <p>Activity: Monitor and manage normal and complicated labor</p> <p>Activity: Perform MVA and obstetric surgery</p> <p>Activity: Case study on vaginal bleeding in early pregnancy (ectopic pregnancy)</p>	<p>Clinical Practice with Clients/Patients Under Guidance of Trainers: Teams 1 & 2 go to the labor ward in the main hospital. Trainers should first involve participants in ward rounds and discussion of client/patient needs. Participants should then be assigned, in pairs, to provide care during labor and childbirth. Where possible (i.e., depending on the availability of clients/patients), participants should, under the guidance of a trainer, practice the skills learned earlier. In addition, participant doctors should observe/assist with obstetric surgery and, when appropriate, perform surgery under the guidance of a trainer. The relevant learning guides and checklists should be used to assess performance.</p> <p>Teams 3 & 4 go to the labor ward at the district hospital and do the same as described for Teams 1 & 2.</p> <p>During periods of “downtime”, participants should work on a case study on vaginal bleeding in early pregnancy (ectopic pregnancy). When participants have completed the case study, the trainer should discuss the outcome, using the case study answer key as a guide. Alternatively, an actual case of ectopic pregnancy could be reviewed and discussed.</p>	<p>Learning guides and checklists for the skills learned during the first two weeks of the training program and for obstetric surgical procedures</p> <p>EmOC Trainer’s Notebook: Case Studies</p> <p>Tips for Trainers: Teaching Clinical Decision-Making</p> <p>Case Study: Vaginal Bleeding in Early Pregnancy (Ruptured Ectopic Pregnancy) and Answer Key</p> <p>MCPC Manual: Section 2, S-7 to S-16</p>
SESSION THIRTY: DAY 15, PM (210 MINUTES)			
Ninth Clinical Practice Session 180 minutes	<p>As above</p> <p>Activity: Review individual progress</p>	<p>Continuation of Clinical Practice with Clients/Patients Under Guidance of Trainers: As described above</p> <p>Discussion: Trainers to meet with participants on an individual basis to review progress, examine Clinical Experience Log Book and discuss specific learning needs for next week’s clinical practice.</p>	
30 minutes	Activity: Review of the day’s activities	<p>Review and discuss participants’ clinical experience, with particular emphasis on emergency interventions. Also discuss factors that facilitated and barriers that hindered the provision of care.</p> <p>The review of the day’s activities for Teams 1 & 2 will take place at the main hospital and for Teams 3 & 4 at the district hospital.</p> <p>Members of Teams 2 & 4 should be reminded that they are assigned to stay on for “late duty” together with one of the trainers, and Teams 1 & 3 for Saturday duty.</p>	
Reading Assignment: MCPC Manual: Section 2, S-57 to S-67			

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
SESSION THIRTY-ONE: DAY 16, AM (270 MINUTES)			
Tenth Clinical Practice Session 270 minutes	<p>Activity: Take part in labor ward rounds</p> <p>Activity: Monitor and manage normal and complicated labor</p> <p>Activity: Perform MVA and obstetric surgery</p> <p>Activity: Case study on unsatisfactory progress in labor (obstructed labor)</p>	<p>Clinical Practice with Clients/Patients Under Guidance of Trainers: Teams 1 & 2 go to the labor ward in the main hospital. Trainers should first involve participants in ward rounds and discussion of client/patient needs. Participants should then be assigned, in pairs, to provide care during labor and childbirth. Where possible (i.e., depending on the availability of clients/patients), participants should, under the guidance of a trainer, practice the skills learned earlier. In addition, participant doctors should observe/assist with obstetric surgery and, when appropriate, perform surgery under the guidance of a trainer. The relevant learning guides and checklists should be used to assess performance.</p> <p>Teams 3 & 4 go to the labor ward at the district hospital and do the same as described for Teams 1 & 2.</p> <p>During periods of “downtime”, participants should work on a case study on unsatisfactory progress in labor (obstructed labor). When participants have completed the case study, the trainer should discuss the outcome, using the case study answer key as a guide. Alternatively, an actual case of obstructed labor could be reviewed and discussed.</p>	<p>Learning guides and checklists for the skills learned during the first two weeks of the training program and for obstetric surgical procedures</p> <p>EmOC Trainer’s Notebook: Case Studies</p> <p>Tips for Trainers: Teaching Clinical Decision-Making</p> <p>Case Study: Unsatisfactory Progress in Labor (Obstructed Labor) and Answer Key</p> <p>MCPC Manual: Section 2, S-57 to S-67</p>
SESSION THIRTY-TWO: DAY 16, PM (210 MINUTES)			
Eleventh Clinical Practice Session 180 minutes	As above	Continuation of Clinical Practice with Clients/Patients Under Guidance of Trainers: As described above	
30 minutes	Activity: Review of the day’s activities	Review and discuss participants’ clinical experience, with particular emphasis on emergency interventions. Also discuss factors that facilitated and barriers that hindered the provision of care.	
		The review of the day’s activities for Teams 1 & 2 will take place at the main hospital and for Teams 3 & 4 at the district hospital. Members of Teams 1 & 3 should be reminded that they are assigned to stay on for “late duty” together with one of the trainers.	
Reading Assignment: MCPC Manual: Section 2, S-17 to S-111			

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
SESSION THIRTY-THREE: DAY 17, AM (270 MINUTES)			
Twelfth Clinical Practice Session 270 minutes	<p>Activity: Take part in labor ward rounds</p> <p>Activity: Monitor and manage normal and complicated labor</p> <p>Activity: Perform MVA and obstetric surgery</p> <p>Activity: Case study on fever after childbirth (metritis)</p>	<p>Clinical Practice with Clients/Patients Under Guidance of Trainers: Teams 1 & 2 go to the labor ward in the main hospital. Trainers should first involve participants in ward rounds and discussion of client/patient needs. Participants should then be assigned, in pairs, to provide care during labor and childbirth. Where possible (i.e., depending on the availability of clients/patients), participants should, under the guidance of a trainer, practice the skills learned earlier. In addition, participant doctors should observe/assist with obstetric surgery and, when appropriate, perform surgery under the guidance of a trainer. The relevant learning guides and checklists should be used to assess performance.</p> <p>Teams 3 & 4 go to the labor ward at the district hospital and do the same as described for Teams 1 & 2.</p> <p>During periods of “downtime”, participants should work on a case study on fever after childbirth (metritis). When participants have completed the case study, the trainer should discuss the outcome, using the case study answer key as a guide. Alternatively, an actual case of metritis could be reviewed and discussed.</p>	<p>Learning guides and checklists for the skills learned during the first two weeks of the training program and for obstetric surgical procedures</p> <p>EmOC Trainer’s Notebook: Case Studies</p> <p>Tips for Trainers: Teaching Clinical Decision-Making</p> <p>Case Study: Fever After Childbirth (Metritis) and Answer Key</p>
SESSION THIRTY-FOUR: DAY 17, PM (210 MINUTES)			
Thirteenth Clinical Practice Session 180 minutes	As above	Continuation of Clinical Practice with Clients/Patients Under Guidance of Trainers: As described above	
30 minutes	Activity: Review of the day’s activities	Review and discuss participants’ clinical experience, with particular emphasis on emergency interventions. Also discuss factors that facilitated and barriers that hindered the provision of care.	
		The review of the day’s activities for Teams 1 & 2 will take place at the main hospital and for Teams 3 & 4 at the district hospital. Members of Teams 2 & 4 should be reminded that they are assigned to stay on for “late duty” together with one of the trainers.	
Reading Assignment: MCPC Manual: Section 2, S-25 to S-34			

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
SESSION THIRTY-FIVE: DAY 18, AM (270 MINUTES)			
Fourteenth Clinical Practice Session 270 minutes	<p>Activity: Take part in labor ward rounds</p> <p>Activity: Monitor and manage normal and complicated labor</p> <p>Activity: Perform MVA and obstetric surgery</p> <p>Activity: Case study on vaginal bleeding after childbirth (atonic uterus)</p>	<p>Clinical Practice with Clients/Patients Under Guidance of Trainers: Teams 1 & 2 go to the labor ward in the main hospital. Trainers should first involve participants in ward rounds and discussion of client/patient needs. Participants should then be assigned, in pairs, to provide care during labor and childbirth. Where possible (i.e., depending on the availability of clients/patients), participants should, under the guidance of a trainer, practice the skills learned earlier. In addition, participant doctors should observe/assist with obstetric surgery and, when appropriate, perform surgery under the guidance of a trainer. The relevant learning guides and checklists should be used to assess performance.</p> <p>Teams 3 & 4 go to the labor ward at the district hospital and do the same as described for Teams 1 & 2.</p> <p>During periods of “downtime”, participants should work on a case study on vaginal bleeding after childbirth (atonic uterus). When participants have completed the case study, the trainer should discuss the outcome, using the case study answer key as a guide. Alternatively, an actual case of atonic uterus could be reviewed and discussed.</p>	<p>Learning guides and checklists for the skills learned during the first two weeks of the training program and for obstetric surgical procedures</p> <p>EmOC Trainer’s Notebook: Case Studies</p> <p>Tips for Trainers: Teaching Clinical Decision-Making</p> <p>Case Study: Vaginal Bleeding After Childbirth (Atonic Uterus) and Answer Key</p> <p>MCPC Manual: Section 2, S-25 to S-34</p>
SESSION THIRTY-SIX: DAY 18, PM (210 MINUTES)			
Fifteenth Clinical Practice Session 180 minutes	As above	Continuation of Clinical Practice with Clients/Patients Under Guidance of Trainers: As described above	
30 minutes	Activity: Review of the day’s activities	Review and discuss participants’ clinical experience, with particular emphasis on emergency interventions. Also discuss factors that facilitated and barriers that hindered the provision of care.	
		The review of the day’s activities for Teams 1 & 2 will take place at the main hospital and for Teams 3 & 4 at the district hospital. Members of Teams 1 & 3 should be reminded that they are assigned to stay on for “late duty” together with one of the trainers.	
Reading Assignment: MCPC Manual: Section 2, S-1 to S-5			

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
SESSION THIRTY-SEVEN: DAY 19, AM (270 MINUTES)			
Sixteenth Clinical Practice Session 270 minutes	<p>Activity: Take part in labor ward rounds</p> <p>Activity: Monitor and manage normal and complicated labor</p> <p>Activity: Perform MVA and obstetric surgery</p> <p>Activity: Clinical simulation on management of shock</p>	<p>Clinical Practice with Clients/Patients Under Guidance of Trainers: Teams 3 & 4 go to the labor ward in the main hospital. Trainers should first involve participants in ward rounds and discussion of client/patient needs. Participants should then be assigned, in pairs, to provide care during labor and childbirth. Where possible (i.e., depending on the availability of clients/patients), participants should, under the guidance of a trainer, practice the skills learned earlier. In addition, participant doctors should observe/assist with obstetric surgery and, when appropriate, perform surgery under the guidance of a trainer. The relevant learning guides and checklists should be used to assess performance.</p> <p>Teams 1 & 2 go to the labor ward at the district hospital and do the same as described for Teams 3 & 4.</p> <p>During periods of “downtime”, trainers should guide participants through the clinical simulation on management of shock, following the guidelines provided in the Trainer’s Notebook.</p>	<p>Learning guides and checklists for the skills learned during the first two weeks of the training program and for obstetric surgical procedures</p> <p>EmOC Trainer’s Handbook: Clinical Simulations</p> <p>Clinical Simulation: Management of Shock (Septic or Hypovolemic)</p> <p>MCPC Manual: Section 2, S-1 to S-5</p>
SESSION THIRTY-EIGHT: DAY 19, PM (210 MINUTES)			
Seventeenth Clinical Practice Session 180 minutes	As above	Continuation of Clinical Practice with Clients/Patients Under Guidance of Trainers: As described above	
30 minutes	Activity: Review of the day’s activities	Review and discuss participants’ clinical experience, with particular emphasis on emergency interventions. Also discuss factors that facilitated and barriers that hindered the provision of care. The review of the day’s activities for Teams 1 & 2 will take place at the district hospital and for Teams 3 & 4 at the main hospital. Members of Teams 2 & 4 should be reminded that they are assigned to stay on for “late duty” together with one of the trainers.	
Reading Assignment: MCPC Manual: Section 2, S-35 to S-50			

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
SESSION THIRTY-NINE: DAY 20, AM (270 MINUTES)			
Eighteenth Clinical Practice Session 270 minutes	<p>Activity: Take part in labor ward rounds</p> <p>Activity: Monitor and manage normal and complicated labor</p> <p>Activity: Perform MVA and obstetric surgery</p> <p>Activity: Clinical simulation on management of headaches, blurred vision, convulsions, loss of consciousness or elevated blood pressure</p>	<p>Clinical Practice with Clients/Patients Under Guidance of Trainers: Teams 3 & 4 go to the labor ward in the main hospital. Trainers should first involve participants in ward rounds and discussion of client/patient needs. Participants should then be assigned, in pairs, to provide care during labor and childbirth. Where possible (i.e., depending on the availability of clients/patients), participants should, under the guidance of a trainer, practice the skills learned earlier. In addition, participant doctors should observe/assist with obstetric surgery and, when appropriate, perform surgery under the guidance of a trainer. The relevant learning guides and checklists should be used to assess performance.</p> <p>Teams 1 & 2 go to the labor ward at the district hospital and do the same as described for Teams 3 & 4.</p> <p>During periods of “downtime”, trainers should guide participants through the clinical simulation on management of headaches, blurred vision, convulsions, loss of consciousness or elevated blood pressure following the guidelines provided in the Trainer’s Notebook.</p>	<p>Learning guides and checklists for the skills learned during the first two weeks of the training program and for obstetric surgical procedures</p> <p>EmOC Trainer’s Notebook: Clinical Simulations</p> <p>Clinical Simulation: Management of Headaches, Blurred Vision, Convulsions, Loss of Consciousness or Elevated Blood Pressure</p> <p>MCPC Manual: Section 2, S-35 to S-50</p>
SESSION FORTY: DAY 20, PM (210 MINUTES)			
Nineteenth Clinical Practice Session 180 minutes	<p>As above</p> <p>Activity: Review individual progress</p>	<p>Continuation of Clinical Practice with Clients/Patients Under Guidance of Trainers: As described above</p> <p>Discussion: Trainers to meet with participants on an individual basis to review progress, examine Clinical Experience Log Book and discuss specific learning needs for next week’s clinical practice.</p>	
30 minutes	Activity: Review of the day’s activities	<p>Review and discuss participants’ clinical experience, with particular emphasis on emergency interventions. Also discuss factors that facilitated and barriers that hindered the provision of care.</p> <p>The review of the day’s activities for Teams 1 & 2 will take place at the district hospital and for Teams 3 & 4 at the main hospital.</p> <p>Members of Teams 1 & 3 should be reminded that they are assigned to stay on for “late duty” together with one of the trainers, and Teams 2 & 4 for Saturday duty.</p>	
Reading Assignment: MCPC Manual: Section 2, S-7 to S-16			

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
SESSION FORTY-ONE: DAY 21, AM (270 MINUTES)			
Twentieth Clinical Practice Session 270 minutes	<p>Activity: Take part in labor ward rounds</p> <p>Activity: Monitor and manage normal and complicated labor</p> <p>Activity: Perform MVA and obstetric surgery</p> <p>Activity: Clinical simulation on management of vaginal bleeding in early pregnancy</p>	<p>Clinical Practice with Clients/Patients Under Guidance of Trainers: Teams 3 & 4 go to the labor ward in the main hospital. Trainers should first involve participants in ward rounds and discussion of client/patient needs. Participants should then be assigned, in pairs, to provide care during labor and childbirth. Where possible (i.e., depending on the availability of clients/patients), participants should, under the guidance of a trainer, practice the skills learned earlier. In addition, participant doctors should observe/assist with obstetric surgery and, when appropriate, perform surgery under the guidance of a trainer. The relevant learning guides and checklists should be used to assess performance.</p> <p>Teams 1 & 2 go to the labor ward at the district hospital and do the same as described for Teams 3 & 4.</p> <p>During periods of “downtime”, trainers should guide participants through the clinical simulation on management of vaginal bleeding in early pregnancy, following the guidelines provided in the Trainer’s Notebook.</p>	<p>Learning guides and checklists for the skills learned during the first two weeks of the training program and for obstetric surgical procedures</p> <p>EmOC Trainer’s Notebook: Clinical Simulations</p> <p>Clinical Simulation: Management of Vaginal Bleeding in Early Pregnancy</p> <p>MCPC Manual: Section 2, S-7 to S-16</p>
SESSION FORTY-TWO: DAY 21, PM (210 MINUTES)			
Twenty-first Clinical Practice Session 180 minutes	As above	Continuation of Clinical Practice with Clients/Patients Under Guidance of Trainers: As described above	
30 minutes	Activity: Review of the day’s activities	Review and discuss participants’ clinical experience, with particular emphasis on emergency interventions. Also discuss factors that facilitated and barriers that hindered the provision of care. The review of the day’s activities for Teams 1 & 2 will take place at the district hospital and for Teams 3 & 4 at the main hospital. Members of Teams 2 & 4 should be reminded that they are assigned to stay on for “late duty” together with one of the trainers.	
Reading Assignment: MCPC Manual: Section 2, S-25 to S-34			

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
SESSION FORTY-THREE: DAY 22, AM (270 MINUTES)			
Twenty-second Clinical Practice Session 270 minutes	<p>Activity: Take part in labor ward rounds</p> <p>Activity: Monitor and manage normal and complicated labor</p> <p>Activity: Perform MVA and obstetric surgery</p> <p>Activity: Clinical simulation on management of vaginal bleeding after childbirth</p>	<p>Clinical Practice with Clients/Patients Under Guidance of Trainers: Teams 3 & 4 go to the labor ward in the main hospital. Trainers should first involve participants in ward rounds and discussion of client/patient needs. Participants should then be assigned, in pairs, to provide care during labor and childbirth. Where possible (i.e., depending on the availability of clients/patients), participants should, under the guidance of a trainer, practice the skills learned earlier. In addition, participant doctors should observe/assist with obstetric surgery and, when appropriate, perform surgery under the guidance of a trainer. The relevant learning guides and checklists should be used to assess performance.</p> <p>Teams 1 & 2 go to the labor ward at the district hospital and do the same as described for Teams 3 & 4.</p> <p>During periods of “downtime”, trainers should guide participants through the clinical simulation on management of vaginal bleeding after childbirth, following the guidelines provided in the Trainer’s Notebook.</p>	<p>Learning guides and checklists for the skills learned during the first two weeks of the training program and for obstetric surgical procedures</p> <p>EmOC Trainer’s Notebook: Clinical Simulations</p> <p>Clinical Simulation: Management of Vaginal Bleeding After Childbirth</p> <p>MCPC Manual: Section 2, S-25 to S-34</p>
SESSION FORTY-FOUR: DAY 22, PM (210 MINUTES)			
Twenty-third Clinical Practice Session 180 minutes	As above	Continuation of Clinical Practice with Clients/Patients Under Guidance of Trainers: As described above	
30 minutes	Activity: Review of the day’s activities	Review and discuss participants’ clinical experience, with particular emphasis on emergency interventions. Also discuss factors that facilitated and barriers that hindered the provision of care. The review of the day’s activities for Teams 1 & 2 will take place at the district hospital and for Teams 3 & 4 at the main hospital. Members of Teams 1 & 3 should be reminded that they are assigned to stay on for “late duty” together with one of the trainers.	
Reading Assignment: MCPC Manual: Section 2, S-141 to S-146			

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
SESSION FORTY-FIVE: DAY 23, AM (270 MINUTES)			
Twenty-fourth Clinical Practice Session 270 minutes	<p>Activity: Take part in labor ward rounds</p> <p>Activity: Monitor and manage normal and complicated labor</p> <p>Activity: Perform MVA and obstetric surgery</p> <p>Activity: Clinical simulation on management of the asphyxiated newborn</p>	<p>Clinical Practice with Clients/Patients Under Guidance of Trainers: Teams 3 & 4 go to the labor ward in the main hospital. Trainers should first involve participants in ward rounds and discussion of client/patient needs. Participants should then be assigned, in pairs, to provide care during labor and childbirth. Where possible (i.e., depending on the availability of clients/patients), participants should, under the guidance of a trainer, practice the skills learned earlier. In addition, participant doctors should observe/assist with obstetric surgery and, when appropriate, perform surgery under the guidance of a trainer. The relevant learning guides and checklists should be used to assess performance.</p> <p>Teams 1 & 2 go to the labor ward at the district hospital and do the same as described for Teams 3 & 4.</p> <p>During periods of “downtime”, trainers should guide participants through the clinical simulation on management of the asphyxiated newborn, following the guidelines provided in the Trainer’s Notebook.</p>	<p>Learning guides and checklists for the skills learned during the first two weeks of the training program and for obstetric surgical procedures</p> <p>EmOC Trainer’s Notebook: Clinical Simulations</p> <p>Clinical Simulation: Management of the Asphyxiated Newborn</p> <p>MCPC Manual: Section 2, S-141 to S-146</p>
SESSION FORTY-SIX: DAY 23, PM (210 MINUTES)			
Twenty-fifth Clinical Practice Session 180 minutes	As above	Continuation of Clinical Practice with Clients/Patients Under Guidance of Trainers: As described above	
30 minutes	Activity: Review of the day’s activities	<p>Review and discuss participants’ clinical experience, with particular emphasis on emergency interventions. Also discuss factors that facilitated and barriers that hindered the provision of care.</p> <p>The review of the day’s activities for Teams 1 & 2 will take place at the district hospital and for Teams 3 & 4 at the main hospital.</p> <p>Members of Teams 2 & 4 should be reminded that they are assigned to stay on for “late duty” together with one of the trainers.</p> <p>Ask a participant to volunteer to write the agenda for the next day on a flipchart, in preparation for the opening session. The schedule in the EmOC Participant’s Handbook should be used to do this. Ask one or more of the other participants to plan an opening activity or warmup for the next day.</p>	
Reading Assignment: MCPC Manual: Section 2, S-141 to S-146; Improving Emergency Obstetric Care Through Criterion-Based Audit: 1–31; AMDD Workbook, Using the UN Process Indicators of Emergency Obstetric Services: 1–29			

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
SESSION FORTY-SEVEN: DAY 24, AM (270 MINUTES)			
10 minutes	Activity: Agenda and opening activity	Review the agenda with participants, as outlined on the flipchart. Have the participant(s) who volunteered for the opening activity or warmup conduct it.	
70 minutes	Objective: Describe the types of maternal and perinatal death reviews and near miss audits	Illustrated Lecture and Discussion: Use the relevant presentation graphics to describe and discuss the types of maternal and perinatal death reviews and near miss audits, the benefits and disadvantages of each, and the process for conducting reviews and audits. Pause at appropriate intervals to emphasize particular points and encourage discussion. For example, ask participants whether they currently conduct mortality reviews or audits. If so, how have the reviews or audits been conducted, who has been involved and how have the results been used?	EmOC Trainer's Notebook: Illustrated Lectures Presentation Graphics: Improving Emergency Obstetric Care Through Criterion-Based Audit
100 minutes	Activity: Demonstration of maternal death review or near miss audit	Demonstration: Trainers should arrange in advance for participants to attend, as observers, a maternal death review or near miss audit at the main hospital used for training activities. Trainers should meet with participants following the review or audit to discuss the process and outcome. If it is not possible to attend a maternal death review or near miss audit, trainers should audit an event (e.g., all cases of postpartum hemorrhage in the past two months) by obtaining patient records, summarizing each case and presenting the results to participants for discussion.	
20 minutes	Break		
70 minutes	Activity: Using the results of maternal death reviews and near miss audits	Discussion: Use the following points to encourage participants to share their views about using the results of maternal death reviews and near miss audits: <ul style="list-style-type: none"> • Clinical practices that were found to be effective • Clinical practices that were not found to be effective • Reinforcing effective clinical practices • Improving or excluding ineffective practices • Avoiding blame • Identifying areas for strengthening management and supervision 	

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
SESSION FORTY-EIGHT: DAY 24, PM (210 MINUTES)			
45 minutes	Activity: Describe lessons learned during clinical practice	<p>Discussion: Use the following points to encourage participants to discuss the lessons learned during clinical practice:</p> <ul style="list-style-type: none"> • Factors that facilitated clinical practice • Factors that made clinical practice difficult • Individual and team strengths with respect to clinical practice • Individual and team weaknesses with respect to clinical practice • Aspects of individual and team practice that need to improve • The most important thing learned by each participant during clinical practice 	
75 minutes	Activity: Describe setting up and managing the emergency obstetric team and services	<p>Illustrated Lecture and Discussion: Use the following points to facilitate discussion about managing the emergency obstetric team and services:</p> <ul style="list-style-type: none"> • Assignment of responsibilities • Working as a team • Ensuring consistent availability of equipment, supplies and drugs for obstetric emergencies • Ensuring that skills for EmOC remain current • Ensuring readiness of all areas of the hospital for EmOC 	AMDD Workbook, Using the UN Process Indicators of Emergency Obstetric Services
20 minutes	Break		
30 minutes	Activity: Identify further individual learning needs	Discussion: Trainers meet with participants individually to discuss and identify further learning needs for inclusion in the 3-month self-directed practicum.	
25 minutes	Activity: Introduce group work for the development of action plans	Explain the purpose and content of the action plans that are to be developed by participants, working in teams. Each team is to begin discussing actions for change and indicators to measure success, in preparation for the development of their action plans during group work the next morning (Session 49). Provide each team with copies of action plan worksheets and ensure that they understand how to complete them.	EmOC Participant's Handbook: Action Plan Worksheets

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
CONTINUATION OF SESSION FORTY-EIGHT: DAY 24, PM (210 MINUTES)			
15 minutes	<p>Activity: Review of the day's activities</p>	<p>Involve participants in review and discussion of the topics and activities covered during the day. Ask a participant to volunteer to write the agenda for the next day on a flipchart, in preparation for the opening session. The schedule in the EmOC Participant's Handbook should be used to do this. Ask one or more of the other participants to plan an opening activity or warmup for the next day.</p>	
<p>Assignment: Each team is to discuss and prepare for the development of an action plan during group work the next morning.</p>			

MODEL EmOC COURSE OUTLINE (5 weeks of 17-week course)			
TIME	OBJECTIVES/ACTIVITIES	TRAINING/LEARNING METHODS	RESOURCE MATERIALS
SESSION FORTY-NINE: DAY 25, AM (270 MINUTES)			
10 minutes	Activity: Agenda and opening activity	Review the agenda with participants, as outlined on the flipchart. Have the participant(s) who volunteered for the opening activity or warmup conduct it.	
120 minutes	Activity: Develop action plans	Group Work: Each team of participants is to prepare an action plan based on the guidelines provided during the introduction to group work during Session 48.	EmOC Participant's Handbook: Action Plan Worksheets
60 minutes	Activity: Present action plans	Each team of participants is to present their action plan.	
20 minutes	Break		
60 minutes	Activity: Identify next steps	Trainers should discuss with participants the following aspects of the self-directed practicum: <ul style="list-style-type: none"> • Responsibilities of participants as individuals and team members • Purpose and nature of mentoring visits by trainers • Timing of mentoring visits • Use of Clinical Experience Log Book Encourage participants to take part in the discussion to ensure that they understand the structure and purpose of the self-directed practicum.	EmOC Trainer's Notebook: Mentoring Guidelines for Trainers Clinical Experience Log Book
SESSION FIFTY: DAY 25, PM (75 MINUTES)			
45 minutes	Activity: Course summary	Provide a brief review of the topics and skills covered during the course. Emphasize that this is the conclusion of the first part of the course. Stress the importance of continuity between this and the forthcoming 3-month self-directed practicum.	
30 minutes	Activity: Closing ceremony		

PRECOURSE KNOWLEDGE QUESTIONNAIRE ANSWER KEY

MANAGEMENT OF SHOCK; RAPID INITIAL ASSESSMENT

1. Rapid initial assessment should be carried out on all women of childbearing age who present with a problem. **TRUE**
2. A woman who suffers shock as a result of an obstetric emergency may have a fast, weak pulse. **TRUE**
3. A woman who has an unruptured ectopic pregnancy usually presents with collapse and weakness. **FALSE**
4. A pregnant woman who has severe anemia typically presents with difficulty in breathing and wheezing. **FALSE**

BLEEDING DURING PREGNANCY AND LABOR

5. Management of inevitable abortion when the pregnancy is greater than 16 weeks usually involves administration of ergometrine or misoprostol. **FALSE**
6. Manual vacuum aspiration (MVA) is an effective method for treatment of incomplete abortion if the uterine size is not greater than 8 weeks. **FALSE**
7. Assessment of a woman who presents with vaginal bleeding after 22 weeks of pregnancy should be limited to abdominal examination. **FALSE**
8. If bleeding is heavy in the case of abruptio placentae and the cervix is fully dilated, delivery should be assisted by vacuum extraction. **TRUE**

BLEEDING AFTER CHILDBIRTH

9. Postpartum hemorrhage is defined as sudden bleeding after childbirth. **FALSE**

10. Continuous slow bleeding or sudden bleeding after childbirth requires early and aggressive intervention. **TRUE**
11. Absent fetal movements and fetal heart sounds, together with intra-abdominal and/or vaginal bleeding and severe abdominal pain, suggest ruptured uterus. **TRUE**

MANAGEMENT OF THIRD STAGE OF LABOR

12. Active management of the third stage of labor should be practiced only on women who have a history of postpartum hemorrhage. **FALSE**
13. If a retained placenta is undelivered after 30 minutes of oxytocin administration and controlled cord traction and the uterus is contracted, controlled cord traction and fundal pressure should be attempted. **FALSE**
14. If the cervix is dilated in the case of delayed (secondary) postpartum hemorrhage, dilatation and curettage should be performed to evacuate the uterus. **FALSE**

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

15. Hypertension in pregnancy can be associated with protein in the urine. **TRUE**
16. The presenting signs and symptoms of eclampsia include convulsions, diastolic blood pressure of 90 mm Hg or more after 20 weeks gestation and proteinuria of 2+ or more. **TRUE**
17. A pregnant woman who is convulsing should be protected from injury by moving objects away from her. **TRUE**
18. The management of mild pre-eclampsia should include sedatives and tranquilizers. **FALSE**

19. The drug of choice for preventing and treating convulsions in severe pre-eclampsia and eclampsia is diazepam. **FALSE**

PARTOGRAPH

20. Cervical dilation plotted to the right of the alert line on the partograph indicates unsatisfactory progress of labor. **TRUE**

NORMAL LABOR AND CHILDBIRTH; OBSTETRIC SURGERY

21. Findings diagnostic of cephalopelvic disproportion are secondary arrest of descent of the head in the presence of good contractions. **TRUE**
22. If the active phase of labor is prolonged, delivery should be by cesarean section. **FALSE**
23. It is recommended to first perform artificial rupture of membranes (if the membranes are intact) for induction of labor, except in patients with HIV. **TRUE**
24. Conditions for vacuum extraction are fetal head at least at 0 station or not more than 2/5 above the symphysis pubis and a fully dilated cervix. **TRUE**
25. Abdominal palpation to assess descent of the fetal head is equivalent to assessing descent using the station on vaginal examination. **TRUE**
26. A head that is felt in the flank on abdominal examination indicates a shoulder presentation or transverse lie. **TRUE**
27. When the fetal head is well flexed with occiput anterior or occiput transverse (in early labor), normal childbirth should be anticipated. **TRUE**
28. If labor is prolonged in the case of a breech presentation, a cesarean section should be performed. **TRUE**

29. In the case of a single large fetus, delivery should be by cesarean section. **FALSE**
30. A transverse uterine scar in a previous pregnancy is an indication for elective cesarean section. **FALSE**
31. If prelabor rupture of membranes occurs before 37 weeks gestation and there are no signs of infection, labor should be induced. **FALSE**
32. Meconium staining of amniotic fluid is seen frequently as the fetus matures and by itself is not an indicator of fetal distress. **TRUE**

FEVER DURING AND AFTER CHILDBIRTH

33. Loin pain and/or tenderness may be present in acute pyelonephritis. **TRUE**
34. Breast pain and tenderness 3 to 5 days after childbirth is usually due to breast engorgement. **TRUE**
35. Lower abdominal pain and uterine tenderness, together with foul-smelling lochia, are characteristic of metritis. **TRUE**

NEWBORN RESUSCITATION

36. When using a bag and mask to resuscitate a newborn, the newborn's neck must be slightly extended to open the airway. **TRUE**

Week 1

ROLE PLAY: INTERPERSONAL COMMUNICATION DURING EmOC ANSWER KEY

Discussion Questions

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

Answers

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

1. The midwife should speak in a calm, quiet, reassuring manner, using terminology that will be easily understood by Mrs. A. Sufficient information should be provided to enable Mrs. A. and the TBA to understand the situation, the need for transfer to the district hospital and what to expect once there.
2. The midwife should listen and express understanding and acceptance of Mrs. A.'s feelings about her situation. For example, non-verbal behaviors such as a squeeze of the hand and a look of concern could be enormously helpful in providing emotional support and reassurance for Mrs. A. In addition, the midwife should interact with the TBA in a similar manner to reassure her and help allay feelings of guilt.
3. If the midwife demonstrates the verbal and non-verbal behaviors mentioned above, Mrs. A. is less likely to appear frightened and more likely to accept the need for transfer to the district hospital. The TBA should feel reassured and therefore be in a better position to be supportive to Mrs. A.

CASE STUDY 1A: VAGINAL BLEEDING IN EARLY PREGNANCY

ANSWER KEY

Case Study

Mrs. A. is a 20-year-old para 1 who presents with the complaint of vaginal bleeding that began yesterday as light bleeding, but has increased today. She reports passing a single clot. She also reports lower abdominal pain, as well as tiredness and “feeling sick” since yesterday. Mrs. A reports 3 months of amenorrhea.

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

1. What will you include in your initial assessment of Mrs. A., and why?
 - Mrs. A. should be greeted respectfully and with kindness.
 - She should be told what is going to be done and listened to carefully. In addition, her questions should be answered in a calm and reassuring manner.
 - A rapid assessment should be done to check for the following signs of shock: Pulse >110; systolic blood pressure less than 90; temperature >38°C; pallor; sweatiness or cold, clammy skin; rapid breathing; confusion. Shock would require emergency treatment/resuscitation.
 - Additional history to be obtained:
 - Passing of any products of conception
 - Frequency, regularity and length of her menstrual periods prior to the current period of amenorrhea
 - Current contraceptive use
 - Other symptoms of pregnancy
2. What particular aspects of Mrs. A.’s physical examination will help you make a diagnosis or identify her problems/needs, and why?
 - An abdominal examination should be done to check for tenderness and, if possible, to determine the size, consistency and position of the uterus.
 - A pelvic examination should be done to check for tenderness and to determine whether the cervix is closed, whether there is any tissue protruding from the cervix, the amount of bleeding, and to confirm the size of the uterus.
3. What causes of bleeding do you need to rule out?
 - Abortion (threatened, inevitable, incomplete, complete)
 - Ectopic pregnancy
 - Molar pregnancy

Diagnosis (identification of problems/needs)

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

History:

Mrs. A. admits that she “may have seen” some tissue expelled this morning. She also reports regular menses with periods lasting approximately 5 days, and some nausea for the past 2½ months. She denies other signs of pregnancy.

She had spontaneous vaginal delivery of a full-term infant 2 years ago.

She is using no contraception.

Physical Examination:

Mrs. A. is conscious and alert with no signs of pallor.

Temperature is 37°C, pulse is 100 beats per minute, blood pressure is 110/70 and respirations are 20 breaths per minute.

Abdominal exam shows no tenderness or masses. The uterus is not palpable. Vaginal exam shows heavy bleeding with clots; tissue is visualized in the cervix; the cervix is 2 cm dilated; there is no cervical motion nor adnexal tenderness. Uterus is 8 weeks size.

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

- Mrs. A.’s symptoms and signs (e.g., heavy bleeding, cramping/lower abdominal pain, dilated cervix, products of conception seen in the cervical os, uterus slightly smaller than expected) are consistent with **incomplete abortion**.

Care Provision (planning and intervention)

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

- Arrangements should be made for immediate evacuation of the uterus using manual vacuum aspiration.
- Continue to monitor vital signs during the procedure and for at least 2 hours after the procedure.
- Provide emotional support and reassurance to Mrs. A., explain what to expect, listen to her carefully and respond to any fears or concerns she may have.

Evaluation

Three hours after the procedure, Mrs. A. has recovered well from the procedure. Her temperature is 37°C, pulse is 90 beats per minute, blood pressure is 112/74 and respirations are 18 per minute. Vaginal bleeding has decreased to spotting only. She is now ready to be discharged.

6. Based on these findings, what is your continuing plan of care for Mrs. A., and why?
- Mrs. A. should be reassured about the chances of a subsequent successful pregnancy and encouraged to delay the next pregnancy until she has completely recovered.
 - Mrs. A. should be counseled about suitable family planning methods.
 - Mrs. A. should be advised to return for immediate attention if she has:
 - Prolonged cramping (more than a few days)
 - Prolonged bleeding (more than 2 weeks)
 - Heavy bleeding (more than normal menstrual bleeding)
 - Severe or increased pain
 - Fever, chills or malaise
 - Fainting
 - Identify any other reproductive health services (e.g., VCT for HIV, tetanus prophylaxis or tetanus booster, treatment of sexually transmitted infections, cervical cancer screening) that Mrs. A. may need.

References

Managing Complications in Pregnancy and Childbirth: pages C-1 to C-2; S-7 to S-8; S-11 to S-13; P-68

CASE STUDY 1B: VAGINAL BLEEDING IN EARLY PREGNANCY

ANSWER KEY

Case Study

Mrs. B. is a 30-year-old para 4 who presents with a history of vaginal bleeding for 4 days. She reports 3 of months amenorrhea. She also reports that she went to a local health worker who prescribed some tablets. Mrs. B. reports that vaginal bleeding started after taking the tablets. Bleeding has increased since yesterday. She has passed products of conception and has cramping lower abdominal pain. She feels tired and ill.

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

1. What will you include in your initial assessment of Mrs. B., and why?
 - Mrs. B. should be greeted respectfully and with kindness.
 - She should be told what is going to be done and listened to carefully. In addition, her questions should be answered in a calm and reassuring manner.
 - A rapid initial assessment should be done to check for the following signs to determine if she is in shock and in need of emergency treatment/resuscitation: Pulse >100; systolic blood pressure less than 90; pallor; sweatiness or cold clammy skin; rapid breathing; confusion. The initial assessment should also include rapid observation of consciousness/convulsions, abdominal pain and temperature
2. What particular aspects of Mrs. B.'s physical examination will help you make a diagnosis or identify her problems/needs, and why?
 - An abdominal examination should be done to check for tenderness and to determine the size, consistency and position of the uterus.
 - A pelvic examination should be done to check for tenderness and to determine whether the cervix is closed, whether there is any tissue protruding from the cervix, the amount of bleeding, and to confirm the size of the uterus.
 - Mrs. B. should be asked if she knows what the medication was that she took at the health center and if any internal examination or other treatment was carried out.

Diagnosis (identification of problems/needs)

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

History:

Mrs. B. reports that she does not know what medication she was given. During her visit to the health center, a vaginal exam was performed and some "medicine" was inserted vaginally.

Physical Examination:

Mrs. B. is conscious and alert with mild pallor. Her temperature is 38.5°C, pulse is 120 beats per minute, blood pressure is 100/60 and respiration rate is 24. Her lower abdomen is tender. On vaginal exam a foul-smelling, blood-stained vaginal discharge is noted. The cervix is 2–3 cm dilated with products of conception visible at the os. The uterus is 8 weeks size and tender.

3. Based on these findings, what is Mrs. B.'s diagnosis (problem/need), and why?
 - Mrs. B.'s symptoms and signs (e.g., heavy bleeding, cramping/lower abdominal pain, dilated cervix, products of conception seen in the cervical os, uterus slightly smaller than expected, tender uterus, foul-smelling vaginal discharge, fever and rapid heart rate) are consistent with incomplete abortion with sepsis.

Care Provision (planning and intervention)

4. Based on your diagnosis (problem/need identification), what is your plan of care for Mrs. B., and why?
 - Immediately begin ampicillin 2 gm IV every 6 hours PLUS gentamicin 5 mg/kg body weight every 24 hours PLUS metronidazole 500 mg IV every 8 hours.
 - Shock should be anticipated and treatment should be started if there are any signs of shock.
 - Mrs. B. should be examined for uterine, vaginal and bowel injuries. If uterine or bowel injuries are suspected, immediate laparotomy should be arranged.
 - Her vagina should be thoroughly irrigated to remove any herbs, local medications or caustic substances.
 - Arrangements should be made for immediate evacuation of the uterus using manual vacuum aspiration.
 - Provide emotional support and reassurance to Mrs. B., explain what to expect, listen to her carefully and respond to any fears or concerns she may have.

Evaluation

Mrs. B.'s post-procedure condition was unremarkable. The vaginal discharge decreased progressively after treatment. On postoperative day two, her temperature is 37°C, pulse is 86, blood pressure is 110/72 and respirations are 18, and there is no abdominal tenderness.

5. Based on these findings, what is your continuing plan of care for Mrs. B., and why?
 - The antibiotics should be stopped after Mrs. B. is fever-free for 48 hours.
 - If pregnancy is not desired, Mrs. B. should be counseled regarding unsafe abortion. Family planning counseling should be provided and her family planning method of choice provided to Mrs. B. before discharge.

- If pregnancy is desired, Mrs. B. should be reassured about the chances of a subsequent successful pregnancy and encouraged to delay the next pregnancy until she has completely recovered.
- Mrs. B. should be advised to return for immediate attention if she has:
 - Prolonged cramping (more than a few days)
 - Prolonged bleeding (more than 2 weeks)
 - Heavy bleeding (more than normal menstrual bleeding)
 - Severe or increased pain
 - Fever, chills or malaise
 - Fainting
- Identify any other reproductive health services (e.g., VCT for HIV, tetanus prophylaxis or tetanus booster, treatment of sexually transmitted infections, cervical cancer screening) that Mrs. B. may need.

References

Managing Complications in Pregnancy and Childbirth: pages C-1 to C-2; S-7 to S-13

CASE STUDY 2: PREGNANCY-INDUCED HYPERTENSION ANSWER KEY

Case Study

Mrs. C. is a 23-year-old gravida 3 para 2 at 37 weeks gestation who is brought to the emergency department of the district hospital complaining of a severe headache and blurred vision. Mrs. C has had four prenatal care visits during this pregnancy. Her prenatal course has been unremarkable. She was last seen 1 week ago, at which time she was counseled about danger signs in pregnancy and what to do about them.

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

1. What will you include in your initial assessment of Mrs. C., and why?
 - Mrs. C. and her husband should be greeted respectfully and with kindness.
 - They should be told what is going to be done and listened to carefully. In addition, their questions should be answered in a calm and reassuring manner.
 - A rapid initial assessment should be done to check level of consciousness and blood pressure. Temperature and respiration rate should also be checked. Mrs. C. should be asked how she is feeling, when headache and blurred vision began, whether she has had upper abdominal pain and whether there has been a decrease in urine output during the past 24 hours. She should also be asked if fetal movements are normal.
 - Mrs. C.'s urine should be tested for protein.
2. What particular aspects of Mrs. C.'s physical examination will help you make a diagnosis or identify her problems/needs, and why?
 - Mrs. C. should be checked for elevated blood pressure and protein in her urine (the presence of proteinuria, together with a diastolic blood pressure greater than 90, is indicative of pre-eclampsia).
 - An abdominal examination should be done to check fetal condition and to listen for fetal heart sounds (in cases of pre-eclampsia/eclampsia reduced placental function may lead to low birth weight; there is an increased risk of hypoxia in both the antenatal and intranatal periods, and an increased risk of abruptio placentae). Her uterus should also be palpated for tenderness and size.
 - Note that a diagnosis should be made rapidly, within a few minutes.
3. What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. C., and why?
 - As mentioned above, urine should be checked for protein.

Diagnosis (identification of problems/needs)

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

History:

Mrs. C. reports onset of severe headache 3 hours prior to admission, and blurred vision that began 2 hours after onset of headache. She denies upper abdominal pain, decreased urine output, convulsions or loss of consciousness. She reports normal fetal movement.

Physical Examination:

Mrs. C. is conscious and alert. Her blood pressure is 160/110. There is no abdominal tenderness. Uterus is 37 weeks size. Fetal movements are normal and fetal heart rate is 120/minute.

Laboratory Tests:

Urine shows 3+ protein.

4. Based on these findings, what is Mrs. C.'s diagnosis (problem/need), and why?
 - Mrs. C.'s symptoms and signs (e.g., diastolic blood pressure 110 or more after 20 weeks gestation and proteinuria up to 3+) are consistent with severe pre-eclampsia.

Care Provision (planning and intervention)

5. Based on your diagnosis (problem/need identification), what is your plan of care for Mrs. C., and why?
 - An antihypertensive drug should be given to lower the diastolic blood pressure and keep it between 90 and 100 to prevent cerebral hemorrhage. Hydralazine is the drug of choice; however, if it is not available, labetalol can be used.
 - Anticonvulsive therapy should be started. Magnesium sulfate is the drug of choice for preventing and treating convulsions in severe pre-eclampsia and eclampsia; however, if it is not available, diazepam can be used.
 - Equipment to respond to a convulsion (airway, suction, mask and bag, oxygen) should be available at her bedside.
 - Mrs. C. should not be left alone if she has a convulsion.
 - An IV of normal saline or Ringer's lactate should be started to administer IV drugs.
 - An indwelling catheter should be inserted to monitor urine output and proteinuria (magnesium sulfate should be withheld if the urine output falls below 30 mL per hour over 4 hours).
 - A strict record of intake and output should be kept to ensure that there is no fluid overload.
 - Vital signs (blood pressure and respiration rate, in particular), reflexes and fetal heart rate should

be monitored hourly (magnesium sulfate should be withheld if the respiration rate falls below 16 breaths/minute or if patellar reflexes are absent).

- Auscultate the lung bases hourly for rales indicating pulmonary edema.
- A bedside clotting test should be done to rule out coagulopathy (coagulopathy can be triggered by eclampsia).
- The steps taken to manage the complication should be explained to Mrs. C. and her husband. In addition, they should be encouraged to express their concerns, listened to carefully, and provided emotional support and reassurance.

Evaluation

Two hours following the initiation of treatment, Mrs. C.'s diastolic blood pressure is 100. Patient reports that headache persists. Fetal heart rate has ranged between 120 and 140/minute. Reflexes are normal. Lungs are clear on auscultation. Clotting time is 6 minutes by bedside clotting test (clotting within 7 minutes is normal). Urine output has dropped to 20 mL/hour.

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

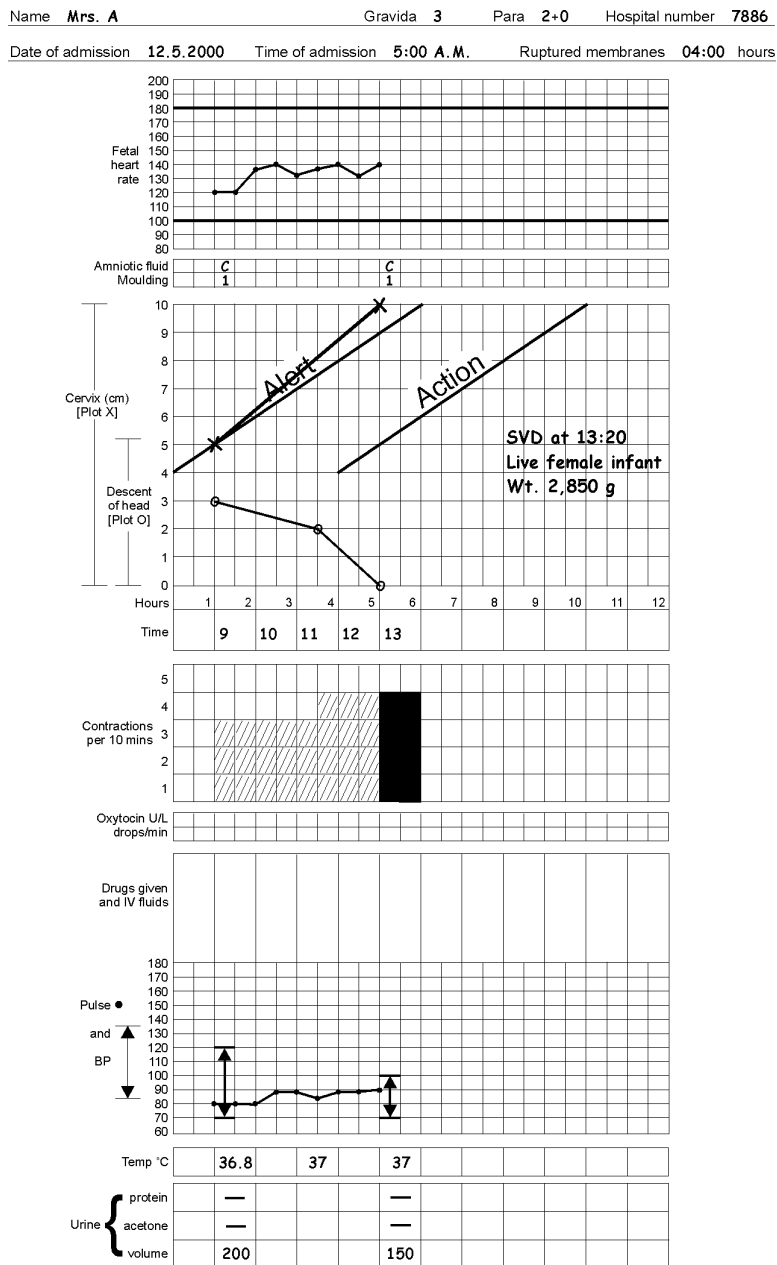
- Do not repeat the dose of magnesium sulfate until the urine output is greater than 30 mL/hour.
- Plans should be made to deliver Mrs. C.'s baby:
 - If the cervix is favorable (soft, thin, partly dilated), membranes should be ruptured and labor should be induced using oxytocin or prostaglandins. In areas of high prevalence of HIV, membranes should not be ruptured.
 - If vaginal delivery is not anticipated within 24 hours of the onset of symptoms, if there are fetal heart abnormalities (less than 100 or more than 180 beats/minute), or if the cervix is unfavorable (firm, thick, closed), Mrs. C. should be delivered by cesarean section.
- The steps taken for continuing management of the complication should be explained to Mrs. C. and her husband. In addition, they should be encouraged to express their concerns, listened to carefully, and provided continuing emotional support and reassurance.
- After childbirth:
 - Anticonvulsive therapy should be continued for 24 hours.
 - Antihypertensive drugs should be continued if Mrs. C.'s diastolic blood pressure is 110 or higher.
 - Continue to monitor blood pressure, respiratory rate, urine output, and urine for protein.

References

Managing Complications in Pregnancy and Childbirth: pages C-21; S-43 to S-48

EXERCISE: USING THE PARTOGRAPH ANSWER KEY

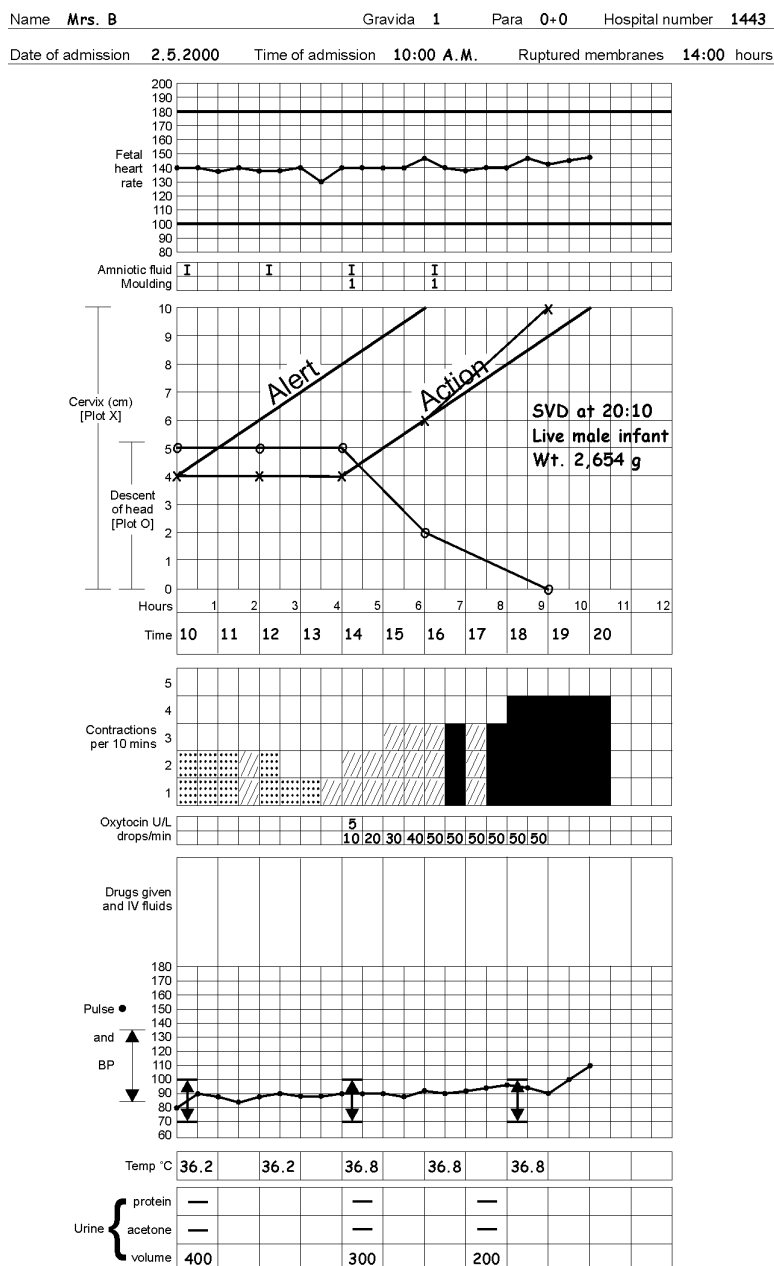
CASE 1



- Step 1—see partograph
- Step 2—see partograph
 - Steps: Inform of findings and what to expect; encourage to ask questions; provide comfort measures, hydration, nutrition
 - Advice: Assume position of choice; drink plenty of fluids; eat as desired
 - Expect at 13.00: Progress to at least 9 cm dilatation

- Step 3
 - Steps: Prepare for birth
 - Advice: Push only when urge to push
 - Expect: Spontaneous vaginal delivery
- Step 4
 - 1st stage of active labor: 4 hrs
 - 2nd stage of active labor: 20 min

EXERCISE: USING THE PARTOGRAPH: CASE 2

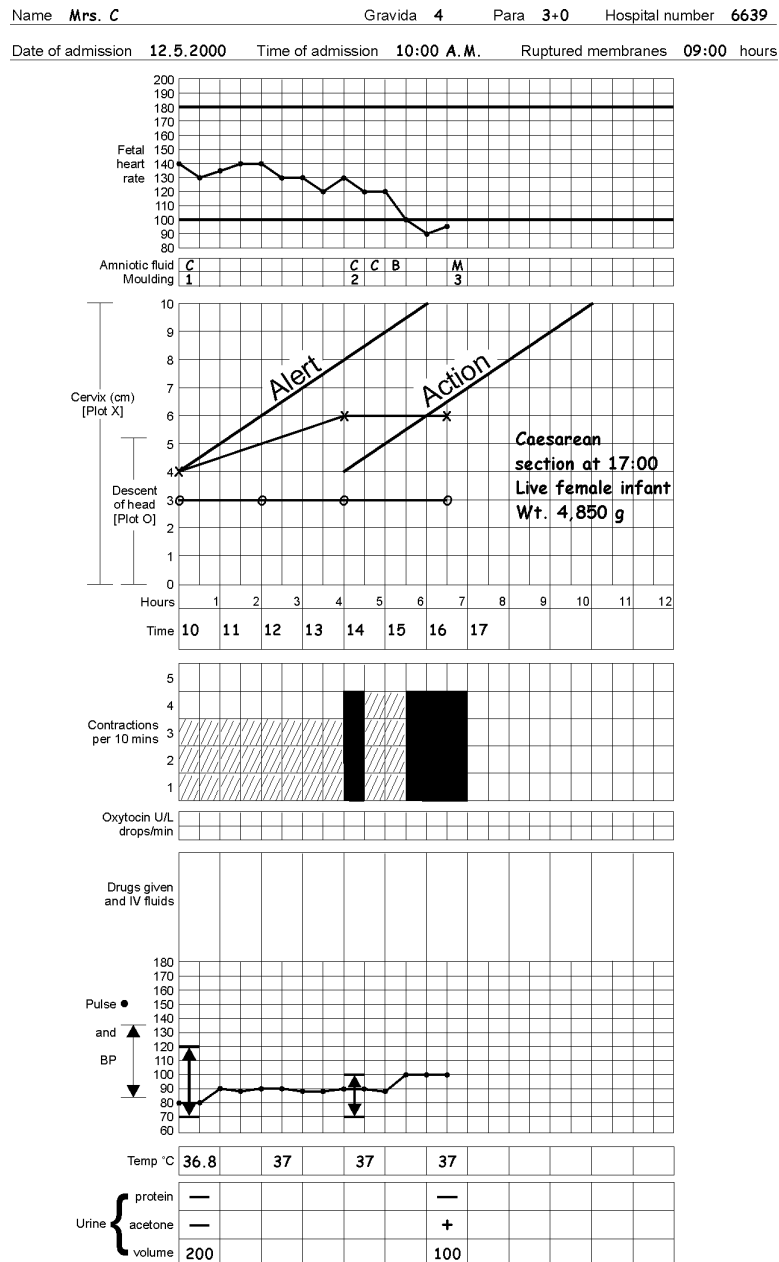


- Step 1
 - Diagnosis: Active labor
 - Action: Inform Mrs. B and family about findings and what to expect; give continual opportunity to ask questions; encourage ambulation and to drink and eat as wanted
- Step 2
 - Diagnosis: Prolonged active phase (cervical dilatation plotted to the right of the alert line on the partograph)
 - Action: The facilitator should take the opportunity to open a discussion about using oxytocin for augmenting labor based on the clinical setting. For instance, is the woman being cared for at a health post that is 4 hours away from a district hospital where an

oxytocin drip can be started? Or if she is being cared for in a district hospital, can other measures be used (such as hydration, ambulation) before oxytocin is started?

- Step 3
 - Diagnosis: Prolonged active phase; less than 3 contractions per 10 min lasting greater than 40 sec; good maternal and fetal condition
 - Action: Augment labor with oxytocin and artificial rupture of membranes; inform of findings and what to expect; reassure; answer questions; encourage drink and assume position of choice
- Step 4
 - Steps: Continue to augment, provide comfort (psychological and physical); encourage drink and nutrition
- Step 5—see partograph
- Step 6—see partograph
- Step 7
 - 1st stage of active labor: 9 hrs
 - 2nd stage of active labor: 1 hr 10 min
 - Why augment: Less than 3 contractions per 10 min lasting greater than 40 sec (lack of progress)

EXERCISE: USING THE PARTOGRAPH: CASE 3



- Step 1—see partograph
- Step 2—see partograph
- Step 3—see partograph
- Step 4—see partograph
 - Final diagnosis: Obstructed labor

- Action at 14.00: Continue emotional and physical support, including hydration; continue attentive monitoring of maternal and fetal condition. Why? Woman and family may become discouraged with lack of progress and emotionally and physically exhausted; have crossed alert line.
- Perform cesarean section because the patient is already in secondary arrest of dilatation and descent despite at least 3 contractions per 10 minutes lasting greater than 40 seconds.
- Yes, was correct action because fetal condition was deteriorating, lack of progress despite at least 3 contractions per 10 minutes lasting greater than 40 seconds, acetone in urine, rising maternal pulse. However, action was delayed longer than was best for mother and baby.
- Problems expected in newborn—asphyxia, meconium aspiration

Week 2

CASE STUDY 1A: VAGINAL BLEEDING AFTER CHILDBIRTH

ANSWER KEY

Case Study

Mrs. A. is a 20-year-old gravida 4 para 4 who presents 6 days postpartum at the hospital complaining that she feels weak, “light-headed” and “sick.” Mrs. A reports that the birth was without complication and that the baby is well. Mrs. A. admits to vaginal bleeding equal to a heavy period.

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

1. What will you include in your initial assessment of Mrs. A., and why?
 - Mrs. A. should be greeted respectfully and with kindness.
 - She should be told what is going to be done and listened to carefully. In addition, her questions should be answered in a calm and reassuring manner.
 - A rapid initial assessment should be done to check for the following signs to determine if she is in shock and in need of emergency treatment/resuscitation: pulse >110; systolic blood pressure less than 90; pallor; sweatiness or cold, clammy skin; rapid breathing; confusion. This initial assessment should also include rapid observation of consciousness, abdominal pain and temperature.
 - History concerning lochia since birth (color, amount and odor) should be obtained.
 - Mrs. A.’s hospital record should be checked for information about amount of blood loss immediately after childbirth, completeness of the placenta and genital trauma.
2. What particular aspects of Mrs. A.’s physical examination will help you make a diagnosis or identify her problems/needs, and why?
 - Mrs. A.’s uterus should be checked immediately to see whether it is contracted (a uterus that is not contracted would suggest atonic uterus and/or retained fragments of placenta.
 - Her perineum, vagina and cervix should be examined carefully to detect tears.
 - The amount, color and odor of Mrs. A.’s lochia should be checked.
 - Conjunctiva should be checked for pallor, which suggests anemia.
3. What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. A., and why?
 - A hemoglobin test should be done because Mrs. A. has vaginal bleeding that is heavier than it should be, as well as signs that suggest anemia (weak and light-headed).

Diagnosis (identification of problems/needs)

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

History:

Mrs. A reports lessening of lochia during the first 4 days postpartum but increasing bright red blood during the past 2 days. She admits foul smell of lochia during past day.

Physical Examination:

Mrs. A.'s temperature is 37.2°C, her pulse rate is 90, her blood pressure is 120/80 and her respiration rate is 20 per minute.

Her uterus is soft, nontender, and almost to the level of her umbilicus. She has no signs of cervical, vaginal or perineal trauma. Lochia is red, moderate, without foul smell. She also has mild conjunctival pallor.

Laboratory Tests:

Hemoglobin is 9 g/dL.

Mrs. A.'s hospital record does not indicate blood loss after childbirth or whether the placenta was complete.

4. Based on these findings, what is Mrs. A.'s diagnosis (problem/need), and why?
 - Mrs. A.'s signs and symptoms (e.g., a uterus that is not well contracted, heavier than normal vaginal bleeding; bleeding that occurs more than 24 hours postpartum, and anemia) are consistent with delayed (secondary) postpartum hemorrhage.

Care Provision (planning and intervention)

5. Based on your diagnosis (problem/need identification), what is your plan of care for Mrs. A., and why?
 - Mrs. A.'s uterus should be massaged to cause it to contract and expel any retained clots.
 - Oxytocin 10 units IM should be given.
 - If Mrs. A.'s cervix is dilated, manual exploration of the uterus should be carried out to remove large clots and placental fragments. A single dose of prophylactic antibiotics (ampicillin 2 g IV PLUS metronidazole or cefazolin 1 g IV PLUS metronidazole 500 mg IV) would be given prior to this procedure.
 - If the cervix is not dilated, Mrs. A.'s uterus should be evacuated using manual vacuum aspiration.
 - If bleeding continues, clotting status should be assessed using a bedside clotting test and, if necessary, coagulopathy should be treated.

- Mrs. A.'s vital signs should be monitored, and her uterus should be checked to make sure that it remains firm and well contracted.
- Anemia should be treated with ferrous sulfate or ferrous fumarate 60 mg by mouth plus folic acid 400 µg by mouth once daily for 6 months.
- The steps taken to manage the complication should be explained to Mrs. A. In addition, she should be encouraged to express her concerns, listened to carefully, and provided emotional support and reassurance.

Evaluation

Two hours following removal of clots and placental remnants, Mrs. A. is resting. Her temperature is 37°C, her pulse rate is 82, her blood pressure is 120/80 and her respirations are 20. Her uterus is well contracted, 3 cm below the umbilicus. Bleeding is minimal.

6. Based on these findings, what is your continuing plan of care for Mrs. A., and why?
 - Mrs. A. should remain at the hospital, and continue to receive antibiotics for 48 hours. Her vital signs and vaginal bleeding should be regularly monitored. Also, her uterus should be regularly palpated to determine firmness and size and to detect any tenderness.
 - Mrs. A. should be encouraged to breastfeed her newborn during, and following, her hospitalization. Before leaving the hospital, counseling should be provided about danger signs in the postpartum period (bleeding, abdominal pain, fever, headache, blurred vision) and what to do if a danger sign arises. Mrs. A. should be counseled about the importance of iron/folic acid supplementation and the inclusion in her diet of locally available foods rich in iron. Breastfeeding and newborn care should be discussed, questions answered, and emotional support provided.
 - Arrangements should be made for her to have postpartum followup care in 1 week.

References

Managing Complications in Pregnancy and Childbirth: pages S-25 to S-34

CASE STUDY 1B: VAGINAL BLEEDING AFTER CHILDBIRTH

ANSWER KEY

Case Study

Mrs. B. is a 30-year-old para four who experienced a normal spontaneous vaginal birth, at the health center, to a full-term healthy newborn weighing 4.2 kg. At the completion of second stage she was given ergometrine 0.2 mg. The placenta was delivered 5 minutes later, without complication. Thirty minutes later, Mrs. B. reports that she has heavy vaginal bleeding.

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

1. What will you include in your initial assessment of Mrs. B., and why?
 - Mrs. B. should be greeted respectfully and with kindness.
 - She should be told what is going to be done and listened to carefully. In addition, her questions should be answered in a calm and reassuring manner.
 - A rapid initial assessment should be done to check for the following signs to determine if she is in shock and in need of emergency treatment/resuscitation: Pulse >110; systolic blood pressure less than 90 mm Hg; pallor; sweatiness or cold, clammy skin; rapid breathing; confusion. The initial assessment would also include rapid observation of consciousness/convulsions, abdominal pain, and temperature.
2. What particular aspects of Mrs. B.'s physical examination will help you make a diagnosis or identify her problems/needs, and why?
 - At the same time as the rapid initial assessment, Mrs. B.'s uterus should be palpated to see whether it is contracted. If the uterus is contracted and firm, the most likely cause of bleeding is genital trauma. If the uterus is not contracted and the placenta is complete, the most likely cause of bleeding is an atonic uterus.
 - The placenta should be checked thoroughly for completeness.
 - Her perineum, vagina and cervix should be examined carefully for tears.
3. What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. B., and why?
 - None at this stage.

Diagnosis (identification of problems/needs)

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

Mrs. B.'s temperature is 37°C, her pulse rate is 88, her blood pressure is 110/80 and her respiration rate is 18 per minute.

Her uterus is firm and well contracted. The placenta is complete.

She has no perineal trauma. Examination of the vagina and cervix is difficult because she continues to have heavy vaginal bleeding; therefore, tears of the cervix and vagina have not yet been ruled out

4. Based on these findings, what is Mrs. B.'s diagnosis (problem/need), and why?
- Mrs. B.'s symptoms and signs (e.g., immediate postpartum hemorrhage, placenta complete, uterus well contracted) are consistent with genital trauma.

Care Provision (planning and intervention)

5. Based on your diagnosis (problem/need identification), what is your plan of care for Mrs. B., and why?
- An IV should be started using a large bore needle to replace fluid loss, using Ringer's lactate or normal saline.
- A careful speculum examination of the vagina and cervix should be conducted, without delay, because tears of the cervix and/or the vagina are the most likely cause of Mrs. B.'s bleeding.
- Any tears should be repaired immediately.
- Mrs. B.'s vital signs and fluid intake and output should be monitored.
- Her uterus should also be checked to make sure that it remains firm and well contracted.
- Blood should be drawn for hemoglobin and cross-matching, and blood for transfusion should be made available as soon as possible, in the event that it is needed.
- The steps taken to manage the complication should be explained to Mrs. B and her family. In addition, she should be encouraged to express her concerns, listened to carefully, and provided emotional support and reassurance.

Evaluation

A cervical tear was identified and repaired. One hour following the repair, Mrs. B's temperature is 37°C, her pulse rate is 86, her blood pressure is 110/80 and her respiration rate is 16 per minute. Her uterus remains well contracted. Bleeding is minimal.

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

- Mrs. B.'s vital signs and blood loss should continue to be monitored, every 15 minutes for 1 hour, then every 30 minutes for 2 hours, every hour for 3 hours and then every 4 hours for 24 hours. Her uterus should be checked to make sure that it remains firm and well contracted. In addition, she should be encouraged to breastfeed her newborn.
- Twenty-four hours after the bleeding has stopped, a hemoglobin or hematocrit should be done to check for anemia.
- If Mrs. B.'s hemoglobin is below 7 g/dL, or her hematocrit is below 20% (indicating severe anemia), she should be given ferrous sulfate or ferrous fumarate 120 mg by mouth plus folic acid 400 µg by mouth once daily for 3 months. After 3 months, she should continue with ferrous sulfate or ferrous fumarate 60 mg by mouth plus folic acid 400 µg by mouth once daily for 6 months. A blood transfusion is not needed if her vital signs are stable and no further bleeding occurs.
- If Mrs. B.'s hemoglobin is between 7–11 g/dL, she should be given ferrous sulfate or ferrous fumarate 60 mg by mouth plus folic acid 400 µg by mouth once daily for 6 months.
- The steps taken for continuing management of the complication should be explained to Mrs. B. She should be encouraged to express her concerns, listened to carefully, and provided continuing emotional support and reassurance.
- Mrs. B. should remain at the health center for an additional 24 hours, and before discharge counseling should be provided about danger signs in the postpartum period (bleeding, abdominal pain, fever, headache, blurred vision), compliance with iron/folic acid treatment and the inclusion in her diet of locally available foods rich in iron. In addition, counseling about breastfeeding and newborn care should be provided. If recovery continues to be unremarkable, Mrs. B. and her baby should be seen by a healthcare provider approximately 5 to 6 days after discharge.

References

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

CASE STUDY 2A: FEVER AFTER CHILDBIRTH

ANSWER KEY

Case Study

Mrs. B. is a 22-year-old para 1 who has come to the health center complaining that her perineal wound has become increasingly tender during the past 12 hours. She also says that she feels hot and unwell. Mrs. B. reports that she gave birth to a full-term newborn 3 days ago at the health center. The newborn weighed 4 kg and Mrs. B. suffered a perineal laceration that required suturing. She was counseled about danger signs before leaving the health center, including the need to seek care early if any danger signs occur.

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

1. What will you include in your initial assessment of Mrs. B., and why?
 - Mrs. B. should be greeted respectfully and with kindness.
 - She should be told what is going to be done and listened to carefully. In addition, her questions should be answered in a calm and reassuring manner.
 - A rapid initial assessment should be done to determine the degree of illness: her temperature, pulse, blood pressure and respirations should be noted. Additional assessment should include the presence of other signs or symptoms, such as: abdominal pain, frequent or painful urination, abdominal tenderness, bleeding, foul-smelling lochia or unconsciousness.
2. What particular aspects of Mrs. B.'s physical examination will help you make a diagnosis or identify her problems/needs, and why?
 - Mrs. B.'s perineal wound should be examined for pain and tenderness, discharge, abscess formation and cellulitis. (Wound tenderness, bloody or serous discharge, and slight erythema beyond the edge of the incision may be present with a wound abscess, wound seroma or wound hematoma; whereas, pain and tenderness, erythema or edema beyond the edge of the incision, purulent discharge, and a reddened area around the wound are signs of wound cellulitis.) If purulent discharge is seen, determine whether it is coming from the wound or from above the wound (vagina, uterus).
 - An abdominal examination should also be done and lochia checked to detect other signs characteristic of postpartum fever (abdominal pain and tenderness, and purulent foul-smelling lochia).
3. What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. B., and why?
 - None at this stage.

Diagnosis (identification of problems/needs)

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

History:

Mrs. B. denies abdominal pain, frequent or painful urination, abdominal tenderness, foul-smelling lochia, or loss of consciousness.

Physical Examination:

Mrs. B.'s temperature is 38°C, her pulse rate is 88 beats per minute, her blood pressure is 120/80 and her respiration rate is 20 breaths per minute. There is no abdominal tenderness. Her lochia is of normal color and amount, and without offensive odor.

Her perineal wound is tender, with pus draining from the center. The wound is not edematous but there is slight erythema present extending beyond the edge of the incision.

4. Based on these findings, what is Mrs. B.'s diagnosis (problem/need), and why?
 - Mrs. B.'s symptoms and signs (e.g., wound tenderness, pus discharge, erythema, fever) are consistent with wound abscess.

Care Provision (planning and intervention)

5. Based on your diagnosis (problem/need identification), what is your plan of care for Mrs. B., and why?
 - Because there is pus draining from the wound, it should be opened and drained. The infected skin and subcutaneous sutures should be removed, the wound debrided and a damp dressing placed in it. Antibiotics are not required because there is no wound cellulitis.
 - The steps taken to manage the complication should be explained to Mrs. B. In addition, she should be encouraged to express her concerns, listened to carefully, and provided emotional support and reassurance.
 - Mrs. B. should be counseled about the need for good hygiene, to change her perineal pad/cloth at least three times a day and to wear clean clothes.
 - She should also be encouraged to rest at home and to drink as much fluid as possible.
 - Mrs. B. should be asked to return the next day for followup and to have the perineal dressing changed.

Evaluation

Mrs. B. returns to the health center the next day. Her temperature is 37.6° C. Her perineal wound is slightly less tender and there is less discharge.

6. Based on these findings, what is your continuing plan of care for Mrs. B., and why?
- The wound should be dressed again with a damp dressing.
 - The steps taken for continuing management of the complication should be explained to Mrs. B. She should be encouraged to express her concerns, listened to carefully, and provided continuing emotional support and reassurance.
 - Mrs. B. should be followed up on a daily basis until the wound has healed satisfactorily.

References

Managing Complications in Pregnancy and Childbirth: pages S-107 to S-108; S-113 to S-114

CASE STUDY 2B: FEVER AFTER CHILDBIRTH

ANSWER KEY

Case Study

Mrs. D. is a pleasant 17-year-old para 1 who is 3 weeks postpartum. She comes to the health center today complaining of breast pain and tenderness, and feeling unwell. Her birth at the health center was uncomplicated and the newborn was healthy and weighed 2.9 kg. You had last seen Mrs. D. 2 days postpartum, when she and her newborn were found to be doing well.

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

1. What will you include in your assessment of Mrs. D., and why?
 - Mrs. D. should be greeted respectfully and with kindness.
 - She should be told what is going to be done and listened to carefully. In addition, her questions should be answered in a calm and reassuring manner.
 - A rapid initial assessment should be done to determine the degree of illness: her temperature, pulse, blood pressure and respiration rate should be checked. Rapid assessment of bleeding, consciousness and abdominal pain should also be included. In addition, she should be asked how breastfeeding is going, whether she has had any problems, how many times in a 24-hour period the newborn is feeding, whether she has fed the newborn anything other than breast milk, and whether she has cracked or sore nipples.
2. What particular aspects of Mrs. D.'s physical examination will help you make a diagnosis or identify her problems/needs, and why?
 - Mrs. D.'s breasts should be checked for pain and tenderness, swelling and inflammation, and cracked nipples to determine whether she may have mastitis or a breast abscess.
3. What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. D., and why?
 - None at this stage.

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 for the first week or so after birth, her newborn seemed to have difficulty taking the nipple into his mouth, but more recently she thinks that he has been doing better. He feeds about 6 times in a 24-hour period and is given water between feedings. Mrs. D. had breastfed the newborn less than an hour before you examined her.

Physical Examination:

Her temperature is 38°C, her pulse rate is 120 per minute, her blood pressure is 120/80 and her respiration rate is 20 per minute.

She has pain and tenderness in her left breast, and there is a wedge-shaped area of redness in the outer upper quadrant of the left breast. There are no areas of fluctuant swelling and no cracks or lesions on her nipples.

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

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

Care Provision (planning and intervention)

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

- Mrs. D. should be treated with one of the following antibiotics: cloxacillin 500 mg by mouth four times per day for 10 days or erythromycin 250 mg by mouth three times per day for 10 days.
- Her breastfeeding technique should be observed for correct positioning (i.e., newborn's head and body straight, well supported, and held close to mother's body, newborn facing breast with nose opposite nipple) and attachment (i.e., more areola visible above than below the mouth, mouth open wide, lower lip turned outward, chin touching breast).
- Mrs. D. should be provided reassurance and encouragement to continue breastfeeding, at least eight times in a 24-hour period. She should also be encouraged to stop giving her newborn water and counseled about exclusive breastfeeding.
- A breast binder or brassiere should be worn to support her breasts and cold compresses should be applied between feedings to reduce swelling and pain.
- Paracetamol 500 mg should be given by mouth, as needed.
- Mrs. D. should be asked to return for followup in 3 days.

Evaluation

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

6. Based on these findings, what is your continuing plan of care for Mrs. D., and why?
- Mrs. D. should be counseled about the importance of completing the full 10-day course of antibiotics (3 days of antibiotic therapy is insufficient to resolve infection).
 - Breastfeeding technique should be observed again to check positioning and attachment, and further reassurance and encouragement should be provided to Mrs. D. to continue breastfeeding at least 8 times in 24 hours.
 - Mrs. D. should be followed up every 2–3 days to ensure that she complies with antibiotic therapy, that her symptoms and signs resolve, and to provide continuing reassurance and encouragement for breastfeeding.

References

Managing Complications in Pregnancy and Childbirth: pages S-107 to S-108; S-112

MIDCOURSE KNOWLEDGE QUESTIONNAIRE

USING THE QUESTIONNAIRE

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

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

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

MIDCOURSE KNOWLEDGE QUESTIONNAIRE

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

MANAGEMENT OF SHOCK; RAPID INITIAL ASSESSMENT

1. Rapid initial assessment should be carried out
 - a) only on women who present with abdominal pain and vaginal bleeding
 - b) only on women who present with abdominal pain
 - c) only on women who present with vaginal bleeding
 - d) on all women of childbearing age who present with a problem
2. A woman who suffers shock as a result of an obstetric emergency may have
 - a) a fast, weak pulse
 - b) low blood pressure
 - c) rapid breathing
 - d) all of the above

BLEEDING DURING PREGNANCY AND LABOR

3. The immediate management of ectopic pregnancy involves
 - a) cross-matching blood and arranging for immediate laparotomy
 - b) making sure that blood is available for transfusion before surgery is performed
 - c) observing the woman for signs of improvement
 - d) all of the above
4. When performing a manual vacuum aspiration (MVA), the vacuum will be lost if
 - a) the syringe is rotated from side to side with the cannula inside the uterine cavity
 - b) the cannula is withdrawn too far
 - c) the pinch valve is released while the cannula is in the uterine cavity
 - d) all of the above
5. The MVA procedure is complete when
 - a) the wall of the uterus feels smooth
 - b) the vacuum in the syringe decreases
 - c) red or pink foam, but no more tissue, is visible in the cannula
 - d) the uterus relaxes

6. The results of a bedside clotting test suggest coagulopathy if
- a) bleeding fails to stop within 7 minutes from a 1 mm incision made on the inner aspect of the forearm
 - b) a clot fails to form within 7 minutes when calcium gluconate is added to a 3 mL test tube of blood
 - c) a clot forms within 7 minutes
 - d) a clot fails to form after 7 minutes or a soft clot forms that breaks down easily
7. For each unit of blood transfused, the woman should be monitored
- a) before starting the transfusion and for 4 hours following completion
 - b) before starting the transfusion, at the onset of the transfusion and at least every hour during the transfusion
 - c) every 15 minutes during the transfusion
 - d) during the transfusion but not after the transfusion

BLEEDING AFTER CHILDBIRTH

8. Immediate postpartum hemorrhage can be due to
- a) atonic uterus
 - b) trauma to the genital tract
 - c) retained placenta
 - d) all of the above
9. Tears of the cervix, vagina or perineum should be suspected when there is immediate postpartum hemorrhage and
- a) a complete placenta and a contracted uterus
 - b) an incomplete placenta and a contracted uterus
 - c) a complete placenta and an atonic uterus
 - d) an incomplete placenta and an atonic uterus
10. If the uterus is inverted following childbirth
- a) the uterine fundus is not felt on abdominal palpation
 - b) there may be slight or intense pain
 - c) the inverted uterus may be apparent at the vulva
 - d) all of the above
11. If manual removal of the placenta is performed
- a) give ergometrine prior to the procedure
 - b) give antibiotics 24 hours after the procedure
 - c) place one hand in the uterus and use the other hand to apply traction on the cord
 - d) place one hand in the uterus and one hand on the abdomen to provide counter traction on the uterine fundus

12. When performing abdominal aortic compression to control postpartum hemorrhage, the point of compression is
- a) just below and slightly to the right of the umbilicus
 - b) just below and slightly to the left of the umbilicus
 - c) just above and slightly to the right of the umbilicus
 - d) just above and slightly to the left of the umbilicus

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

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

- a) mild pre-eclampsia
- b) chronic hypertension
- c) superimposed mild pre-eclampsia
- d) pregnancy-induced hypertension

14. Elevated blood pressure and proteinuria in pregnancy define

- a) pre-eclampsia
- b) chronic hypertension
- c) pyelonephritis
- d) none of the above

15. In a patient with hypertension and proteinuria, severe headache is a symptom of

- a) mild pre-eclampsia
- b) moderate pre-eclampsia
- c) severe pre-eclampsia
- d) impending eclampsia

16. The loading dose of magnesium sulfate is given via

- a) IV over 5 minutes, followed by deep IM injection into each buttock
- b) IV over 5 minutes, followed by deep IM injection into one buttock
- c) simultaneous IV and IM injections
- d) IV bolus, followed by deep IM injection into each buttock

17. An antihypertensive drug should be given for hypertension in severe pre-eclampsia or eclampsia if diastolic blood pressure is

- a) above 90 mm Hg or more
- b) between 100 and 110 mm Hg
- c) 110 mm Hg or more
- d) 120 mm Hg or more

PARTOGRAPH

18. Unsatisfactory progress of labor should be suspected if
- a) the latent phase is longer than 8 hours
 - b) cervical dilatation is plotted to the right of the alert line on the partograph
 - c) the woman has been experiencing labor pains for 12 hours or more without delivery
 - d) all of the above
19. A partograph records
- a) dilatation and effacement from 4 cm until 10 cm
 - b) dilatation and effacement from 3 cm until 10 cm
 - c) Descent of fetal head and dilatation from 4 cm until 10 cm
 - d) all of the above

LABOR AND CHILDBIRTH; OBSTETRIC SURGERY

20. When the fetus is alive in the case of obstructed labor and the cervix is fully dilated and the head is at 0 station or below
- a) deliver with a symphysiotomy
 - b) delivery should be by vacuum extraction
 - c) forceps delivery should be attempted
 - d) labor should be augmented with oxytocin
21. Oxytocin infusion should not be used
- a) to augment labor
 - b) in multigravida
 - c) in multiple pregnancy
 - d) in obstructed labor
22. Pudendal block is always necessary for
- a) breech delivery
 - b) episiotomy repair
 - c) manual removal of placenta
 - d) none of the above
23. The vacuum cup should be placed
- a) above the flexion point, 1 cm anterior to the posterior fontanelle
 - b) below the flexion point, 1 cm anterior to the posterior fontanelle
 - c) over the flexion point, 1 cm anterior to the posterior fontanelle
 - d) over the flexion point, 2 cm anterior to the posterior fontanelle

24. In occiput posterior position
- a) vacuum extraction should not be performed
 - b) vaginal delivery cannot occur
 - c) the expulsive phase may be prolonged
 - d) the woman should not give birth in a squatting position
25. If there are signs of obstruction or the fetal heart rate is abnormal in an occiput posterior position
- a) delivery should be by cesarean section
 - b) the membranes should be ruptured
 - c) labor should be augmented using oxytocin
 - d) spontaneous maternal pushing should be encouraged
26. In face presentations when the chin is in the anterior position and the cervix is fully dilated
- a) delivery should be by cesarean section
 - b) normal childbirth should be anticipated
 - c) delivery should be by vacuum extraction
 - d) none of the above
27. The presence of meconium is common with breech labor and is
- a) always a sign of fetal distress
 - b) not a sign of fetal distress if the fetal heart rate is normal
 - c) an indication for cesarean section
 - d) an indication for breech extraction
28. To deliver stuck shoulders
- a) firm, continuous downward pressure should be applied on the fetal head
 - b) firm, intermittent downward pressure should be applied on the fetal head
 - c) suprapubic pressure should be avoided
 - d) downward firm pressure on the fundus should be applied
29. If the first baby in a multiple pregnancy is a transverse lie
- a) labor should be allowed to progress as for a single fetus
 - b) labor should be augmented
 - c) delivery should be by cesarean section
 - d) delivery should be by vacuum extraction

30. In the case of a scarred uterus, when labor crosses the alert line on the partograph during a trial of labor and slow progress is found to be due to inefficient uterine contractions
- a) immediate cesarean section should be performed
 - b) no intervention is necessary, but progress should continue to be monitored using the partograph
 - c) the membranes should be ruptured and labor augmented with oxytocin
 - d) the membranes should be ruptured but oxytocin should not be given
31. If fetal distress occurs during labor
- a) oxytocin should be stopped if it is being administered
 - b) the rate of oxytocin should be increased if it is being administered
 - c) the rate of oxytocin should be decreased if it is being administered
 - d) none of the above
32. If a maternal cause for an abnormal fetal heart rate is not identified and the fetal heart rate remains abnormal throughout at least three contractions
- a) a cesarean section should be performed
 - b) delivery should be by vacuum extraction
 - c) labor should be augmented with oxytocin
 - d) a vaginal examination should be done to check for explanatory signs
33. If the cord prolapses in the first stage of labor and is pulsating
- a) if available, salbutamol 0.5 mg should be given by slow IV over 2 minutes
 - b) a hand should be inserted into the vagina and the presenting part pushed up to decrease pressure on the cord and dislodge the presenting part from the pelvis
 - c) a cesarean section should be performed immediately
 - d) all of the above

FEVER DURING AND AFTER CHILDBIRTH

34. When a woman has mastitis, she should
- a) discontinue breastfeeding from the affected breast only
 - b) apply hot compresses to the breasts for 10 minutes three times each day
 - c) support her breasts with a binder or brassiere
 - d) avoid using antibiotics
35. Amnionitis should be diagnosed when a woman presents with
- a) fever and foul-smelling vaginal discharge in the first 22 weeks of pregnancy
 - b) fever and foul-smelling watery vaginal discharge after 22 weeks of pregnancy
 - c) maternal tachycardia
 - d) fever and elevated white blood cell count in a woman after 22 weeks of pregnancy

36. Although mefloquine may be used in all three trimesters of pregnancy, its use should be carefully considered in
- a) the first trimester of pregnancy
 - b) the second trimester of pregnancy
 - c) the third trimester of pregnancy
 - d) immediately following pregnancy
37. When treating acute pyelonephritis in pregnancy
- a) shock is rare and should be considered a sign of another life-threatening infection
 - b) antibiotic treatment should not be started until urine culture results are available
 - c) clinical response is usually seen within 48 to 72 hours
 - d) intravenous antibiotics should be given for a total of 7 days
38. A reddened, wedge-shaped area on the breast is a typical sign of
- a) breast abscess
 - b) mastitis
 - c) breast engorgement
 - d) none of the above
39. Before draining a pelvic abscess
- a) a combination of IV antibiotics should be given
 - b) a combination of oral antibiotics should be given
 - c) a broad spectrum oral antibiotic should be given
 - d) a broad spectrum IV antibiotic should be given
40. A woman who experiences breast engorgement should be encouraged to
- a) breastfeed more frequently, alternating breasts at feedings
 - b) breastfeed more frequently, using both breasts at each feeding
 - c) breastfeed every 4 to 6 hours, alternating breasts at feedings
 - d) breastfeed every 4 to 6 hours, using both breasts at each feeding
41. If an asymptomatic ovarian cyst of more than 10 cm is detected in the first trimester of pregnancy
- a) an emergency laparotomy should be performed
 - b) it should be observed for growth and complications
 - c) surgery should be scheduled for the second trimester
 - d) surgery should be scheduled after childbirth

42. Management of heart failure due to anemia almost always involves
- a) transfusion with packed cells
 - b) transfusion with packed cells or sedimented cells
 - c) transfusion with any available blood product
 - d) none of the above
43. Treatment of severe anemia for pregnant women living in an area where hookworm is highly endemic should involve
- a) a single anthelmintic treatment in the first trimester of pregnancy
 - b) a single anthelmintic treatment in the second trimester of pregnancy
 - c) a single anthelmintic treatment in the third trimester of pregnancy
 - d) repeat of anthelmintic treatment 12 weeks after the first dose
44. When loss of fetal movement has occurred, the option of expectant versus active management should be
- a) discussed with the woman and her family
 - b) the decision of the specialist doctor
 - c) the decision of the doctor
 - d) none of the above
45. To prevent endometritis following cesarean section
- a) give a full course of antibiotics for 7 days
 - b) the drug of choice is metronidazol
 - c) the drug should be started 24 hours before the surgery
 - d) none of the above

NEWBORN RESUSCITATION

46. Care after successful resuscitation of a newborn should include prevention of heat loss by
- a) placing the newborn in skin-to-skin contact on the mother's chest and covering the newborn's body and head
 - b) wrapping the newborn firmly in a warm blanket
 - c) wrapping the newborn loosely in a warm blanket
 - d) bathing the newborn in warm water

MIDCOURSE KNOWLEDGE QUESTIONNAIRE ANSWER SHEET

MANAGEMENT OF SHOCK; RAPID INITIAL ASSESSMENT

1. _____
2. _____

BLEEDING DURING PREGNANCY AND LABOR

3. _____
4. _____
5. _____
6. _____
7. _____

BLEEDING AFTER CHILDBIRTH

8. _____
9. _____
10. _____
11. _____
12. _____

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

13. _____
14. _____
15. _____
16. _____
17. _____

PARTOGRAPH

18. _____
19. _____

LABOR AND CHILDBIRTH; OBSTETRIC SURGERY

20. _____

21. _____

22. _____

23. _____

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FEVER DURING AND AFTER CHILDBIRTH

34. _____

35. _____

36. _____

37. _____

38. _____

39. _____

40. _____

41. _____

42. _____

43. _____

44. _____

45. _____

NEWBORN RESUSCITATION

46. _____

MIDCOURSE KNOWLEDGE QUESTIONNAIRE ANSWER KEY

MANAGEMENT OF SHOCK; RAPID INITIAL ASSESSMENT

1. Rapid initial assessment should be carried out
 - a) only on women who present with abdominal pain and vaginal bleeding
 - b) only on women who present with abdominal pain
 - c) only on women who present with vaginal bleeding
 - d) **ON ALL WOMEN OF CHILDBEARING AGE WHO PRESENT WITH A PROBLEM**
2. A woman who suffers shock as a result of an obstetric emergency may have
 - a) a fast, weak pulse
 - b) low blood pressure
 - c) rapid breathing
 - d) **ALL OF THE ABOVE**

BLEEDING DURING PREGNANCY AND LABOR

3. The immediate management of ectopic pregnancy involves
 - a) **CROSS-MATCHING BLOOD AND ARRANGING FOR IMMEDIATE LAPAROTOMY**
 - b) making sure that blood is available for transfusion before surgery is performed
 - c) observing the woman for signs of improvement
 - d) all of the above
4. When performing a manual vacuum aspiration (MVA), the vacuum will be lost if
 - a) the syringe is rotated from side to side with the cannula inside the uterine cavity
 - b) **THE CANNULA IS WITHDRAWN TOO FAR**
 - c) the pinch valve is released while the cannula is in the uterine cavity
 - d) all of the above
5. The MVA procedure is complete when
 - a) the wall of the uterus feels smooth
 - b) the vacuum in the syringe decreases
 - c) **RED OR PINK FOAM, BUT NO MORE TISSUE, IS VISIBLE IN THE CANNULA**
 - d) the uterus relaxes

6. The results of a bedside clotting test suggest coagulopathy if
- a) bleeding fails to stop within 7 minutes from a 1 mm incision made on the inner aspect of the forearm
 - b) a clot fails to form within 7 minutes when calcium gluconate is added to a 3 mL test tube of blood
 - c) a clot forms within 7 minutes
 - d) A CLOT FAILS TO FORM AFTER 7 MINUTES OR A SOFT CLOT FORMS THAT BREAKS DOWN EASILY**
7. For each unit of blood transfused, the woman should be monitored
- a) before starting the transfusion and for 4 hours following completion
 - b) BEFORE STARTING THE TRANSFUSION, AT THE ONSET OF THE TRANSFUSION AND AT LEAST EVERY HOUR DURING THE TRANSFUSION**
 - c) every 15 minutes during the transfusion
 - d) during the transfusion but not after the transfusion

BLEEDING AFTER CHILDBIRTH

8. Immediate postpartum hemorrhage can be due to
- a) atonic uterus
 - b) trauma to the genital tract
 - c) retained placenta
 - d) ALL OF THE ABOVE**
9. Tears of the cervix, vagina or perineum should be suspected when there is immediate postpartum hemorrhage and
- a) A COMPLETE PLACENTA AND A CONTRACTED UTERUS**
 - b) an incomplete placenta and a contracted uterus
 - c) a complete placenta and an atonic uterus
 - d) an incomplete placenta and an atonic uterus
10. If the uterus is inverted following childbirth
- a) the uterine fundus is not felt on abdominal palpation
 - b) there may be slight or intense pain
 - c) the inverted uterus may be apparent at the vulva
 - d) ALL OF THE ABOVE**
11. If manual removal of the placenta is performed
- a) give ergometrine prior to the procedure
 - b) give antibiotics 24 hours after the procedure
 - c) place one hand in the uterus and use the other hand to apply traction on the cord
 - d) PLACE ONE HAND IN THE UTERUS AND ONE HAND ON THE ABDOMEN TO PROVIDE COUNTER TRACTION ON THE UTERINE FUNDUS**

12. When performing abdominal aortic compression to control postpartum hemorrhage, the point of compression is
- a) just below and slightly to the right of the umbilicus
 - b) just below and slightly to the left of the umbilicus
 - c) just above and slightly to the right of the umbilicus
 - d) **JUST ABOVE AND SLIGHTLY TO THE LEFT OF THE UMBILICUS**

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

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

- a) mild pre-eclampsia
- b) **CHRONIC HYPERTENSION**
- c) superimposed mild pre-eclampsia
- d) pregnancy-induced hypertension

14. Elevated blood pressure and proteinuria in pregnancy define

- a) **PRE-ECLAMPSIA**
- b) chronic hypertension
- c) pyelonephritis
- d) none of the above

15. In a patient with hypertension and proteinuria, severe headache is a symptom of

- a) mild pre-eclampsia
- b) moderate pre-eclampsia
- c) **SEVERE PRE-ECLAMPSIA**
- d) impending eclampsia

16. The loading dose of magnesium sulfate is given via

- a) **IV OVER 5 MINUTES, FOLLOWED BY DEEP IM INJECTION INTO EACH BUTTOCK**
- b) IV over 5 minutes, followed by deep IM injection into one buttock
- c) simultaneous IV and IM injections
- d) IV bolus, followed by deep IM injection into each buttock

17. An antihypertensive drug should be given for hypertension in severe pre-eclampsia or eclampsia if diastolic blood pressure is

- a) above 90 mm Hg or more
- b) between 100 and 110 mm Hg
- c) **110 MM HG OR MORE**
- d) 120 mm Hg or more

PARTOGRAPH

18. Unsatisfactory progress of labor should be suspected if
- a) the latent phase is longer than 8 hours
 - b) cervical dilatation is plotted to the right of the alert line on the partograph
 - c) the woman has been experiencing labor pains for 12 hours or more without delivery
 - d) **ALL OF THE ABOVE**
19. A partograph records
- a) dilatation and effacement from 4 cm. until 10 cm
 - b) dilatation and effacement from 3 cm. until 10 cm
 - c) **DESCENT OF FETAL HEAD AND DILATATION FROM 4 CM UNTIL 10 CM**
 - d) all of the above

LABOR AND CHILDBIRTH; OBSTETRIC SURGERY

20. When the fetus is alive in the case of obstructed labor and the cervix is fully dilated and the head is at 0 station or below
- a) deliver with a symphysiotomy
 - b) **DELIVERY SHOULD BE BY VACUUM EXTRACTION**
 - c) forceps delivery should be attempted
 - d) labor should be augmented with oxytocin
21. Oxytocin infusion should not be used
- a) to augment labor
 - b) in multigravida
 - c) in multiple pregnancy
 - d) **IN OBSTRUCTED LABOR**
22. Pudendal block is always necessary for
- a) breech delivery
 - b) episiotomy repair
 - c) manual removal of placenta
 - d) **NONE OF THE ABOVE**
23. The vacuum cup should be placed
- a) above the flexion point, 1 cm anterior to the posterior fontanelle
 - b) below the flexion point, 1 cm anterior to the posterior fontanelle
 - c) **OVER THE FLEXION POINT, 1 CM ANTERIOR TO THE POSTERIOR FONTANELLE**
 - d) over the flexion point, 2 cm anterior to the posterior fontanelle

24. In occiput posterior position
- a) vacuum extraction should not be performed
 - b) vaginal delivery cannot occur
 - c) **THE EXPULSIVE PHASE MAY BE PROLONGED**
 - d) the woman should not give birth in a squatting position
25. If there are signs of obstruction or the fetal heart rate is abnormal in an occiput posterior position
- a) **DELIVERY SHOULD BE BY CESAREAN SECTION**
 - b) the membranes should be ruptured
 - c) labor should be augmented using oxytocin
 - d) spontaneous maternal pushing should be encouraged
26. In face presentations when the chin is in the anterior position and the cervix is fully dilated
- a) delivery should be by cesarean section
 - b) **NORMAL CHILDBIRTH SHOULD BE ANTICIPATED**
 - c) delivery should be by vacuum extraction
 - d) none of the above
27. The presence of meconium is common with breech labor and is
- a) always a sign of fetal distress
 - b) **NOT A SIGN OF FETAL DISTRESS IF THE FETAL HEART RATE IS NORMAL**
 - c) an indication for cesarean section
 - d) an indication for breech extraction
28. To deliver stuck shoulders
- a) **FIRM, CONTINUOUS DOWNWARD PRESSURE SHOULD BE APPLIED ON THE FETAL HEAD**
 - b) firm, intermittent downward pressure should be applied on the fetal head
 - c) suprapubic pressure should be avoided
 - d) downward firm pressure on the fundus should be applied
29. If the first baby in a multiple pregnancy is a transverse lie
- a) labor should be allowed to progress as for a single fetus
 - b) labor should be augmented
 - c) **DELIVERY SHOULD BE BY CESAREAN SECTION**
 - d) delivery should be by vacuum extraction

30. In the case of a scarred uterus, when labor crosses the alert line on the partograph during a trial of labor and slow progress is found to be due to inefficient uterine contractions
- a) immediate cesarean section should be performed
 - b) no intervention is necessary, but progress should continue to be monitored using the partograph
 - c) **THE MEMBRANES SHOULD BE RUPTURED AND LABOR AUGMENTED WITH OXYTOCIN**
 - d) the membranes should be ruptured but oxytocin should not be given
31. If fetal distress occurs during labor
- a) **OXYTOCIN SHOULD BE STOPPED IF IT IS BEING ADMINISTERED**
 - b) the rate of oxytocin should be increased if it is being administered
 - c) the rate of oxytocin should be decreased if it being administered
 - d) none of the above
32. If a maternal cause for an abnormal fetal heart rate is not identified and the fetal heart rate remains abnormal throughout at least three contractions
- a) a cesarean section should be performed
 - b) delivery should be by vacuum extraction
 - c) labor should be augmented with oxytocin
 - d) **A VAGINAL EXAMINATION SHOULD BE DONE TO CHECK FOR EXPLANATORY SIGNS**
33. If the cord prolapses in the first stage of labor and is pulsating
- a) if available, salbutamol 0.5 mg should be given by slow IV over 2 minutes
 - b) a hand should be inserted into the vagina and the presenting part pushed up to decrease pressure on the cord and dislodge the presenting part from the pelvis
 - c) a caesarean section should be performed immediately
 - d) **ALL OF THE ABOVE**

FEVER DURING AND AFTER CHILDBIRTH

34. When a woman has mastitis, she should
- a) discontinue breastfeeding from the affected breast only
 - b) apply hot compresses to the breasts for 10 minutes three times each day
 - c) **SUPPORT HER BREASTS WITH A BINDER OR BRASSIERE**
 - d) avoid using antibiotics
35. Amnionitis should be diagnosed when a woman presents with
- a) fever and foul-smelling vaginal discharge in the first 22 weeks of pregnancy
 - b) **FEVER AND FOUL-SMELLING WATERY VAGINAL DISCHARGE AFTER 22 WEEKS OF PREGNANCY**
 - c) maternal tachycardia
 - d) fever and elevated white blood cell count in a woman after 22 weeks of pregnancy

36. Although mefloquine may be used in all three trimesters of pregnancy, its use should be carefully considered in
- a) **THE FIRST TRIMESTER OF PREGNANCY**
 - b) the second trimester of pregnancy
 - c) the third trimester of pregnancy
 - d) immediately following pregnancy
37. When treating acute pyelonephritis in pregnancy
- a) shock is rare and should be considered a sign of another life-threatening infection
 - b) antibiotic treatment should not be started until urine culture results are available
 - c) **CLINICAL RESPONSE IS USUALLY SEEN WITHIN 48 TO 72 HOURS**
 - d) intravenous antibiotics should be given for a total of 7 days
38. A reddened, wedge-shaped area on the breast is a typical sign of
- a) breast abscess
 - b) **MASTITIS**
 - c) breast engorgement
 - d) none of the above
39. Before draining a pelvic abscess
- a) **A COMBINATION OF IV ANTIBIOTICS SHOULD BE GIVEN**
 - b) a combination of oral antibiotics should be given
 - c) a broad spectrum oral antibiotic should be given
 - d) a broad spectrum IV antibiotic should be given
40. A woman who experiences breast engorgement should be encouraged to
- a) breastfeed more frequently, alternating breasts at feedings
 - b) **BREASTFEED MORE FREQUENTLY, USING BOTH BREASTS AT EACH FEEDING**
 - c) breastfeed every 4 to 6 hours, alternating breasts at feedings
 - d) breastfeed every 4 to 6 hours, using both breasts at each feeding
41. If an asymptomatic ovarian cyst of more than 10 cm is detected in the first trimester of pregnancy
- a) an emergency laparotomy should be performed
 - b) **IT SHOULD BE OBSERVED FOR GROWTH AND COMPLICATIONS**
 - c) surgery should be scheduled for the second trimester
 - d) surgery should be scheduled after childbirth

42. Management of heart failure due to anemia almost always involves
- a) transfusion with packed cells
 - b) TRANSFUSION WITH PACKED CELLS OR SEDIMENTED CELLS**
 - c) transfusion with any available blood product
 - d) none of the above
43. Treatment of severe anemia for pregnant women living in an area where hookworm is highly endemic should involve
- a) a single anthelmintic treatment in the first trimester of pregnancy
 - b) a single anthelmintic treatment in the second trimester of pregnancy
 - c) a single anthelmintic treatment in the third trimester of pregnancy
 - d) REPEAT OF ANTHELMINTIC TREATMENT 12 WEEKS AFTER THE FIRST DOSE**
44. When loss of fetal movement has occurred, the option of expectant versus active management should be
- a) DISCUSSED WITH THE WOMAN AND HER FAMILY**
 - b) the decision of the specialist doctor
 - c) the decision of the doctor
 - d) none of the above
45. To prevent endometritis following cesarean section
- a) give a full course of antibiotics for 7 days
 - b) the drug of choice is metronidazol
 - c) the drug should be started 24 hours before the surgery
 - d) NONE OF THE ABOVE**

NEWBORN RESUSCITATION

46. Care after successful resuscitation of a newborn should include prevention of heat loss by
- a) PLACING THE NEWBORN IN SKIN-TO-SKIN CONTACT ON THE MOTHER'S CHEST AND COVERING THE NEWBORN'S BODY AND HEAD**
 - b) wrapping the newborn firmly in a warm blanket
 - c) wrapping the newborn loosely in a warm blanket
 - d) bathing the newborn in warm water

Week 3

CASE STUDY 1: PREGNANCY-INDUCED HYPERTENSION ANSWER KEY

Case Study

Mrs. B. is a 16-year-old gravida 1 para 0 at 30 weeks gestation, who has come today for a followup visit as requested by her provider at her last visit 1 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 1 week if she noticed any danger signs. A review of her records shows that she has had three antenatal visits this pregnancy and that before her last visit all findings were within normal limits. At her last visit, it was found that her blood pressure was 130/90 mm Hg. Her urine was negative for protein. The fetal heart sounds were normal, the fetus 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., and why?
 - Mrs. B. should be greeted respectfully and with kindness.
 - She should be told what is going to be done and listened to carefully. In addition, her questions should be answered in a calm and reassuring manner.
 - Mrs. B. should be asked how she is feeling and whether she has had headache, blurred vision, upper abdominal pain or other problems since her last clinic visit.
 - She should be asked whether fetal activity has changed since her last visit.
 - Her blood pressure should be checked and her urine tested for protein (the presence of proteinuria, together with a diastolic blood pressure equal to or greater than 90 mm Hg, is indicative of pre-eclampsia).
2. What particular aspects of Mrs. B.’s physical examination will help you make a diagnosis or identify her problems/needs, and why?
 - Blood pressure should be measured.
 - An abdominal examination should be done to check fetal growth and to listen for fetal heart sounds (in cases of pre-eclampsia/eclampsia reduced placental function may lead to low birth weight; there is an increased risk of hypoxia in both the antenatal and intrapartum periods, and an increased risk of abruptio placentae).
3. What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. B., and why?
 - As mentioned above, urine should be checked for protein.

Diagnosis (identification of problems/needs)

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

History:

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

Physical Examination:

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

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

Care Provision (planning and intervention)

5. Based on your diagnosis (problem/need identification), what is your plan of care for Mrs. B., and why?
 - Mrs. B. and her family should be provided reassurance and counseled about the danger signs related to severe pre-eclampsia and eclampsia (severe headache, blurred vision, upper abdominal pain, convulsions or loss of consciousness) and the need to seek help immediately if any of these occur. She should be advised of the possible consequences of pregnancy-induced hypertension.
 - She should be encouraged to take additional periods of rest and to eat a normal diet (salt restriction should be discouraged because this does not prevent pregnancy-induced hypertension).
 - Mrs. B. should be asked to return to the clinic twice weekly to have her blood pressure, urine and fetal condition monitored.
 - Mrs. B.'s management should not include the use of anticonvulsants, antihypertensives, sedatives or tranquilizers (these should not be given unless the blood pressure or urinary protein level increases).
 - Basic antenatal care (early detection and treatment of problems, prophylactic interventions, birth plan development/revision, plan for newborn feeding) should be provided, as needed.
 - She should be advised to plan for childbirth in the hospital.

Evaluation

Mrs. B. attends the antenatal clinic on a twice-weekly basis, as requested. Her blood pressure remains the same, she continues to have proteinuria 1+ and the fetal growth is normal. Four weeks later, however, her blood pressure is 130/100 mm 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 fetal movement. She finds it very tiring, however, to have to travel to the clinic by bus twice weekly for followup and wants to come only once a week.

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

- Mrs. B. needs to be admitted to the district hospital for followup since her diastolic blood pressure and proteinuria have increased, and followup as an outpatient is no longer feasible.
- The need for close followup should be explained to Mrs. B. In relation to this, she should be encouraged to express her concerns, listened to carefully, and provided emotional support and reassurance.
- Her care in hospital should be as follows:
 - Normal diet
 - Blood pressure monitored twice daily
 - Urine tested for protein daily
 - Fetal condition monitored twice daily
 - No anticonvulsants, antihypertensives, sedatives or tranquilizers
- If Mrs. B.'s blood pressure returns to normal or her condition is stable, she could be discharged, providing arrangements can be made for twice-weekly followup (e.g., it may be possible for her to attend the antenatal clinic once a week and be monitored at home once a week by a community midwife).
- If her condition remains unchanged, she should remain in the hospital and be monitored as described above.
- Basic antenatal care should continue to be provided, as needed.
- If Mrs. B. develops signs of fetal growth restriction, early childbirth should be considered.
- If fetal and maternal conditions are stable, she should be allowed to go into spontaneous labor and may deliver vaginally without the need for vacuum extraction or forceps.

References

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

CASE STUDY 2: VAGINAL BLEEDING IN EARLY PREGNANCY

ANSWER KEY

Case Study

Mrs. B. is a 20-year-old para 2 who came to the health center 2 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. B. was advised to avoid strenuous activity and sexual intercourse and return immediately if her symptoms persisted. Mrs. B. returns to the health center today and reports that irregular vaginal bleeding has continued and she now has acute abdominal pain that started 2 hours ago.

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

1. What will you include in your initial assessment of Mrs. B., and why?
 - Mrs. B. should be greeted respectfully and with kindness.
 - She should be told what is going to be done and listened to carefully. In addition, her questions should be answered in a calm and reassuring manner.
 - A rapid initial assessment should be done to check for the following signs to determine if she is in shock and in need of emergency treatment/resuscitation: pulse >110 ; systolic blood pressure less than 90 mm Hg; pallor; sweatiness or cold, clammy skin; rapid breathing; confusion. The initial assessment also includes rapid observation of consciousness/convulsions, temperature, and abdominal pain. She should also be assessed to determine whether vaginal bleeding has increased or products of conception have been passed.
2. What particular aspects of Mrs. B.'s physical examination will help you make a diagnosis or identify her problems/needs, and why?
 - An abdominal examination should be done to check for distension and rebound tenderness, which may indicate ectopic pregnancy, and to determine whether the uterus is softer or larger than normal for dates, which may indicate molar pregnancy.
 - A gentle bimanual examination should be performed to check for cervical motion tenderness and tender adnexal mass, which may indicate ectopic pregnancy, and to check for products of conception in the cervical os, which may indicate incomplete abortion.
3. What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. B., and why?
 - An ultrasound scan may help to distinguish a threatened abortion or twisted ovarian cyst from an ectopic pregnancy.

Diagnosis (identification of problems/needs)

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

Mrs. B.'s temperature is 36.8°C, her pulse rate is 130 beats per minute and weak, her blood pressure is 85/60 and her respirations are 20 per minute.

Her skin is pale and sweaty.

Mrs. B. 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 6-week size uterus is softer than normal.

4. Based on these findings, what is Mrs. B.'s diagnosis (problem/need), and why?
 - Mrs. B.'s symptoms and signs (e.g., signs of shock, acute abdominal and pelvic pain, rebound tenderness, light vaginal bleeding, closed cervix, and cervical motion tenderness) are consistent with ruptured ectopic pregnancy.

Care Provision (planning and intervention)

5. Based on your diagnosis (problem/need identification), what is your plan of care for Mrs. B., and why?
 - Mrs. B. should be treated for shock immediately:
 - Position her on her side.
 - Ensure that her airway is open.
 - Give her oxygen at 6–8 L per minute by mask or cannula.
 - Keep her warm.
 - Elevate her legs.
 - Monitor her temperature, pulse, blood pressure and respiration.
 - Start an IV using a large bore needle for rapid infusion of fluids (1 L of normal saline or Ringer's lactate in 15–20 minutes).
 - Monitor her intake and output (an indwelling catheter should be inserted to monitor urinary output).
 - Blood should be drawn for hemoglobin and cross-matching, and blood for transfusion should be made available as soon as possible.
 - Arrangements should be made for immediate transfer to the district hospital for an emergency laparotomy. Surgery should not be delayed while waiting for blood to be made available for transfusion.
 - Provide emotional support and reassurance to Mrs. B. and her family (or support person), explaining the situation and what to expect, and answering questions and concerns.

Evaluation

Mrs. B.'s postoperative course was without complications, and notable for patient tolerating oral intake, having minimal complaints of abdominal pain, ambulating well, and spontaneously voiding. She is now ready to be discharged; however, her hemoglobin is 9 g/dL.

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

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

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

References

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

CASE STUDY 3: ELEVATED BLOOD PRESSURE IN PREGNANCY

ANSWER KEY

Case Study

Mrs. A. is a 34-year-old gravida 4 para 3 at 18 weeks gestation who has come to the antenatal clinic today for a followup visit as requested by her midwife at her last visit 1 week ago. She attended her first antenatal care visit 1 week ago, when it was found that her blood pressure was 140/100 mm Hg on two readings taken 4 hours apart. Mrs. A. reports that she has had high blood pressure for years, which has not been treated with antihypertensive drugs. She does not know what her blood pressure was before she became pregnant. She moved to the district 6 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. A., and why?
 - Mrs. A. should be greeted respectfully and with kindness.
 - She should be told what is going to be done and listened to carefully. In addition, her questions should be answered in a calm and reassuring manner.
 - She should be asked how she is feeling and whether she has had headache, visual disturbance or upper abdominal pain since the last visit. Her blood pressure should be taken and her urine should be tested for protein (proteinuria up to 2+, together with a diastolic blood pressure of 90–110 mm Hg before 20 weeks, is characteristic of chronic hypertension with mild superimposed pre-eclampsia).
 - Mrs. A.'s medical record should be obtained to check her history of hypertension.
2. What particular aspects of Mrs. A.'s physical examination will help you make a diagnosis or identify problems/needs, and why?
 - The most important examinations are measurement of blood pressure and urine protein estimation.
 - An abdominal examination should be done to check fetal growth and condition (in cases of chronic hypertension and pre-eclampsia/eclampsia, reduced placental function may lead to low birth weight; there is an increased risk of hypoxia in both the antenatal and intrapartum periods, and an increased risk of abruptio placentae).
3. What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. A., and why?
 - As mentioned above, urine should be checked for protein.

Diagnosis (identification of problems/needs)

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

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

4. Based on these findings, what is Mrs. A.'s diagnosis (problem/need), and why?
 - Mrs. A.'s symptoms and signs (e.g., diastolic blood pressure of 90 mm Hg or more before 20 weeks gestation and, in Mrs. A.'s case, a history of hypertension, lack of proteinuria) are consistent with chronic hypertension.

Care Provision (planning and intervention)

5. Based on your diagnosis (problem/need identification), what is your plan of care for Mrs. A., and why?
 - Mrs. A. should be counseled about the danger signs in pregnancy, with particular emphasis on those related to pre-eclampsia and eclampsia (severe headache, blurred vision, upper abdominal pain, convulsions or loss of consciousness) and the need to seek help immediately if any of these occur.
 - Additional periods of rest should be encouraged
 - Mrs. A. should be asked to return to the clinic in 1 week to have her blood pressure, urine and fetal growth and condition monitored.
 - She should be encouraged to express her concerns, listened to carefully and provided reassurance.
 - In the meantime, an attempt should be made to obtain her medical record.
 - Mrs. A.'s management should not, at this stage, include the use of antihypertensive drugs. (High levels of blood pressure maintain renal and placental perfusion in chronic hypertension. Reducing blood pressure will result in diminished perfusion—blood pressure should not be lowered below its pre-pregnancy level. There is no evidence that aggressive treatment to lower the blood pressure to normal levels improves either fetal or maternal outcome.)
 - Basic antenatal care (early detection and treatment of problems, prophylactic interventions, birth plan development/revision, plan for newborn feeding) should be provided, as needed.

Evaluation

Mrs. A. returns to the antenatal clinic in 1 week. She feels well and denies headache, blurred vision, upper abdominal pain, convulsions, loss of consciousness or decreased fetal movement. Her blood pressure is 136/100 mm Hg. On abdominal exam, her uterus is 19-week size and fetal 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 140/100 mm Hg.

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

- Mrs. A. should be asked to return to the clinic every 2 weeks to have her blood pressure, urine and fetal condition monitored.
- She should be provided counseling about danger signs, again with particular emphasis on those related to pre-eclampsia/eclampsia.
- She should be encouraged to express her concerns, listened to carefully and provided reassurance.
- If Mrs. A.'s diastolic blood pressure increases to 110 mm Hg or more, or her systolic blood pressure increases to 160 mm Hg or more, she should be treated with antihypertensive drugs.
- If she develops proteinuria, superimposed pre-eclampsia should be considered and she should be managed accordingly.
- Basic antenatal care should continue to be provided, as needed.
- If there are no complications, Mrs. A. should be delivered at term.

References

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

Weeks 4 and 5

CASE STUDY 1: UNSATISFACTORY PROGRESS IN LABOR

ANSWER KEY

Case Study

Mrs. D. is a 20-year-old primigravida at term. She had antenatal care in a health center. She reports that labor 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., and why?
 - Mrs. D. should be greeted respectfully and with kindness.
 - She should be told what is going to be done and listened to carefully. In addition, her questions should be answered in a calm and reassuring manner.
 - She should be asked about frequency and regularity of contractions and if she has had bleeding, loss of water (rupture of membranes), fever, decreased fetal movements, or other danger signs or problems.
 - Her temperature, pulse, blood pressure and respiration rate should be taken and recorded. If there are any signs of dehydration, ketosis or shock, treatment should be started immediately.
 - Mrs. D.'s emotional response to labor should also be assessed to determine her level of anxiety and tolerance of pain.
2. What particular aspects of Mrs. D.'s physical examination will help you make a diagnosis or identify her problems/needs, and why?
 - An abdominal exam should be performed to determine the size of the uterus, the presentation of the fetus and the descent of the presenting part, as well as fetal heart rate. The uterus should be palpated to determine the frequency and duration of uterine contractions.
 - A vaginal examination should be performed to assess the dilatation of the cervix, to determine if the membranes are still intact, and to detect any molding of the fetal skull.

Diagnosis (identification of problems/needs)

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

History:

Mrs. D. reports that contractions have increased in intensity in the 12 hours since they began and have been approximately every 4–6 minutes for the past 4–5 hours. She admits that she felt a gush of water approximately 1 hour prior to admission. She reports normal fetal movement. She denies any danger signs.

Physical Examination:

Mrs. D.'s temperature is 37°C, her pulse rate is 84 per minute, her blood pressure is 112/70 and her respirations are 22 per minute. There are no signs of dehydration, ketosis or shock. She is moderately distressed by pain.

The fundal height is 40 cm. She has 3 contractions in 10 minutes, each lasting 30 seconds. The fetal head is 5/5 palpable above the symphysis pubis. The fetal heart rate is regular at 144 per minute. The cervix is 4 cm dilated. The membranes are not palpable and no amniotic fluid is visibly draining. There is no molding of the fetal skull.

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

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

Care Provision (planning and intervention)

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

- Mrs. D. should be made as comfortable as possible, and a supportive, encouraging atmosphere, respectful of her wishes, should be provided. In particular, massage and other comfort measures such as changes in position and posture may help to relieve discomfort. Encourage her to walk about freely, to empty her bladder regularly and to eat and drink as she wishes. If necessary, give her analgesics.
- Ongoing observations should include: maternal pulse, fetal heart rate and contractions half hourly; temperature every 2 hours; blood pressure, dilatation, amniotic fluid, moulding, descent of head, and urine volume and for protein and acetone every 4 hours.
- Observations should be recorded on the partograph.
- Another vaginal examination should be performed after 4 hours to assess progress in labor.

Evaluation

Four hours later, Mrs. D.'s temperature is 37°C, her pulse rate is 88 per minute, and her blood pressure is 114/70. She is having 4 contractions in 10 minutes, each lasting 30 seconds.

The cervix is 6 cm dilated. Scanty but clear amniotic fluid is draining. There is no moulding.

The fetal head is 5/5 palpable above the symphysis pubis and the fetal heart rate is 144 beats per minute. She produced 200 mL of urine in the past 4 hours, negative for protein and acetone.

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

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

6. Based on your diagnosis (problem/need identification), what is your plan of care for Mrs. D., and why?
- Because uterine contractions are less than 3/10 minutes and last less than 40 seconds and progress in labor has not been satisfactory, labor should be augmented by infusing oxytocin.

Oxytocin infusion (2.5 units in 500 mL) is started. The infusion rate is titrated to ensure establishment of at least 3 uterine contractions in 10 minutes lasting at least 40 seconds.

7. When would you reassess Mrs. D. again, and why?
- Mrs. D. will be closely monitored as before for her response to pain, uterine contractions, fetal heart rate and descent of the fetus. The oxytocin infusion rate should be maintained at the lowest rate that achieves at least 3 contractions/10 minutes lasting at least 40 seconds. The color of the amniotic fluid that drains will be recorded. Vaginal examination to assess cervical dilatation will be performed 2 hours after establishment of a good pattern of uterine contractions.

On reassessment 2½ hours later, Mrs. D.'s temperature is 37°C, her pulse rate is 90 per minute, and her blood pressure is 120/70. She is having 4 contractions in 10 minutes, each lasting 40–45 seconds. The fetal heart rate is 152 per minute. The fetal head is 4/5 palpable above the symphysis pubis. The cervix is 6 cm dilated and edematous. There is no amniotic fluid draining. Moulding is 2: sutures overlapping but reducible. She produced 160 mL of urine in the past 4 hours, negative for protein and acetone.

8. Based on these findings, what is Mrs. D.'s diagnosis (problem/need), and why?
- Mrs. D.'s symptoms and signs (e.g., secondary arrest of cervical dilatation and descent of the presenting part in the presence of good contractions) are consistent with the diagnosis of obstructed labor due to cephalopelvic disproportion (CPD).
9. Based on your diagnosis (problem/need identification), what is your plan of care for Mrs. D., and why?
- Arrangements should be made for immediate delivery of the baby by cesarean section.

References

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

CASE STUDY 2: FEVER AFTER CHILDBIRTH

ANSWER KEY

Case Study

Mrs. C. is a 35-year-old para three. Mrs. C.'s husband has brought her to the health center 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). Labor lasted 2 days and the TBA inserted herbs into Mrs. C.'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. C., and why?
 - Mrs. C. and her husband should be greeted respectfully and with kindness.
 - They should be told what is going to be done and listened to carefully. In addition, their questions should be answered in a calm and reassuring manner.
 - A rapid initial assessment should be done to determine the degree of illness: her temperature, consciousness, abdominal pain, vaginal bleeding, and fever as well as any signs of shock, including pulse greater than 110, systolic blood pressure less than 90 mm Hg, pallor, sweatiness or cold and clammy skin, rapid respirations and confusion. She should be asked whether she has felt weak and lethargic or whether she has had frequent, painful urination, or foul-smelling vaginal discharge. Determine whether she is from a malarial area.
 - The following information should also be obtained about the birth: when the membranes ruptured, problems delivering the placenta, whether it was complete and whether there was excessive bleeding following the birth.
 - Especially because herbs were inserted into Mrs. C.'s vagina during labor, tetanus vaccination status should be checked.
2. What particular aspects of Mrs. C.'s physical examination will help you make a diagnosis or identify her problems/needs, and why?
 - Mrs. C.'s abdomen should be checked for tenderness and her vulva should be checked for purulent discharge (lower abdominal pain, tender uterus, and purulent, foul-smelling lochia are symptoms and signs of metritis). Her legs should be checked for calf muscle tenderness, which may indicate deep vein thrombosis.
 - Mrs. C.'s perineum, vagina and cervix should be examined carefully for tears, particularly because labor was prolonged and because foreign substances were inserted into the vagina.
3. What screening procedures/laboratory tests will you include (if available) in your assessment of Mrs. C., and why?
 - None at this stage.

Diagnosis (identification of problems/needs)

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

History:

Mrs. C. 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. C.'s temperature is 39.8°C, her pulse rate is 136 per minute, her blood pressure is 100/70 and her respiration rate is 24 per minute.

She appears pale and lethargic and slightly confused.

Abdominal exam shows a poorly contracted and tender uterus that is just 1 cm 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 2 cm dilated with cervical motion tenderness present.

It is not known whether the placenta was complete.

Mrs. C. is fully immunized against tetanus and had a booster 3 years ago.

4. Based on these findings, what is Mrs. C.'s diagnosis (problem/need), and why?
 - Mrs. C.'s symptoms and signs (e.g., fever, together with signs of shock [rapid pulse, confusion], and lower abdominal pain, uterine tenderness, and foul-smelling vaginal discharge) are consistent with metritis.

Care Provision (planning and intervention)

5. Based on your diagnosis (problem/need identification), what is your plan of care for Mrs. C., and why?
 - Mrs. C. should be treated for shock immediately:
 - Position her on her side.
 - Ensure that her airway is open.
 - Give her oxygen at 6–8 L per minute by mask or cannula.
 - Keep her warm.
 - Elevate her legs.
 - Monitor her temperature, pulse, blood pressure and respiration.
 - Start an IV using a large bore needle for rapid infusion of fluids (1 L of normal saline or Ringer's lactate in 15–20 minutes).
 - Monitor her intake and output (an indwelling catheter should be inserted to monitor urine output).
 - Blood should be drawn for hemoglobin and cross-matching and blood for transfusion should be made available, if necessary.

- The following combination of antibiotics should be given: ampicillin 2 g IV every 6 hours; plus gentamicin 5 mg/kg of body weight IV every 24 hours; plus metronidazole 500 mg IV every 8 hours.
- If retained placental fragments are suspected, a digital exploration of the uterus should be performed to remove clots and large pieces of tissue. If necessary, ovum forceps or a large curette should be used.
- Temperature, pulse, blood pressure, uterine tenderness and involution, and lochia should be monitored for improvement.
- Because Mrs. C.'s childbirth was unhygienic, a booster of tetanus toxoid (TT) 0.5 mL IM should be given immediately since she has completed the initial three-dose series and has had a booster within the past 10 years. (If she had not completed the initial three-dose series or had not had a booster within the past 10 years, she should be given anti-tetanus serum (antitoxin) 1500 units IM. She would then need to receive a booster injection of tetanus toxoid 0.5 mL IM in 4 weeks.)
- The steps taken to manage the complication should be explained to Mrs. C. and her husband. In addition, they should be encouraged to express their concerns, listened to carefully, and provided emotional support and reassurance.

Evaluation

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

Mrs. C.'s temperature is 38°C, her pulse rate is 96 beats per minute, her blood pressure is 110/70 and her respiration rate is 20 breaths per minute. She is less pale and no longer confused. Her uterus is less tender and is firm at 3 cm 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. C., and why?
 - IV antibiotics should be continued until Mrs. C. has been fever-free for 48 hours. Oral antibiotics are not necessary after stopping the IV antibiotics.
 - Her vital signs, intake and output, uterine tenderness and involution, and lochia should continue to be monitored.
 - IV fluids should be continued to maintain hydration until Mrs. C. is well enough to take adequate fluid and nourishment by mouth.
 - The steps taken for continuing management of the complication should be explained to Mrs. C. and her husband. In addition, they should be encouraged to express their concerns, listened to carefully, and provided continuing emotional support and reassurance.
 - Arrangements should be made to talk with the TBA who attended the birth, and provide community education about clean birth practices.

References

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

CASE STUDY 3: VAGINAL BLEEDING AFTER CHILDBIRTH

ANSWER KEY

Case Study

Mrs. A. is a 20-year-old para 1 who has been brought to the health center 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. A. and the TBA report that the duration of labor 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. A., and why?

- Mrs. A. and the TBA should be greeted respectfully and with kindness.
- They should be told what is going to be done and listened to carefully. In addition, their questions should be answered in a calm and reassuring manner.

A rapid initial assessment should be done to check for the following signs to determine if she is in shock and in need of emergency treatment/resuscitation: pulse >110; systolic blood pressure less than 90 mm Hg; pallor; sweatiness or cold, clammy skin; rapid breathing; confusion. Level of consciousness/convulsions and abdominal pain should also be rapidly noted, and temperature taken to screen for sepsis. The TBA should be asked whether the uterus contracted well after the delivery of the placenta and whether the placenta and membranes were delivered complete and without difficulty or if they delivered in pieces.

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

- Mrs. A.'s uterus should be checked immediately to see whether it is contracted. If the uterus is contracted and firm, the most likely cause of bleeding is genital trauma. If the uterus is not contracted and the placenta is complete, the most likely cause of bleeding is an atonic uterus. If the placenta is not complete, the most likely cause of bleeding is retained placental fragments/membranes.
- Mrs. A.'s perineum, vagina and cervix should be carefully examined later for tears.

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

- None at this stage.

Diagnosis (identification of problems/needs)

You have completed your rapid assessment of Mrs. A., 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. A.'s temperature is 36.8°C, her pulse rate is 108 per minute, her blood pressure is 80/60 and her respirations are 24 per minute.

She is pale and sweating.

Her uterus is soft and does not contract with fundal massage. She has heavy, bright red vaginal bleeding. On inspection there is no evidence of perineal, vaginal or cervical tears.

4. Based on these findings, what is Mrs. A.'s diagnosis (problem/need), and why?
 - Mrs. A.'s symptoms and signs (e.g., immediate postpartum hemorrhage, uterus soft and not contracted, shock) are consistent with atonic uterus.

Care Provision (planning and intervention)

5. Based on your diagnosis (problem/need identification), what is your plan of care for Mrs. A., and why?
 - Call for help/assistance because many things have to be done simultaneously. Mrs. A. should **not** be left unattended.
 - An assistant should immediately start uterine massage (simultaneously with your assessment.)
 - An assistant should give oxytocin 10 units IM until an IV can be started. Uterine massage should continue.
 - **At the time of the rapid initial assessment**, as soon as shock is identified, treatment for shock should begin:
 - Ensure that her airway is open.
 - Start an IV using a large bore needle for rapid infusion of fluids (1 L of normal saline or Ringer's lactate in 15–20 minutes). A second IV line should be used to infuse 20 units of oxytocin in 1 L of fluid at 40 drops per minute. Do not give more than 3 L of IV fluids containing oxytocin.
 - Position her on her side.
 - Give her oxygen at 6–8 L per minute by mask or cannula.
 - Keep her warm.
 - Elevate her legs.
 - Monitor her temperature, pulse, blood pressure and respiration.

- Monitor her intake and output (an indwelling catheter should be inserted to monitor urine output).
- If the uterus still does not contract, manual exploration should be performed to check for and remove retained placental fragments.
- Blood should be drawn for hemoglobin and cross-matching, and blood for transfusion should be made available as soon as possible. A bedside clotting test should be done to determine whether coagulopathy is present (coagulopathy is both a cause and result of massive obstetric hemorrhage).
- The steps taken to manage the complication should be explained to Mrs. A. In addition, she should be encouraged to express her concerns, listened to carefully, and provided emotional support and reassurance.

Evaluation

Manual exploration of the uterus was performed and some placental tissue has been removed. Fifteen minutes after the initiation of treatment, however, she continues to have heavy vaginal bleeding. Her uterus remains poorly contracted. Her bedside clotting test is 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. A., and why?

- Blood should be made available for transfusion immediately.
- In the meantime, rapid fluid replacement should continue with Ringer's lactate or normal saline.
- If available, give ergometrine/methylergometrine 0.2 mg IM or IV slowly and/or 15-methyl prostaglandin IM, or misoprostol 600 mcg rectally or orally.
- Bimanual compression of the uterus or abdominal aortic compression should be performed to control the bleeding; compression should be maintained until bleeding is controlled.
- If the bleeding continues in spite of compression, arrangements should be made immediately to transfer Mrs. A. to the district hospital for utero-ovarian artery ligation. If life-threatening bleeding continues after ligation, subtotal hysterectomy should be performed.
- The steps taken for continuing management of the complication should be explained to Mrs. A. In addition, she should be encouraged to express her concerns, listened to carefully, and provided continuing emotional support and reassurance.
- Communication about Mrs. A.'s condition should be maintained between the health center (referring facility) and the district hospital (referral facility), particularly about her healthcare needs following discharge from hospital.

References

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

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

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

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

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

Resources: Learning Guide for Adult Resuscitation, sphygmomanometer, stethoscope, equipment for starting an IV infusion, syringes and vials, oxygen cylinder, gauge, self-inflating mask, equipment for bladder catheterization, new examination or high-level disinfected surgical gloves

SCENARIO 1 (Information provided and questions asked by the trainer)	KEY REACTIONS/RESPONSES (Expected from participant)
<p>1. Mrs. L. is a 36-year-old multigravida who has five children. Her husband, who tells you that she gave birth at home with the help of a traditional birth attendant, has carried her into the hospital. The birth attendant told him that the placenta delivered easily and completely immediately after birth, but Mrs. L. has been bleeding “too much” since then. The family tried numerous things to help Mrs. L. before bringing her to the hospital, but she continues to bleed “too much.”</p> <ul style="list-style-type: none"> • What do you do? 	<ul style="list-style-type: none"> • Shouts for help to urgently mobilize all available personnel • Evaluates Mrs. L. immediately for shock, including vital signs (temperature, pulse, blood pressure and respiration rate), level of consciousness, color and skin temperature • Tells Mrs. L. (and her husband) what is going to be done, listens to her and responds attentively to her questions and concerns • Turns Mrs. L. on her side, if unconscious or semi-conscious, and keeps the airway open
<p>2. On examination, you find that Mrs. L.’s temperature is 37°C, pulse 120 beats/minute, blood pressure 84/50 mm Hg and respiration rate 34 breaths/minute. Her skin is cold and clammy.</p> <ul style="list-style-type: none"> • What do you think is wrong with Mrs. L.? • What will you do now? 	<ul style="list-style-type: none"> • States that Mrs. L. is in shock • Asks one of the staff that responded to her/his shout for help to start an IV infusion, using a large-bore cannula and normal saline or Ringer’s lactate at a rate of 1 L in 15–20 minutes • While starting the IV, collects blood for appropriate tests (hemoglobin, blood typing and cross matching, and bedside clotting test for coagulopathy) • Starts oxygen at 6–8 L/minute • Catheterizes bladder • Looks for the cause of shock (hypovolemic or septic) by palpating the uterus for firmness and tenderness, assessing the amount of blood loss • Covers Mrs. L. to keep her warm • Elevates legs
<p>Discussion Question 1: How do you know when a woman is in shock?</p>	<p>Expected Responses: Pulse greater than 110 beats/minute; systolic blood pressure less than 90 mm Hg; cold, clammy skin; pallor; respiration rate greater than 30 breaths/minute; anxious and confused or unconscious</p>
<p>Discussion Question 2: If a peripheral vein cannot be cannulated, what should be done?</p>	<p>Expected Response: A venous cut-down should be performed.</p>
<p>3. On further examination, you find that Mrs. L.’s uterus is soft and not contracted, but not tender. Her clothing from the waist down is blood-soaked.</p> <ul style="list-style-type: none"> • What are Mrs. L.’s main problems? • What are the causes of her shock and bleeding? • What will you do next? 	<ul style="list-style-type: none"> • States that Mrs. L. reportedly lost “too much” blood after childbirth and considerable blood loss is evident on her clothes • States that Mrs. L.’s uterus is soft and not contracted, but not tender; she has no fever • Determines that Mrs. L.’s shock is due to postpartum hemorrhage, atonic uterus • Massages Mrs. L.’s uterus to stimulate a contraction • Starts a second IV infusion and gives 20 units oxytocin in 1 L of fluid at 60 drops/minute

SCENARIO 1 (continuation)	KEY REACTIONS/RESPONSES (continuation)
<p>4. After 15 minutes, the uterus is firm and bleeding has stopped, but Mrs. L.'s pulse is still 116 beats/minute, blood pressure 88/60 mm Hg and respiration rate 32 breaths/minute.</p> <ul style="list-style-type: none"> What will you do now? 	<ul style="list-style-type: none"> Gives another liter of fluid to ensure 2 L are infused within an hour of starting treatment Continues to give oxygen at 6–8 L/minute Continues to check that uterus remains contracted Continues to monitor pulse and blood pressure
<p>5. After another 15 minutes, the uterus is still firm and there is no further bleeding. Mrs. L.'s pulse is 90 beats/minute, blood pressure 100/60 mm Hg and respiration rate 24 breaths/minute.</p> <ul style="list-style-type: none"> What will you do now? 	<ul style="list-style-type: none"> Adjusts rate of IV infusion to 1 L in 6 hours Continues to check to ensure that uterus remains contracted Continues to monitor pulse and blood pressure Checks that urine output is 30 mL/hour or more
<p>6. Mrs. L.'s conditions has stabilized. Twenty-four hours later, her hemoglobin is 6.5 g/dL.</p> <ul style="list-style-type: none"> What will you do now? 	<ul style="list-style-type: none"> Begins ferrous fumarate 120 mg by mouth PLUS folic acid 400 µg by mouth daily, and advises Mrs. L. that she will need to take this dosage for 3 months

SCENARIO 2 (Information provided and questions asked by the trainer)	KEY REACTIONS/RESPONSES (Expected from participant)
<p>1. Mrs. M. is 26 years old and gave birth at home to her second child, with the help of her neighbor. The family reports that Mrs. M. has had a fever since yesterday, was very restless during the night and is very drowsy this morning. She was carried into the hospital by her husband and neighbor.</p> <ul style="list-style-type: none"> What do you do? 	<ul style="list-style-type: none"> Shouts for help to urgently mobilize available personnel Evaluates Mrs. M. immediately for shock, including vital signs (temperature, pulse, blood pressure and respiration rate), level of consciousness, color and skin temperature Tells Mrs. M. (and her husband and neighbor) what is going to be done, listens to her and responds attentively to her questions and concerns Turns Mrs. M. on her side, if unconscious or semi-conscious, and keeps the airway open

SCENARIO 2 (continuation)	KEY REACTIONS/RESPONSES (continuation)
<p>2. On examination, you find that Mrs. M.'s temperature is 39.4°C, pulse 136 beats/minute, blood pressure 80/50 mm Hg and respiration rate 34 breaths/minute. She is confused and drowsy.</p> <ul style="list-style-type: none"> • What do you think is wrong with Mrs. M.? • What will you do now? 	<ul style="list-style-type: none"> • States that Mrs. M. is in shock • Asks one of the staff that responded to her/his shout for help to start an IV infusion, using a large-bore cannula and normal saline or Ringer's lactate at a rate of 1 L in 15–20 minutes • While starting the IV, collects blood for appropriate tests (hemoglobin, blood typing and cross matching, and bedside clotting test for coagulopathy), while starting the IV • Starts oxygen at 6–8 L/minute • Catheterizes bladder • Looks for the cause of the shock (hypovolemic or septic) by palpating the uterus for firmness and tenderness • Covers Mrs. M. to keep her warm • Elevates legs
<p>3. On further examination, you find that Mrs. M.'s uterus is tender and that she has foul-smelling lochia. Upon questioning, the neighbor admits that herbs were inserted into Mrs. M.'s vagina during labor.</p> <ul style="list-style-type: none"> • What are Mrs. M.'s main problems? • What are the causes of her shock, and why? • What will you do next? 	<ul style="list-style-type: none"> • States that Mrs. M. has a fever, a tender uterus and foul-smelling lochia • Determines that Mrs. M.'s shock is due to infection resulting from unclean labor and childbirth practices • Gives penicillin G 2 million units OR ampicillin 2 g IV (and repeats every 6 hours) PLUS gentamicin 5 mg/kg body weight IV (and repeats every 24 hours) PLUS metronidazole 500 mg IV (and repeats every 8 hours)
<p>4. After 6 hours, Mrs. M.'s temperature is 38°C, pulse 100 beats/minute, blood pressure 100/60 mm Hg and respiration rate 24 breaths/minute. She is easily roused and is oriented.</p> <ul style="list-style-type: none"> • What will you do now? 	<ul style="list-style-type: none"> • Adjusts rate of IV infusion to 1 L in 6 hours • Continues to monitor temperature, pulse and blood pressure • Checks that urine output is 30 mL/hour or more • Continues to administer antibiotics

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

Purpose: The purpose of this activity is to provide a simulated experience for participants to practice problem-solving and decision-making skills in the management of headaches, blurred vision, convulsions, loss of consciousness or elevated blood pressure, with emphasis on thinking quickly and reacting (intervening) rapidly.

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

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

Resources: Sphygmomanometer, stethoscope, equipment for starting an IV infusion, syringes and vials, oxygen cylinder, gauge, self-inflating mask, equipment for bladder catheterization, reflex hammer (or similar device), high-level disinfected or sterile surgical gloves

SCENARIO 1 (Information provided and questions asked by the trainer)	KEY REACTIONS/RESPONSES (Expected from participant)
<p>1. Mrs. G. is 16 years old and is 37 weeks pregnant. This is her first pregnancy. She has presented to the labor unit with contractions and says that she has had a bad headache all day. She also says that she cannot see properly. While she is getting up from the examination table, she falls back onto the pillow and begins to have a convulsion.</p> <ul style="list-style-type: none"> What will you do? 	<ul style="list-style-type: none"> Shouts for help to urgently mobilize all available personnel Checks airway to ensure that it is open, and turns Mrs. G. onto her left side Protects her from injuries (fall) but does not attempt to restrain her Has one of the staff members who responded to her/his shout for help take Mrs. G.'s vital signs (temperature, pulse, blood pressure and respiration rate) and check her level of consciousness, color and skin temperature Has another staff member start oxygen at 4–6 L/minute Prepares and gives magnesium sulfate 20% solution, 4 g IV over 5 minutes Follows promptly with 10 g of 50% magnesium sulfate solution, 5 g in each buttock deep IM injection with 1 mL of 2% lignocaine in the same syringe At the same time, explains to the family what is happening and talks to the woman as appropriate
<p>Discussion Question 1: What would you do if there was no magnesium sulfate in the hospital?</p>	<p>Expected Response: Use diazepam 10 mg slowly over 2 minutes.</p>
<p>2. After 5 minutes, Mrs. G. is no longer convulsing. Her diastolic blood pressure is 110 mm Hg and her respiration rate is 20 breaths/minute.</p> <ul style="list-style-type: none"> What is Mrs. G.'s problem? What will you do next? What should the aim be with respect to controlling Mrs. G.'s blood pressure? What other care does Mrs. G. require now? 	<ul style="list-style-type: none"> States that Mrs. G.'s symptoms and signs are consistent with eclampsia Gives hydralazine 5 mg IV slowly every 5 minutes until diastolic blood pressure is lowered to between 90–100 mm Hg States that the aim should be to keep Mrs. G.'s diastolic blood pressure between 90 mm Hg and 100 mm Hg to prevent cerebral hemorrhage Has one of the staff assist with the emergency insertion of an indwelling catheter to monitor urinary output and proteinuria Has a second staff member start an IV infusion of normal saline or Ringer's lactate and draws blood to assess clotting status using a bedside clotting test Maintains a strict fluid balance chart
<p>Discussion Question 2: Would you give additional hydralazine after the first dose?</p>	<p>Expected Response: Repeat hourly as needed, or give 12.5 mg IM every 2 hours as needed.</p>
<p>3. After another 15 minutes, Mrs. G.'s blood pressure is 94 mm Hg and her respiration rate is 16 breaths/minute.</p> <ul style="list-style-type: none"> What will you do now? 	<ul style="list-style-type: none"> Stays with Mrs. G. continuously and monitors pulse, blood pressure, respiration rate, patella reflexes and fetal heart Checks whether Mrs. G. has had any further contractions

SCENARIO 1 (continuation)	KEY REACTIONS/RESPONSES (continuation)
<p>4. It is now 1 hour since treatment was started for Mrs. G. She is sleeping but is easily roused. Her blood pressure is now 90 mm Hg and her respiration rate is still 16 breaths/minute. She has had several more contractions, each lasting less than 20 seconds.</p> <ul style="list-style-type: none"> What will you do now? 	<ul style="list-style-type: none"> Continues to monitor pulse, blood pressure, respiration rate, patella reflexes and fetal heart Monitors urine output and IV fluid intake Monitors for the development of pulmonary edema by auscultating lung bases for rales Assesses Mrs. G.'s cervix to determine whether it is favorable or unfavorable
<p>5. It is now 2 hours since treatment was started for Mrs. G. Her blood pressure is still 90 mm Hg and her respiration rate is still 16 breaths/minute. All other observations are within expected range. She continues to sleep and rouses when she has a contraction. Contractions are occurring more frequently but still last less than 20 seconds. Mrs. G.'s cervix is 100% effaced and 3 cm dilated. There are no fetal heart abnormalities.</p> <ul style="list-style-type: none"> What will you do now? When should childbirth occur? 	<ul style="list-style-type: none"> Continues to monitor Mrs. G. as indicated above States that membranes should be ruptured using an amniotic hook or a Kocher clamp and labor induced using oxytocin or prostaglandins States that childbirth should occur within 12 hours of the onset of Mrs. G.'s convulsions

SCENARIO 2 (Information provided and questions asked by the trainer)	KEY REACTIONS/RESPONSES (Expected from participant)
<p>1. Mrs. H. is 20 years old. She is 38 weeks pregnant. This is her second pregnancy. Her mother-in-law has brought Mrs. H. to the health center this morning because she has had a severe headache and blurred vision for the past 6 hours. Mrs. H. says she feels very ill.</p> <ul style="list-style-type: none"> What will you do? 	<ul style="list-style-type: none"> Shouts for help to urgently mobilize all available personnel Places Mrs. H. on the examination table on her left side Makes a rapid evaluation of Mrs. H.'s general condition, including vital signs (temperature, pulse, blood pressure, and respiration rate), level of consciousness, color and skin temperature Simultaneously asks about the history of Mrs. H.'s present illness
<p>2. Mrs. H.'s pulse is 100 beats/minute, diastolic blood pressure is 96 mm Hg and respiration rate 20 breaths/minute. She has hyper-reflexia. Her mother-in-law tells you that Mrs. H. has had no symptoms or signs of the onset of labor.</p> <ul style="list-style-type: none"> What is Mrs. H.'s problem? What will you do now? What is your main concern at the moment? 	<ul style="list-style-type: none"> States that Mrs. H.'s symptoms and signs are consistent with severe pre-eclampsia Has one of the staff members who responded to her/his shout for help start oxygen at 4–6 L/minute Prepares and gives magnesium sulfate 20% solution, 4 g IV over 5 minutes Follows promptly with 10 g of 50% magnesium sulfate solution, 5 g in each buttock deep IM injection with 1 mL of 2% lignocaine in the same syringe At the same time, tells Mrs. H. (and her mother-in-law) what is going to be done, listens to her and responds attentively to her questions and concerns States that the main concern at the moment is to prevent Mrs. H. from convulsing

SCENARIO 2 (continuation)	KEY REACTIONS/RESPONSES (continuation)
<p>3. After 15 minutes, Mrs. H. is resting quietly. She still has a headache and hyper-reflexia.</p> <ul style="list-style-type: none"> • What will you do now? • What will you do during the next hour? 	<ul style="list-style-type: none"> • Has one of the staff assist with the emergency insertion of an indwelling catheter to monitor urinary output and proteinuria • Starts an IV infusion of normal saline or Ringer's lactate • Listens to the fetal heart • States that during the next hour will continue to monitor vital signs, reflexes and fetal heart, and maintain a strict fluid balance chart
<p>4. It is now 1 hour since treatment for Mrs. H. was started. Her pulse is still 100 beats/minute, diastolic blood pressure 96 mm Hg and respiration rate 20 breaths/minute. She still has hyper-reflexia. You detect that the fetal heart rate is 80.</p> <ul style="list-style-type: none"> • What is your main concern now? • What will you do now? 	<ul style="list-style-type: none"> • States that main concern now is fetal heart abnormality • States that Mrs. H. should be prepared to go to the operating room for cesarean section • Tells Mrs. H. (and her mother-in-law) what is happening, listens to her concerns and provides reassurance

CLINICAL SIMULATION FOR THE MANAGEMENT OF VAGINAL BLEEDING IN EARLY PREGNANCY

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

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

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

Resources: Learning Guides for Postabortion Care and Postabortion Family Planning Counseling, childbirth simulator and placenta/cord/ammion model, sphygmomanometer, stethoscope, equipment for starting an IV infusion, syringes and vials, bucket for waste disposal, high-level disinfected or sterile surgical gloves, antiseptic solution

SCENARIO 1 (Information provided and questions asked by the trainer)	KEY REACTIONS/RESPONSES (Expected from participant)
<p>1. Mrs. A. is 20 years old. This is her first pregnancy. Her family brings her into the health center. Mrs. A. is able to walk with the support of her sister and husband. She reports that she is 14 or 15 weeks pregnant and that she has had some cramping and spotting for several days. She has had heavy bleeding and cramping, however, for the past 6–8 hours. She has not attended an antenatal clinic nor is she being treated for any illnesses.</p> <ul style="list-style-type: none"> • What is your first concern? • What will you do first? 	<ul style="list-style-type: none"> • States that first concern is to determine whether or not Mrs. A. is in shock • Makes a rapid evaluation of Mrs. A.'s general condition, including vital signs (temperature, pulse, blood pressure and respiration rate), level of consciousness, color and skin temperature • Explains to Mrs. A. (and her family) what is going to be done, listens to her and responds attentively to her questions and concerns
<p>2. On examination, you find that Mrs. A.'s pulse is 100 beats/minute, blood pressure 100/60 mm Hg and respiration rate 24 breaths/minute. She is conscious. Her skin is not cold or clammy. You notice bright red blood soaking through her dress.</p> <ul style="list-style-type: none"> • Is Mrs. A. in shock? • What will you do next? • What questions will you ask? 	<ul style="list-style-type: none"> • States that Mrs. A. is not in shock • Starts an IV infusion of normal saline or Ringer's lactate • Asks Mrs. A. if anything happened to her or if anyone did anything to her which may have caused the bleeding • Asks how long it takes to soak a pad • Asks if Mrs. A. has passed any tissue • Asks if she has fainted
<p>3. Mrs. A. was well until she started bleeding. You can tell from her responses that she wanted this pregnancy. You see no signs of physical violence. She soaks a pad every 4–5 minutes. She has not fainted but she "feels dizzy." She has passed some clots and thinks she may have passed tissue.</p> <ul style="list-style-type: none"> • What will you do next and why? 	<ul style="list-style-type: none"> • Palpates Mrs. A.'s abdomen for uterine size, tenderness and consistency; checks for tender adnexal mass to rule out ectopic pregnancy; checks for large, boggy uterus to rule out molar pregnancy • Does a bimanual examination to rule out inevitable or incomplete abortion • Takes Mrs. A.'s temperature to rule out sepsis
<p>4. On examination, you find that the uterus is firm, slightly tender and palpable just at the level of the symphysis pubis; there are no adnexal masses. Bimanual examination reveals that the cervix is approx 1–2 cm dilated, uterine size is less than 12 weeks, and no tissue is palpable at the cervix. There is no cervical motion tenderness.</p> <ul style="list-style-type: none"> • What is your working diagnosis? 	<ul style="list-style-type: none"> • States that Mrs. A. has an incomplete abortion
<p>Discussion Question 1: Why did you rule out ectopic pregnancy?</p>	<p>Expected Responses: Bleeding is heavier than for ectopic, no adnexal masses were palpable abdominally or vaginally, no cervical motion tenderness, cervix is dilated, no history of fainting</p>

SCENARIO 1 (continuation)	KEY REACTIONS/RESPONSES (continuation)
<p>4. (continued)</p> <ul style="list-style-type: none"> What will you do now? 	<ul style="list-style-type: none"> Explains findings to Mrs. A. (and her family) Prepares Mrs. A. for manual vacuum aspiration (MVA)
<p>5. The treatment room is occupied at the moment because another patient with incomplete abortion is undergoing an MVA. The room will be available in 30 minutes.</p> <ul style="list-style-type: none"> What will you do now? 	<ul style="list-style-type: none"> Explains the situation to Mrs. A. (and her family) and provides reassurance Keeps the IV running Gives ergometrine 0.2 mg IM OR misoprostol 400 µg orally Continues to monitor blood loss, pulse and blood pressure
<p>6. Fifteen minutes have passed since ergometrine was given, but Mrs. A. is still soaking one pad every 5 minutes. Her pulse is 104 beats/minute and her blood pressure is 98/60 mm Hg.</p> <ul style="list-style-type: none"> What will you do now? 	<ul style="list-style-type: none"> Repeats the ergometrine 0.2 mg IM Continues IV infusion Continues to monitor blood loss, pulse and blood pressure Takes blood for typing and cross-matching so that it is available if needed
<p>7. Bleeding slowed after the second dose of ergometrine. MVA was performed 30 minutes later and complete evacuation of the products of conception has been assured.</p> <ul style="list-style-type: none"> What will you do now? 	<ul style="list-style-type: none"> Monitors Mrs. A.'s vital signs and blood loss Ensures that Mrs. A. is clean, warm and comfortable Encourages her to eat and drink as she wishes
<p>8. After 6 hours, Mrs. A.'s vital signs are stable and there is almost no blood loss. She insists on going home.</p> <ul style="list-style-type: none"> What will you do before she goes home? 	<ul style="list-style-type: none"> Talks to Mrs. A. about whether or not she wants to get pregnant and when; provides family planning counseling and a family planning method, if necessary Provides reassurance about the chances for a subsequent successful pregnancy Advises Mrs. A. to seek medical attention immediately if she develops prolonged cramping, prolonged bleeding, bleeding more than normal menstrual bleeding, severe or increased pain, fever, chills or malaise, foul-smelling discharge, fainting Talks to her and her husband about safe sex Asks about her tetanus immunization status and provides immunization if needed

CLINICAL SIMULATION FOR THE MANAGEMENT OF VAGINAL BLEEDING AFTER CHILDBIRTH

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

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

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

Resources: Learning Guides for Bimanual Compression of Uterus and Repair of Cervical Tears, sphygmomanometer, stethoscope, equipment for starting an IV infusion, oxygen cylinder, gauge, self-inflating mask, syringes and vials, vaginal speculum, sponge forceps, high-level disinfected or sterile surgical gloves

SCENARIO 1 (Information provided and questions asked by the trainer)	KEY REACTIONS/RESPONSES (Expected from participants)
<p>1. Mrs. B. is 24 years old and has just given birth to a healthy baby girl after 7 hours of labor. Active management of the third stage was performed, and the placenta and membranes were complete. The midwife who attended the birth left the hospital at the end of her shift. Approximately 30 minutes later, a nurse rushes to tell you that Mrs. B. is bleeding profusely.</p> <ul style="list-style-type: none"> • What will you do? 	<ul style="list-style-type: none"> • Shouts for help to urgently mobilize all available personnel • Makes a rapid evaluation of Mrs. B.'s general condition, including vital signs (temperature, pulse, blood pressure and respiration rate), level of consciousness, color and temperature of skin • Explains to Mrs. B. what is going to be done, listens to her and responds attentively to her questions and concerns
<p>2. On examination, you find that Mrs. B.'s pulse is 120 beats/minute and weak and her blood pressure is 86/60 mm Hg. Her skin is not cold and clammy.</p> <ul style="list-style-type: none"> • What is Mrs. B.'s problem? • What will you do now? 	<ul style="list-style-type: none"> • States that Mrs. B. is in shock from postpartum bleeding • Palpates the uterus for firmness • Asks one of the staff that responded to her/his shout for help to start an IV infusion, using a large-bore cannula and normal saline or Ringer's lactate at a rate of 1 L in 15–20 minutes with 10 units oxytocin • While starting the IV, collects blood for appropriate tests (hemoglobin, blood typing and cross matching, and bedside clotting test for coagulopathy)
<p>Discussion Question 1: How do you know when a woman is in shock?</p>	<p>Expected Responses: Pulse greater than 110 beats/minute; systolic blood pressure less than 90 mm Hg; cold, clammy skin; pallor; respiration rate greater than 30 breaths/minute; anxious and confused or unconscious</p>
<p>3. You find that Mrs. B.'s uterus is soft and not contracted.</p> <ul style="list-style-type: none"> • What will you do now? 	<ul style="list-style-type: none"> • Massages the uterus to expel blood and blood clots and stimulate a contraction • Starts oxygen at 6–8 L/minute • Catheterizes bladder • Covers Mrs. B. to keep her warm • Elevates legs • Continues to monitor (or has assistant monitor) blood loss, pulse and blood pressure
<p>4. After 5 minutes, Mrs. B.'s uterus is well contracted, but she continues to bleed heavily.</p> <ul style="list-style-type: none"> • What will you do now? 	<ul style="list-style-type: none"> • Examines the cervix, vagina and perineum for tears • Asks one of the staff members assisting to locate placenta and examines for missing pieces
<p>5. On further examination of the placenta, you find that it is complete. On examination of Mrs. B.'s cervix, vagina and perineum, you find a cervical tear. She continues to bleed heavily.</p> <ul style="list-style-type: none"> • What will you do now? 	<ul style="list-style-type: none"> • Prepares to repair the cervical tear • Tells Mrs. B. what is happening, listens to her concerns and provides reassurance • Has a staff member assisting check Mrs. B.'s vital signs

SCENARIO 1 (continuation)	KEY REACTIONS/RESPONSES (continuation)
<p>Discussion Question 2: What would you have done if examination of the placenta had shown a missing piece (placenta incomplete)?</p>	<p>Expected Responses:</p> <ul style="list-style-type: none"> • Explain the problem to Mrs. B. and provide reassurance. • Give pethidine and diazepam IV slowly or use ketamine. • Give a single dose of prophylactic antibiotics (ampicillin 2 g IV plus metronidazole 500 mg IV OR cefazolin 1 g IV plus metronidazole 500 mg IV). • Use sterile or high-level disinfected gloves to feel inside the uterus for placental fragments and remove with hand, ovum forceps or large curette.
<p>6. Forty-five minutes have passed since treatment for Mrs. B. was started. You have just finished repairing Mrs. B.'s cervical tear. Her pulse is now 100 beats/minute, blood pressure 96/60 mm Hg and respiration rate 24 breaths/minute. She is resting quietly.</p> <ul style="list-style-type: none"> • What will you do now? 	<ul style="list-style-type: none"> • Adjusts rate of IV infusion to 1 L in 6 hours • Continues to check for vaginal blood loss • Continues to monitor pulse and blood pressure • Checks that urine output is 30 mL/hour or more • Continues with routine postpartum care, including breastfeeding of newborn

CLINICAL SIMULATION FOR THE MANAGEMENT OF THE ASPHYXIATED NEWBORN

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

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

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

Resources: Learning Guide for Newborn Resuscitation, newborn resuscitation model, newborn self-inflating bag and mask, suction equipment, blanket, towels

SCENARIO 1 (Information provided and questions asked by the trainer)	KEY REACTIONS/RESPONSES (Expected from participant)
<p>1. Mrs. C. has given birth to a 2,800 g baby boy after a prolonged second stage of labor. This was her second pregnancy. Her first baby is alive. At birth, the newborn is blue and limp and does not breathe.</p> <ul style="list-style-type: none"> • What do you do? • What precautions about suctioning do you observe, and why? 	<ul style="list-style-type: none"> • Dries the newborn rapidly, wraps it in a dry cloth/towel and moves it to a warm, flat surface • Places the newborn on its back with its head slightly extended to open the airway • Keeps the newborn wrapped or covered, except for the face and upper chest • Suctions the mouth and then the nose • Reassesses the newborn and if still not breathing starts ventilating • Places the mask on the newborn's face, covering the chin, mouth and nose • Forms a seal between the mask and the face • Squeezes the bag and checks seal by ventilating twice and observing if the chest rises • Simultaneously tells the mother what is happening and provides reassurance • If the newborn's chest is rising, ventilates at 40 breaths/minute for 20 minutes or until the newborn starts to breathe • Does not suction deeply, because this may cause the newborn to stop breathing or may cause its heart to stop
<p>2. You have started ventilating, but the newborn's chest does not rise.</p> <ul style="list-style-type: none"> • What will you do now? 	<ul style="list-style-type: none"> • Rechecks and corrects, if necessary, the position of the newborn • Repositions the mask on the newborn's face to improve the seal between mask and face • Squeezes the bag harder to increase ventilation pressure
<p>3. After repositioning the mask, the newborn's chest rises when ventilated.</p> <ul style="list-style-type: none"> • What will you do now? 	<ul style="list-style-type: none"> • Ventilates for 1 minute and then stops to quickly assess if the newborn is breathing
<p>4. After 1 minute of ventilating, the newborn is still not breathing. You remember that Mrs. C. received 100 mg pethidine 40 minutes prior to the birth.</p> <ul style="list-style-type: none"> • What will you do now? 	<ul style="list-style-type: none"> • Continues ventilating until spontaneous breathing begins • States that after vital signs have been established, will give naloxone 0.1 mg/kg body weight IV to the newborn
<p>Discussion Question 1: From which newborns would you withhold naloxone?</p>	<p>Expected Response: Newborns whose mother is suspected of having recently abused narcotic drugs</p>
<p>5. After 2 more minutes of ventilating, the newborn starts to cry.</p> <ul style="list-style-type: none"> • What will you do now? 	<ul style="list-style-type: none"> • Stops ventilating and observes for 5 minutes after crying stops • Determines that breathing is normal (30–60 breaths/minute) and that there is no indrawing of the chest and no grunting for 1 minute

SCENARIO 1 (continuation)	KEY REACTIONS/RESPONSES (continuation)
<i>Discussion Question 2: What would you do if the newborn is breathing but has severe indrawing of the chest?</i>	<i>Expected Response: Give oxygen by nasal catheter or prongs, if possible, and arrange transfer to a facility with special care for sick newborns.</i>
<p>6. The newborn is now breathing normally.</p> <ul style="list-style-type: none"> What ongoing care does the newborn need? 	<ul style="list-style-type: none"> Prevents heat loss by placing in skin-to-skin contact with mother or putting under radiant heater Examines the newborn and counts the number of breaths/minute Measures the newborn's axillary temperature Encourages the mother to breastfeed and provides reassurance (a newborn that requires resuscitation is at higher risk of developing hypoglycemia) Monitors closely for 24 hours

Section Three:

Presentation Graphics

EMERGENCY OBSTETRIC CARE COURSE PARTICIPANT'S HANDBOOK

PRESENTATION GRAPHICS

WEEK 1

Averting Maternal Death and Disability, Program Orientation
Changing Obstetric and Midwifery Practice
Human Rights and Emergency Obstetric Care
Universal Precautions in Infection Prevention
Rapid Initial Assessment
Management of Shock
Vaginal Bleeding in Early Pregnancy
Vaginal Bleeding in Later Pregnancy and Labor
Postabortion Care
Headaches, Blurred Vision, Convulsions, Loss of Consciousness or Elevated Blood Pressure
Normal Labor and Childbirth
Managing Labor Using the Partograph
Postpartum Care

WEEK 2

Vaginal Bleeding After Childbirth
Fever During and After Childbirth
Normal Newborn Care
Analgesia and Anesthesia in Emergency Obstetric Care
Operative Care Principles
Obstetric Surgery

WEEKS 4 AND 5

Improving Emergency Obstetric Care Through Criterion-Based Audit

Week 1

Averting
Maternal Death and Disability
(AMDD)

Program Orientation
A Tool for Self-Learning

This Presentation Covers:

- Causes of Maternal Death and Disability
- Evolution of Understanding of the Problem
- Central Role of Emergency Obstetric Care
- UN Process Indicators
- The AMDD Program

AMDD Program Orientation

2

What Is Maternal Death?

The death of a woman while she is pregnant

...or...

**within 42 days of the
termination of the pregnancy...**

**...From any cause related to
or aggravated by the pregnancy**

World Health Organization (WHO)

AMDD Program Orientation

3

WHO Estimates 515,000 Maternal Deaths Each Year

**MORE
THAN ONE WOMAN
DIES EVERY MINUTE**
from pregnancy-related causes

AMDD Program Orientation

4

What Is Maternal Disability?

**Short- or Long-term Illness
Caused by
Obstetric Complications**

The Most Serious Is Obstetric Fistula
*(An Abnormal Passage Between Vagina and Bladder or Rectum Often
Caused by Obstructed Labor When it is Not Treated with Cesarean Section)*

AMDD Program Orientation

5

What Do Women Die Of?

**They Die
of Obstetric Complications
that Need Not Be Fatal**

AMDD Program Orientation

6

DIRECT

OBSTETRIC COMPLICATIONS

- Hemorrhage 21%
- Unsafe Abortion 14%
- Eclampsia 13%
- Obstructed Labor 8%
- Infection 8%
- Other 11%

Account for about 3/4 of Maternal Deaths

AMDD Program Orientation

7

INDIRECT

OBSTETRIC COMPLICATIONS

- Are Due to Pre-existing Conditions, Including Malaria, Anemia and Hepatitis
- And Increasingly HIV/AIDS

Account for about 1/4 of Maternal Deaths

AMDD Program Orientation

8

Most Obstetric Complications
Occur Suddenly

Without Warning

If women do not receive
medical treatment on time,
they will probably suffer disability...

Or Die

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WHERE DO WOMEN DIE TODAY?

**99% of Maternal Deaths Today
Occur in
Africa, Asia and Latin America**

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**WHAT ABOUT
THE REST OF THE WORLD?**

**Maternal Mortality Used to Be Very High in Europe and the US and
so Was Infant Mortality.**

**In 1915,
Maternal and Infant Mortality Rates
Were as High in the US
as They Are in Africa Today**

AMDD Program Orientation11

WHAT HAPPENED NEXT?

**Better Living Conditions
Reduced Infant Mortality in the US
by over 40%
Between 1915 and 1933**

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**BUT
MATERNAL MORTALITY**

REMAINED THE SAME

**“The well known triad
of fever, haemorrhage and toxæmia predominated...”
(Irvine Loudon)**

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13

...Until the late 1930s

**There was then a
“steep and sustained decline
which has continued in most Western countries
at much the same rate
for over fifty years”
(Irvine Loudon)**

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**What Happened
to Reduce Maternal Mortality
in the West?**

**Effective treatment for obstetric complications
was developed and used,
e.g., antibiotics for infection,
blood transfusions for hemorrhage**

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Most Obstetric Complications

Can Neither
Be Predicted
Nor Prevented...

But if Women Receive Effective Treatment
in Time,

...Almost All Can Be Saved

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How Much Time Do We Have?

It is estimated that, if untreated, death occurs on average in:

2 hours	from Postpartum Hemorrhage
12 hours	from Antepartum Hemorrhage
2 days	from Obstructed Labor
6 days	from Infection

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**To Avert
Death and Disability...**

**...We Need to Ensure
that Women have Access To...**

**Emergency Obstetric Care
(EmOC)**

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**How
Can We Improve Access
to EmOC?**

**By making sure
health facilities provide the
services needed to
save women's lives.**

**Eight key functions “signal” a facility’s
ability to provide EmOC**

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EmOC Key Functions

Cover These Services:

- Antibiotics (intravenous or by injection)
- Oxytocic Drugs (ditto)
- Anticonvulsants (ditto)
- Manual Removal of Placenta
- Removal of Retained Products
- Assisted Vaginal Delivery
- Surgery (Cesarean Section)
- Blood Transfusion

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Basic and Comprehensive EmOC Facilities

BASIC

EmOC Facilities Provide the First Six Services

- Antibiotics (intravenous or by injection)
- Oxytocic Drugs (ditto)
- Anticonvulsants (ditto)
- Manual Removal of Placenta
- Removal of Retained Products
- Assisted Vaginal Delivery

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Basic and Comprehensive EmOC Facilities

COMPREHENSIVE

EmOC Facilities Provide All Eight Services

- Antibiotics (intravenous or by injection)
- Oxytocic Drugs (ditto)
- Anticonvulsants (ditto)
- Manual Removal of Placenta
- Removal of Retained Products
- Assisted Vaginal Delivery

- **Surgery (Cesarean Section)**
- **Blood Transfusion**

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THE GOOD NEWS

Not all these functions need hospitals and doctors

Well-trained nurses and midwives can perform most functions at Basic EmOC Facilities

An Important Point for Resource Poor Areas

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How Can We Tell We Are Making a Difference?

If we know we have provided enough EmOC...

...and if we know that these services are being used by women suffering obstetric complications...

WE CAN BE CONFIDENT THAT WE ARE SAVING WOMEN’S LIVES

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**How Do We Know
Which Women
Will Experience Complications?**

WE DON'T

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**...But we do know that of any
population of pregnant women at
least 15% will experience an
obstetric complication**

**...This is as true of pregnant
women in the US and Europe as of
women in Africa, Asia and Latin
America**

**Nobody Knows Why This Happens.
It is a Fact of Life.**

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**Can We Really Tell
if Services Are Functioning?**

...And Are Being Used?

**In 1991,
United Nations Children's Fund (UNICEF) and Columbia University
developed 6 Process Indicators to do just that.**

**These were issued by UNICEF/WHO/United Nation's Population Fund
(UNFPA) in 1997:**

**Guidelines for Monitoring Availability
and Use of Obstetric Services**

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Process Indicators

In general, process indicators show you the changes
in the conditions that lead to an outcome
(such as death or disability)

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THE 6 PROCESS INDICATORS

tell us about changes in:

Access to... Utilization of... and Quality of...
EmOC Services

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INDICATOR #1

For every 500,000 population,
there should be at least:

1 Comprehensive EmOC Facility
4 Basic EmOC Facilities

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INDICATOR #2
Geographical Distribution
of EmOC Facilities

EmOC Facilities should be well-
distributed to serve 500,000 people

Minimum: 1 Comprehensive and 4 Basic EmOC Facilities

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INDICATOR #3
Proportion of All Births
in EmOC Facilities

At Least 15%
of All Births in the Community
Should Take Place in EmOC Facilities

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INDICATOR #4

Met Need for EmOC Services

At Least 100% of Women Estimated
to Have Obstetric Complications Should
Be Treated in EmOC Facilities

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INDICATOR #5

**Cesarean Sections
as a Percentage of All Births**

Minimum: 5%

Maximum: 15%

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INDICATOR #6

Case Fatality Rate

**Proportion of Women
with Obstetric Complications
Admitted to a Facility
Who Die:**

Maximum Acceptable Level:

1%

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CALCULATING ALL 6 INDICATORS

- Gives you an indication of where the problems lie and where action is needed.
- Also, these indicators are sensitive to change: within months, you can know if your project is making a difference.

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ACCESS TO EmOC

Problems:

- Does Indicator # 1 show you need more EmOC facilities?
- Does Indicator # 2 show you need better distributed EmOC facilities?

Action:

- Most countries already have enough facilities; they may just need to upgrade services to ensure 1 Comprehensive and 4 Basic EmOC facilities per 500,000 population.

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UTILIZATION OF EmOC

Problems

- Does Indicator # 3 show that births in your EmOC facilities are fewer than 15% of all births in the population?
- Does Indicator # 4 show that “Met Need” is less than 100% (i.e., that not all women who experience obstetric complications are using EmOC facilities)?
- Does Indicator # 5 show that less than 5% of all births in the population are by Cesarean section?

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UTILIZATION OF EmOC

Action:

Collect More Information First

- Do you have enough qualified staff?
- Do you need to train staff on management of emergency obstetric complications?
- Does hospital management need improvement?
- What is the supply situation like?
- What is the equipment situation like?

If all the above is in place, conduct focus groups in the community to find out why women are not coming for care

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QUALITY OF EmOC

Problem:

Does Indicator # 6 show that more than 1% of women treated for obstetric complications are dying at your EmOC facilities?

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QUALITY OF EmOC

Action: Get More Information

- Find out if your EmOC facilities are really functioning
- Check staff numbers, skills, management capacity, supplies and equipment
- Lobby your health ministry for more support—and get the community to lobby with you

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**Any Country
Can Avert
Maternal Death and Disability
if it Makes Good EmOC**

**Available and Accessible
on Time**

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The AMDD Program

- The AMDD Program was established in 1999 at Columbia University's School of Public Health, Heilbrunn Department of Population and Family Health
- The AMDD Program is dedicated to improving the availability, quality and utilization of life-saving obstetric services in developing countries
- AMDD partners projects in close to 50 countries within a framework that links technical know-how with management capacity and human rights
- AMDD is funded by a generous grant from the Bill and Melinda Gates Foundation

AMDD Partners

Project Partners:

- UNICEF: projects in Bangladesh, Bhutan, India, Nepal, Pakistan and Sri Lanka
- UNFPA: projects in India, Morocco, Mozambique and Nicaragua
- Regional Prevention of Maternal Mortality (RPMM) Network: teams and projects in 19 sub-Saharan African countries
- CARE: projects in Ethiopia, Rwanda, Tanzania, Peru and Tajikistan
- Save the Children: projects in Mali and Vietnam
- Reproductive Health for Refugees (RHR) Consortium: projects in 12 countries

AMDD Partners

Technical Partners:

- Family Health International
- John Snow International
- Indian Institute of Management at Ahmedabad (IIMA)
- JHPIEGO
- EngenderHealth (formerly AVSC International)

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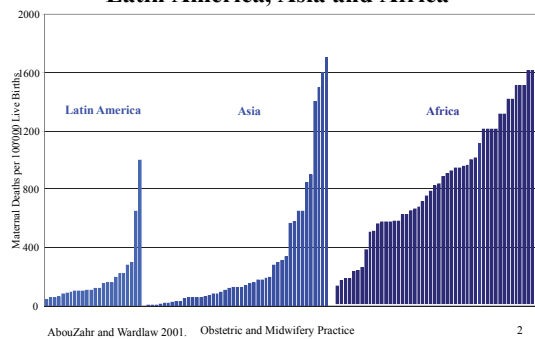
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Changing Obstetric and Midwifery Practice

Managing Complications in Pregnancy and Childbirth

Maternal Mortality Ratios by Country in Latin America, Asia and Africa



Maternal Mortality: Scope of Problem

- 180–200 million pregnancies per year
- 75 million unwanted pregnancies¹
- 50 million induced abortions²
- 20 million unsafe abortions (same as above)
- 600,000 maternal deaths (1 per min.)
- 1 maternal death=30 maternal morbidities

¹ Sadik 1997.
² WHO 1998.

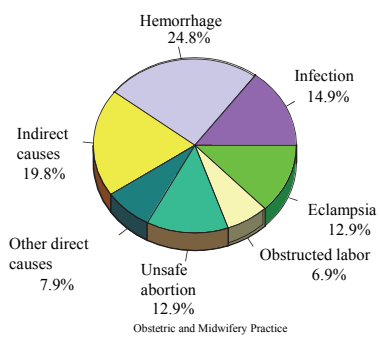
Newborn Mortality: Scope of Problem

- 3 million newborn deaths (first week of life)
- 3 million stillbirths

Obstetric and Midwifery Practice

4

Causes of Maternal Death



Obstetric and Midwifery Practice

5

Interventions to Reduce Maternal Mortality

Historical review

- Traditional birth attendants
- Antenatal care
- Risk screening

Current approach

- Skilled provider at childbirth
- Emergency Obstetric Care (EmOC)



Obstetric and Midwifery Practice

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Interventions: Antenatal Care

- Antenatal care clinics started in US, Australia, Scotland between 1910–1915
- New concept—screening healthy women for signs of disease
- By 1930s large number (1,200) antenatal care clinics opened in UK
- No reduction in maternal mortality
- But, widely used as a maternal mortality reduction strategy in 1980s and early 1990s
- Is antenatal care important? YES!!
- Early detection of problems and birth preparation

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Interventions: Risk Screening

- Disadvantages
- Very poorly predictive
- Costly—removes woman to maternity waiting homes
- If risk-negative, gives false security
- Conclusion: Cannot identify those at risk of maternal mortality—every pregnancy is at risk

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Why Change the Focus of Antenatal Care

- Every pregnancy faces risks
- It is almost impossible to predict accurately which woman will face life-threatening complications
- Antenatal risk assessment has not reduced maternal mortality
- Many antenatal routines have not been effective in preventing complications

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Risk Approach Does Not Work

- Large number of women classified as “high risk” never develop any complications
- Most women who develop complications do not have risk factors and were classified as “low risk”

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Implications of Risk Approach

- Women classified as “low risk” have a false sense of security
- Women classified as “high risk” undergo unnecessary inconvenience and cost
- Health systems overburdened by unnecessary management of “high risk” mothers and resources for dealing with actual emergencies reduced

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Interventions: Traditional Birth Attendants

Advantages

- Community-based
- Sought out by women
- Low tech
- Teach clean childbirth

Disadvantages

- Technical skills limited
- May keep women away from life-saving interventions due to false reassurance

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Maternal Mortality Reduction Sri Lanka, 1940–1985

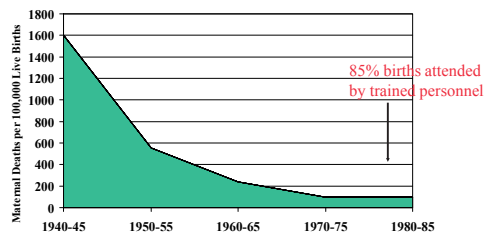
Health System Improvements:

- Introduction of system of health facilities
- Expansion of midwifery skills
- Decreased use of home childbirth and births by untrained birth attendants
- Spread of family planning

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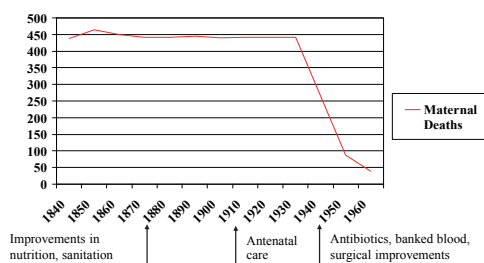
Maternal Mortality Reduction Sri Lanka, 1940–1985



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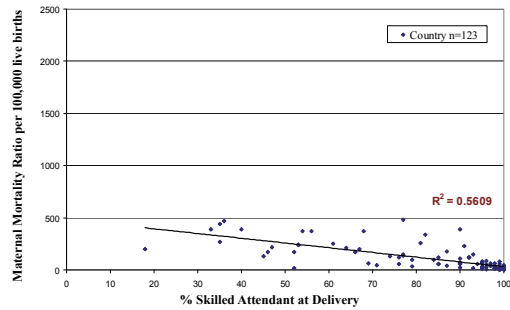
Maternal Mortality: UK 1840–1960



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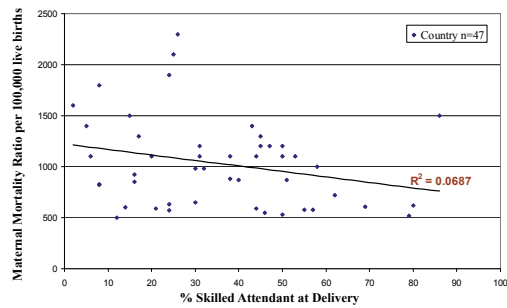
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Relationship between Skilled Attendant at Delivery and MMR for countries with MMR<500



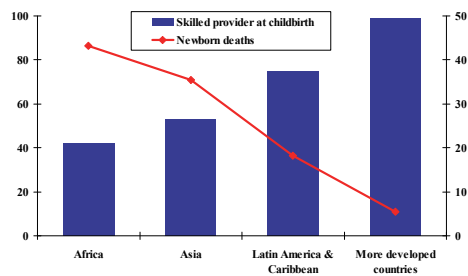
Source: Safe Motherhood Initiative website and *Maternal Mortality in 1995: Estimates developed by WHO, UNICEF, UNFPA 2001*.
Obstetric and Midwifery Practice 16

Relationship between Skilled Attendant at Delivery and MMR for countries with MMR>500



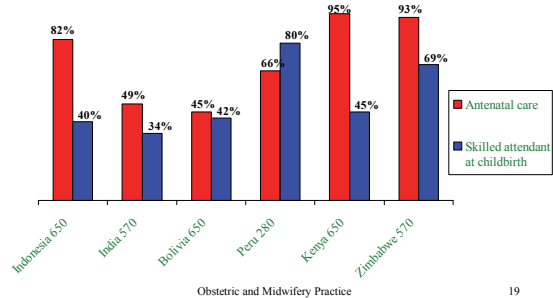
Source: Safe Motherhood Initiative website and *Maternal Mortality in 1995: Estimates developed by WHO, UNICEF, UNFPA 2001*.
Obstetric and Midwifery Practice 17

Good Quality Maternity Services Will Save the Lives of Newborns



Abouzahr and Wardlaw 2001. Obstetric and Midwifery Practice 18

Care During Pregnancy and Childbirth in Asia, Africa and Latin America (selected countries)



19

Interventions: Skilled Provider at Childbirth

- Has relevant training, range of skills
- Recognizes onset of complications
- Observes woman, monitors newborn
- Performs essential basic interventions
- Refers mother and newborn to higher level of care if complications arise requiring further interventions
- Has patience and empathy

WHO 1999.

Obstetric and Midwifery Practice

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Interventions: Skilled Provider at Childbirth

- Proven effective
 - Malaysia: basic maternity services, 320 → 157
 - Cuba: national priority, 118 → 31
 - China: facility-based childbirth 1,500 → 50
- Malaysia vs. Indonesia:
 - Midwifery skills (2 years) vs. nursing and midwifery education (4 years)

Obstetric and Midwifery Practice

21

Solutions for Maternal and Newborn Survival

Identifying the problem: Maternal and newborn death

- Delay in decision to seek care
 - Lack of understanding of complications
 - Acceptance of maternal death
 - Low status of women
 - Socio-cultural barriers to seeking care
- Delay in reaching care
 - Mountains, islands, rivers—poor organization
- Delay in receiving care
 - Supplies, personnel, finances
 - Poorly trained personnel with punitive attitude

Embracing the solution: Maternal and newborn survival

- Community involvement and social mobilization
 - Mother-friendly services
 - Community education
- Taking care to the community
 - Skilled provider at every birth
 - EmOC
 - Innovative community programs
- Improved standards of care
 - Developing guidelines
 - Preservice training
 - Performance improvement strategies
 - Periodic audits, e.g., near miss audits

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Changing Established Practices

- Experience
- Expert opinion
- Evidence
- Expectation

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Evidence-Based Medicine

Systematic, scientific and explicit use of current best evidence in making decisions about the care of individual patients

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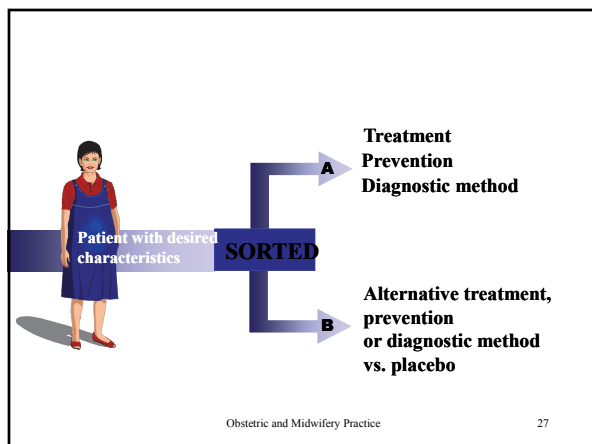
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So What Has Changed?

- Developments in clinical research
- Developments in methodology
 - Meta-analysis
 - Recognition of bias in traditional reviews and expert opinions
- Explosion in medical literature
 - Methodological papers
 - Electronic databases

Levels of Evidence and Grades of Recommendations

Grade of Recommendation	Level of Evidence	Interventions
A	1a	Systematic review of randomized controlled trials (RCTs)
	1b	Individual RCT
B	2a	Systematic review of cohort studies
	2b	Individual cohort study
	3a	Systematic review of case-control studies
	3b	Individual case-control study
C	4	Case series
D	5	Expert opinion without explicit critical appraisal or based on physiology or bench research



Final Result

Group A Number or % without morbidity
Number or % with collateral effects

Group B Number or % without morbidity
Number or % with collateral effects

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Interpretation of Results Calcium Supplementation to Prevent Gestational Hypertension

Calcium
57 / 579 9.8%

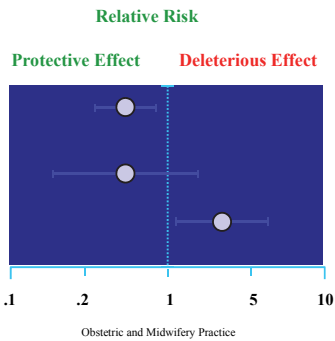
Placebo
87 / 588 14.8%

RR = 0.67 (0.49–0.91)
Reduction in prevalence by 33%
(variable effect between 51%–9%)

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Graphic Expression

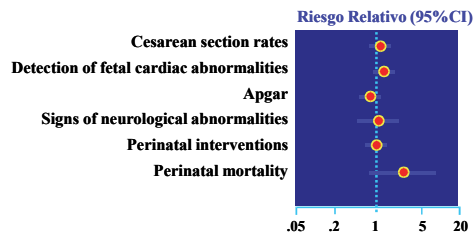


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Antenatal Fetal Monitoring

4 studies 1,579 patients

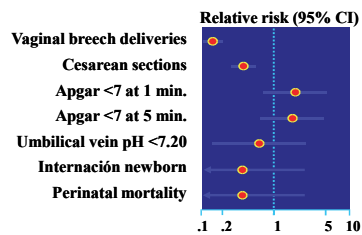


Obstetric and Midwifery Practice

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External Cephalic Version More than 37 Weeks

6 studies 712 women



Obstetric and Midwifery Practice

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Beneficial Forms of Care

- Active management of the third stage of labor (decreases blood loss after childbirth)
- Antibiotic treatment of asymptomatic bacteriuria in pregnancy (prevents pyelonephritis and reduces the incidence of preterm childbirth)
- Antibiotic prophylaxis for women undergoing cesarean section (reduces postoperative infectious morbidity)

Obstetric and Midwifery Practice

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Beneficial Forms of Care (continued)

- External cephalic version at term (decreases incidence of breech delivery and reduces cesarean section rates)
- Magnesium sulfate therapy for women with eclampsia (more effective than diazepam, etc.) for the control of convulsions
- Population-based iodine supplementation in severely iodine deficient areas (prevents cretinism and infant deaths due to iodine deficiency)
- Routine iron and folic acid supplementation (reduces the incidence of maternal anemia at childbirth or at 6 weeks postpartum)

Obstetric and Midwifery Practice

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Management of Hypertension in Pregnancy

Treatment Option	Status of Scientific Evidence
Bed Rest (at home or in hospital)	No evidence of value
Anti-hypertensive medication for <i>mild</i> hypertension (e.g., betablockers and methyldopa)	Shown to be beneficial. Prevents further increases in blood pressure. Reduces number of hospital admissions, inductions and emergency childbirths.
Use of anti-platelet agents (e.g., aspirin) to prevent pre-eclampsia and intrauterine growth retardation (IUGR)	Initial results are promising, but larger studies are not promising.
Anticonvulsants to prevent occurrence of eclampsia	Current evidence shows no benefit. Multicenter studies are under way.
Diuretics	No clear evidence of benefit. May be harmful.

Obstetric and Midwifery Practice

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Magnesium Sulfate vs. Diazepam: Recurrence of Convulsions

	Convulsions	No Convulsions	
Magnesium Sulfate	71	547	618
Diazepam	160	458	618

RR 0.45
95% CI 0.35–0.58

No differences in maternal morbidity and borderline decrease in maternal mortality

Duley and Henderson-Smith 2000.

Obstetric and Midwifery Practice

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Active vs. Physiological Management: Postpartum Hemorrhage

	Active Management	Physiologic Management	OR and 95% CI
Bristol Trial	50/846 (5.9%)	152/849 (17.9%)	3.13 (2.3–4.2)
Hinchingbrooke Trial	51/748 (6.8%)	126/764 (16.5%)	2.42 (1.78–3.3)

Prendiville et al 1988,
Rogers et al 1998.

Obstetric and Midwifery Practice

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Active vs. Physiological Management: Results

		Active Management	Physiologic Management	OR and 95% CI
Duration third stage (median)	Bristol	5 minutes	15 minutes	Not done
	Hinchingbrooke	8 minutes	15 minutes	Not done
Third stage > 30 min.	Bristol	25 (2.9%)	221 (26%)	6.42 (4.9–8.41)
	Hinchingbrooke	25 (3.3%)	125 (16.4%)	4.9 (3.22–7.43)
Blood transfusion	Bristol	18 (2.1%)	48 (5.6%)	2.56 (1.57–4.19)
	Hinchingbrooke	4 (0.5%)	20 (2.6%)	4.9 (1.68–14.25)
Therapeutic oxytocics	Bristol	54 (6.4%)	252 (29.7%)	4.83 (3.77–6.18)
	Hinchingbrooke	24 (3.2%)	161 (21.1%)	6.25 (4.33–9.96)

Obstetric and Midwifery Practice

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Forms of Care of Unknown Effectiveness

- Antibiotic prophylaxis for uncomplicated incomplete abortion to reduce postabortion complications
- Anticonvulsant therapy to women with pre-eclampsia, the prevention of eclampsia
- Routine symphysio-fundal height measurements during pregnancy to help detect IUGR
- Routine topical antiseptic or antibiotic application to the umbilical cord to prevent sepsis and other illness in the neonate

Obstetric and Midwifery Practice

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Forms of Care Likely to Be Ineffective

- Use of antibiotics in preterm labor with intact membranes in order to prolong pregnancy and reduce preterm birth
- Early amniotomy during labor to reduce cesarean section rates
- External cephalic version before term to reduce incidence of breech delivery
- Routine early pregnancy ultrasound to decrease perinatal mortality

Forms of Care Likely to Be Harmful

- Routine episiotomy (compared to restricted use of episiotomy) to prevent perineal/vaginal tears
- Diazoxide for rapid lowering of blood pressure during pregnancy (associated with severe hypotension)
- Forceps extraction instead of vacuum extraction for assisted vaginal delivery when both are applicable. Forceps delivery is associated with increased incidence of maternal genital tract trauma
- Using diazepam or phenytoin to prevent further fits in women with eclampsia when magnesium sulfate is available

Antenatal Care Practices

Practices not recommended

- High risk approach
- Routine antenatal measurement
 - Maternal height to screen for cephalopelvic disproportion
 - Determining fetal position before 36 weeks
 - Testing for ankle edema to detect pre-eclampsia
- Bed rest for threatened abortion, uncomplicated twins, mild pre-eclampsia
- External cephalic version before 37 weeks

Recommended practices

- Birth preparedness counseling
- Complication readiness planning
- Iron and folate supplementation
- Tetanus immunization
- Reduced frequency of antenatal visits by skilled provider to maintain normal health and detect complications
- In selected populations
 - Iodine supplementation in severely iodine deficient areas
 - Intermittent presumptive treatment for malaria
- External cephalic version at term

Essential Care Series



Obstetric and Midwifery Practice

43

Promoting a Culture of Quality Care

- Good quality care saves time and money
 - Partograph
 - Manual vacuum aspiration/postabortion care
 - Active management of third stage
- Team responsibility:
 - Providers
 - Supervisors
 - Community

Obstetric and Midwifery Practice

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Obstetric and Midwifery Practice

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Human Rights and Emergency Obstetric Care

Why Use a Human Rights Approach to Reduce Maternal Mortality?

- Human rights are international standards that governments have accepted as binding upon them and in their countries
- Human rights identify the forces that keep unacceptable things from changing
- Human rights means using a different vision of human well-being to call for the re-arrangements of power necessary for change

Human Rights and EmOC

2

Examples of Human Rights-Related Problems Before and During Pregnancy

- Unwanted pregnancy due to lack of access to contraception
- Unsafe abortion
- Complications during pregnancy
 - Delay in seeking care: Lack of information about when and where to go for care, low status of women, poverty
 - Delay in getting to the appropriate facility: Poor transportation and communication infrastructure
 - Delay in receiving care: Attitudes of healthcare providers, expensive drugs, equipment and supplies

Human Rights and EmOC

3

Basic Principles and Values of a Human Rights Approach

Every person, whether woman, man, or child, deserves to be treated with dignity

Dignity in health is not only about preventing death and disease, but also about the way individuals, communities and societies obtain and maintain a standard of health

How to Apply Human Rights Principles to Maternal Mortality Reduction

Right to Health: Every person has “the right to the highest attainable standard of physical and mental health.”—Article 12, International Covenant on Economic, Social and Cultural Rights

Realizing the Right: To comply with the obligation to fulfill the right to health, states must take “appropriate measures” toward the “progressive realization” of the right, and must do so to the “maximum of available resources”

Appropriate measure: Emergency obstetric care

Using Human Rights Principles in Maternal Mortality Programs

Human rights can affect health programs on multiple levels

- Individual: Change the way patients and providers are treated
- Institutional: Help facility function better through community involvement
- Systemic: Address global influential factors

Human Rights in the Clinical Setting

- Availability of human resources, equipment and drugs
- How services are delivered:
 - Dignity: Privacy and respect
 - Non-discrimination: Eliminating social and cultural barriers that limit access to care

Identify which actions violate these rights

Human Rights and EmOC

7

AMDD Approach to Human Rights

- Identify the human rights laws and the principles and values that underlie them
- Ask how these laws/principles/values would change the way that a facility functions
- Identify concrete actions needed to make such functioning possible

Human Rights and EmOC

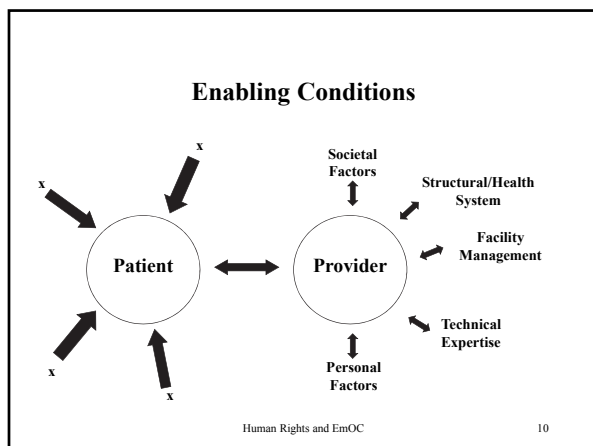
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“Whole-site” Approach

- All human interactions in the facility matter
- How do we create the enabling conditions that make respect for human rights possible?
- Focus on BOTH patients AND providers

Human Rights and EmOC

9



Universal Access to Emergency Obstetric Care

Fulfilling the right to health means working progressively toward universal access to emergency obstetric care

Human Rights and EmOC 11

Role Play

- Group 1: Skit of an “ideal” interaction between patient and provider(s) showing respect for human rights
- Group 2: Skit of an interaction between patient and provider(s) in which, from a human rights perspective, everything goes wrong

Human Rights and EmOC 12

Universal Precautions in Infection Prevention

Managing Complications in Pregnancy and Childbirth

Universal Precautions in Infection Prevention

Managing Complications in Pregnancy and Childbirth

Session Objectives

- To discuss essential elements of universal precautions for infection prevention in emergency obstetric care
- To discuss best universal precaution practices in emergency obstetric care

Infection Prevention 2

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Infection Prevention 2

Universal Precautions in Infection Prevention: Objectives

- To prevent major infections when providing services
- To minimize the risk of transmitting serious infections (e.g., hepatitis B and C and HIV) from or to:
 - Clients
 - Healthcare providers
 - Other staff, including cleaning and housekeeping personnel

Infection Prevention

3

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- Infection Prevention
- 3

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Infection Prevention

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Infection Prevention

3

Basic Principles in Universal Precautions

- Consider every person (client or staff) potentially infectious
- Wash hands, the most practical procedure for preventing cross-contamination (person to person)
- Wear gloves before touching:
 - Anything wet
 - Broken skin
 - Mucous membranes
 - Blood or other body fluids (secretions or excretions)
 - Soiled instruments and other items

Infection Prevention

4

Basic Principles in Universal Precautions (continued)

- Use physical barriers (protective goggles, face masks and aprons) if splashes and spills of any body fluids (secretions or excretions) are anticipated
- Use safe work practices:
 - Do not recap or bend needles
 - Pass sharp instruments safely
 - Dispose of medical waste properly
- Isolate patients only if secretions (airborne) or excretions (urine or feces) cannot be contained
- Process instruments and other items using recommended infection prevention practices

Infection Prevention

5

Handwashing

- Handwashing may be the single most important procedure in preventing infection
- Wash hands:
 - Before and after examining any client (direct contact)
 - After removing gloves because gloves may have holes in them
 - After exposure to blood or any body fluids (secretions or excretions), even if gloves were worn

Infection Prevention

6

Routine Handwashing

Steps:

- Use a plain or antiseptic soap
- Vigorously rub lathered hands together for 10 to 15 seconds
- Rinse with clean running water from a tap or bucket
- Dry hands with a clean towel or air dry them

Infection Prevention

7

Protective Barriers

- Wear gloves:
 - When performing a procedure in the clinic or operating room
 - When handling soiled instruments, gloves and other items
 - When disposing of contaminated waste items (cotton, gauze or dressings)
- Use a separate pair of gloves for each woman to avoid cross contamination

Infection Prevention

8

Protective Barriers (continued)

- Wear protective goggles, face masks and aprons:
 - During all childbirths
 - If splashes and spills of any body fluids are likely

Infection Prevention

9

Handling Sharp Instruments and Needles

- Leave sharp instruments or needles only in “safe zones”
- Tell other workers before passing sharps
- Use each needle and syringe only once
- Do not recap, bend or break needles before disposal
- Dispose of needles and syringes in a puncture-proof container

Infection Prevention

10

Safe Waste Disposal: Objectives

- To prevent spread of infection to clinic personnel who handle waste
- To prevent spread of infection to local community
- To protect those who handle waste from accidental injury

Infection Prevention

11

Safe Waste Disposal: Practices

- Wear utility gloves while handling contaminated waste
- Place contaminated items (gauze or cotton) in leakproof covered containers or plastic bag
- Dispose of all sharp items in puncture-proof containers
- Dispose of contaminated solid waste by incineration or burial
- Wash hands, gloves and containers after disposal of infectious waste

Infection Prevention

12

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Rapid Initial Assessment

Managing Complications in Pregnancy and Childbirth

Session Objectives

- To discuss best practices for the initial assessment of obstetrical patients
- To review implementation of a rapid assessment scheme

Rapid Initial Assessment

2

Definition

A quick check of a woman's condition when she presents with a problem to rapidly determine her degree of illness

Rapid Initial Assessment

3

Assess Condition

- Airway and breathing
- Circulation (signs of shock)
- Vaginal bleeding (early or late pregnancy or after childbirth)
- Unconscious or convulsing
- Dangerous fever
- Abdominal pain

Rapid Initial Assessment

4

Assess Airway and Breathing

- Danger signs:
 - Look for:
 - Cyanosis
 - Respiratory distress
 - Examine:
 - Skin: Pallor
 - Lungs: Wheezing or rales
- Consider:
 - Severe anemia
 - Heart failure
 - Pneumonia
 - Asthma

Rapid Initial Assessment

5

Assess Circulation

- Examine:
 - Skin: Cool and moist
 - Pulse: Fast (110 beats/min. or more) and weak
 - Blood pressure: Low (systolic less than 90 mm Hg)
- Consider shock even if blood pressure is normal

Rapid Initial Assessment

6

Assess Vaginal Bleeding

- Ask if:
 - Pregnant and length of gestation
 - Recently given birth
 - Placenta delivered
- Examine:
 - Vulva: Amount of bleeding, placenta retained, obvious tears
 - Uterine fundus: Atony
 - Bladder: Full

DO NOT DO VAGINAL EXAMINATION AT THIS STAGE

Rapid Initial Assessment

7

Assess Vaginal Bleeding (continued)

Consider:

Early Pregnancy	Late Pregnancy	Postpartum
Abortion	Abruptio placenta	Atonic uterus
Ectopic pregnancy	Ruptured uterus	Tears of cervix and vagina
Molar pregnancy	Placenta previa	Retained placenta
		Inverted uterus

Rapid Initial Assessment

8

Assess Unconsciousness or Convulsions

- Danger signs
 - Ask if pregnant and length of gestation
 - Examine:
 - Blood pressure: Diastolic 90 mm Hg or more
 - Temperature: 38°C or more
- Consider:
 - Eclampsia
 - Malaria
 - Epilepsy
 - Tetanus

Rapid Initial Assessment

9

Assess Dangerous Fever

- **Danger signs:**
 - **Ask if:**
 - Weak, lethargic
 - Frequent, painful urination
 - **Examine:**
 - Temperature: 38°C or more
 - Unconscious
 - Neck: Stiffness
 - Lungs: Shallow breathing, consolidation
 - Abdomen: Severe tenderness
 - Vulva: Purulent discharge
 - Breasts: Tenderness

Rapid Initial Assessment

10

Assess Dangerous Fever (continued)

- Consider:
- Urinary tract infection
 - Malaria
 - Metritis
 - Pelvic abscess
 - Peritonitis
 - Breast infection
 - Complications of abortion
 - Pneumonia

Rapid Initial Assessment

11

Assess Abdominal Pain

- **Danger signs:**
 - Ask if pregnant and length of gestation
 - **Examine:**
 - Temperature: 38°C or more
 - Pulse: 110 beats/min. or more
 - Blood pressure: Systolic less than 90 mm Hg
 - Uterus: State of pregnancy

Rapid Initial Assessment

12

Assess Abdominal Pain (continued)

Consider:

Obstetrical Causes

- Ectopic pregnancy
- Possible term or preterm labor
- Amnionitis
- Abruptio placenta
- Ruptured uterus

Nonobstetrical Causes

- Ovarian cyst
- Appendicitis

Rapid Initial Assessment

13

Signs and Symptoms that Require Prompt Treatment

- Blood-stained mucus discharge with palpable contractions
- Ruptured membranes
- Pallor
- Weakness
- Fainting
- Severe headaches
- Blurred vision
- Vomiting
- Fever
- Respiratory distress

Rapid Initial Assessment

14

Implementing a Rapid Initial Assessment Scheme

- Train ALL staff to react in agreed upon fashion when woman arrives at facility with obstetric emergency or pregnancy complication
- Practice clinical drills or emergency drills with staff to ensure readiness at all levels
- Ensure that access is not blocked, equipment is in working order and staff is properly trained to use equipment

Rapid Initial Assessment

15

Implementing a Rapid Initial Assessment Scheme (continued)

- Develop norms and protocols to distinguish a real emergency and how to react immediately
- Clearly identify women in waiting room who need prompt or immediate attention
- Agree on schemes by which women with emergencies can be exempted from payment, at least temporarily

Management of Shock

Managing Complications in Pregnancy and Childbirth

Session Objectives

- Best practices for management of shock
- Evidence for replacement fluids
- Best practices for use of blood/blood products

Management of Shock

2

Definition of Shock

- Failure of circulatory system to maintain adequate perfusion of vital organs
- LIFE THREATENING
- REQUIRES IMMEDIATE AND INTENSIVE TREATMENT

Management of Shock

3

When to Expect or Anticipate Shock

- Bleeding:
 - Early pregnancy (e.g., abortion, ectopic pregnancy, molar pregnancy)
 - Late pregnancy or labor (e.g., placenta previa, abruptio placenta, ruptured uterus)
 - After childbirth (e.g., ruptured uterus, uterine atony)
- Infection (e.g., unsafe or septic abortion, amnionitis, metritis)
- Trauma (e.g., injury to uterus or bowel during abortion, ruptured uterus)

Management of Shock

4

Symptoms and Signs of Shock

- Fast, weak pulse (110 beats/min. or more)
- Low blood pressure (systolic less than 90 mm Hg)
- Pallor (inner eyelids, palms, around mouth)
- Sweatiness or cold clammy skin
- Rapid breathing (30 breaths/min. or more)
- Anxiousness, confusion, unconsciousness
- Low urine output (less than 30 mL/hour)

Management of Shock

5

Immediate Management of Shock

- Shout for help—mobilize personnel
- Monitor vital signs
- Position woman onto her side
- Keep woman warm
- Elevate legs
- Collect blood for testing

Management of Shock

6

Specific Management

- Start IV infusion (two if possible)
 - Infuse fluids at a rate of 1 L in 15–20 min., then give at least 2 L of fluids in first hour
 - If shock results from bleeding, more rapid infusion is necessary
- If peripheral vein cannot be cannulated, perform venous cutdown
- Monitor vital signs
- Catheterize bladder
- Give oxygen at 6–8 L/min.
- Blood work: Hemoglobin, cross-match
- Assess clotting status with bedside clotting test
- Manage specific cause

Management of Shock

7

Manage Specific Cause: Heavy Bleeding

- Stop bleeding (use oxytocics, uterine massage, bimanual compression, aortic compression, surgery)
- Give IV fluids
- Transfuse as soon as possible
- Manage cause of bleeding:
 - First 22 weeks of pregnancy: Abortion, ectopic or molar pregnancy
 - After 22 weeks or during labor but before childbirth: Placenta previa, abruptio placenta or ruptured uterus
 - After childbirth: Ruptured uterus, uterine atony, genital tract tears, retained placenta or placental fragments
- Reassess condition

Management of Shock

8

Transfusion

Risks of transfusion of whole blood or plasma:

- Transfusion reaction (skin rash to anaphylactic shock)
- Transmission of infectious agents (HIV, hepatitis B and C, syphilis, Chagas disease)
- Bacterial infection if blood is improperly manufactured or stored
- Risks increase with increase in volume transfused

Management of Shock

9

Transfusion Risks

To minimize risk of transfusion:

- Effective donor selection
- Screening for infectious agents
- Quality assurance programs
- High quality blood grouping, compatibility testing, component separation, storage and transport
- Appropriate use of blood and blood products

Management of Shock

10

Principles of Clinical Transfusion

- Transfusion is only one element of managing woman
- Follow national guidelines for decision to transfuse, weighing:
 - Risks and benefits for individual patient
 - Expected degree of improvement
 - Indications for transfusion
 - Alternative fluids for resuscitation
 - Ability to monitor patient

Management of Shock

11

Monitoring the Transfused Woman

- Monitor the woman before transfusion, at onset, 15 min. after start, every hour and at 4 hour intervals after completing the transfusion
- Monitor:
 - General appearance
 - Temperature
 - Pulse
 - Blood pressure
 - Respiration
 - Fluid balance
- Note volume infused, unique donation numbers, adverse effects

Management of Shock

12

Management of Transfusion Reaction

- Stop infusion
- Continue IV fluids
- Minor adverse effects:
 - Give promethazine 10 mg by mouth

Management of Shock

13

Managing Prophylactic Shock from Mismatched Blood Transfusion

- Anaphylactic shock, give:
 - Adrenaline 1:1000 solution 0.1 mL in 10 mL normal saline IV slowly
 - Promethazine 10 mg IV
 - Hydrocortisone 1 g IV every 2 hours as needed
 - Aminophylline 250 mg in 10 mL normal saline IV slowly for bronchospasm
- Monitor renal, pulmonary and cardiac function
- Transfer to referral center when stable
- Document and report reaction

Management of Shock

14

Alternatives to Transfusion

- Solutions with similar concentrations to plasma:
 - Crystalloid
 - Colloid

DEXTROSE SOLUTIONS ARE POOR REPLACEMENT FLUIDS. DO NOT USE UNLESS THERE IS NO OTHER ALTERNATIVE. DO NOT USE PLASMA OR PLAIN WATER.

Management of Shock

15

Prevention of Hemorrhagic Shock

Minimize wastage of blood:

- Use best anesthesia and surgical technique to minimize blood loss at surgery
- Autotransfuse during procedures where appropriate
- Active management of third stage of labor
- Management of postpartum hemorrhage

Management of Shock

16

Manage Specific Cause: Infection

- If facilities available, collect samples of blood, urine, pus for culture
- Give antibiotics to cover aerobic and anaerobic infections until fever-free for 48 hours (DO NOT GIVE BY MOUTH):
 - Penicillin G 2 million units OR ampicillin 2 g IV every 6 hours
 - PLUS gentamicin 5 mg/kg body weight IV every 24 hours
 - PLUS metronidazole 500 mg IV every 8 hours
- Reassess condition

Management of Shock

17

Manage Specific Cause: Trauma

- Prepare for surgical intervention

Management of Shock

18

Shock: Reassessment

- Reassess response within 30 min. to determine improvement
 - Stabilizing pulse (rate of 90 beats/min. or less)
 - Increasing blood pressure (systolic 100 mm Hg or greater)
 - Improved mental status (less confusion or anxiety)
 - Increasing urine output (30 mL/hour or more)
- If improving:
 - Adjust IV infusion rate to 1 L in 6 hours
 - Continue management for cause of shock
- If not improving or stabilizing, further management required

Management of Shock

19

Shock: Further Management

- Continue IV infusion at 1 L in 6 hours and oxygen at 6–8 L/min.
- Monitor closely
- Perform lab tests for hematocrit, blood grouping, Rh typing and cross-match
- If facilities available, check serum electrolytes, serum creatinine and blood pH

Management of Shock

20

Vaginal Bleeding in Early Pregnancy

Managing Complications in Pregnancy and Childbirth

Session Objectives

- To review best practices for diagnosis and management of vaginal bleeding in early pregnancy
- To review strategies for diagnosing ectopic pregnancy

Vaginal Bleeding in Early Pregnancy

2

Definition

Vaginal bleeding that occurs during first 22 weeks of pregnancy

Vaginal Bleeding in Early Pregnancy

3

General Management of Bleeding in Early Pregnancy

- Evaluate woman's condition, including vital signs
- If shock suspected, immediately begin treatment
- If woman is in shock, consider ruptured ectopic pregnancy
- Infuse IV fluids

Diagnosis of Bleeding in Early Pregnancy

- Threatened abortion
- Inevitable abortion
- Incomplete abortion
- Complete abortion
- Ectopic pregnancy
- Molar pregnancy

Management of Threatened Abortion

- Medical treatment usually not necessary
- Advise woman to avoid strenuous activity and sexual intercourse; bed rest not necessary
- If bleeding stops, followup in antenatal clinic. Reassess if bleeding recurs
- If bleeding persists, assess for fetal viability (pregnancy test/ultrasound) or ectopic pregnancy (ultrasound). Persistent bleeding, particularly in the presence of uterus larger than expected may indicate twins or molar pregnancy

Do not give medications such as hormones (e.g., estrogens or progestins) or tocolytic agents (e.g., salbutamol or indomethacin) because they will not prevent miscarriage.

Management of Inevitable Abortion

- If pregnancy is less than 16 weeks, plan for evacuation of uterine contents. If evacuation not immediately possible:
 - Give ergometrine 0.2 mg IM (repeated after 15 min. if necessary) OR misoprostol 400 µg by mouth (repeated once after 4 hours if necessary)
 - Arrange for evacuation as soon as possible
- If pregnancy is greater than 16 weeks:
 - Await spontaneous expulsion of products of conception and then evacuate uterus to remove any remaining products of conception
 - If necessary, infuse oxytocin 40 units in 1 L IV fluids at 40 drops/min. to help expulsion of products of conception
- Ensure followup after treatment

Vaginal Bleeding in Early Pregnancy

7

Management of Incomplete Abortion if Pregnancy is Less than 16 Weeks

- If bleeding light to moderate, use fingers or ring (or sponge) forceps to remove products of conception protruding through cervix
- If bleeding heavy, evacuate uterus:
 - Manual vacuum aspiration (MVA) is preferred method, evacuation by sharp curettage should only be done if MVA not available
 - If evacuation not immediately possible, give ergometrine 0.2 mg IM (repeated after 15 min. if necessary) OR misoprostol 400 µg orally (repeated once after 4 hours if necessary)
- Ensure followup of woman after treatment

Vaginal Bleeding in Early Pregnancy

8

Management of Incomplete Abortion if Pregnancy is Greater than 16 Weeks

- Infuse oxytocin 40 units in 1 L IV fluids at 40 drops/min. until expulsion of products of conception occurs
- Evacuate any remaining products of conception from uterus by dilatation and curettage
- If necessary, give misoprostol 200 µg vaginally every 4 hours until expulsion, but do not administer more than 800 µg
- Ensure followup of woman after treatment

Vaginal Bleeding in Early Pregnancy

9

Management of Complete Abortion

- Evacuation of the uterus usually not necessary
- Observe for heavy bleeding
- Ensure followup of woman after treatment

Followup After Abortion

- Tell woman that spontaneous abortion is common
- Reassure woman that chances for subsequent successful pregnancy are good unless there has been sepsis or unless cause of abortion is identified that may have an adverse effect on future pregnancies (rare)
- Encourage her to delay next pregnancy until completely recovered
- Provide counseling for women who have had unsafe abortion. If pregnancy not desired, certain contraceptive methods can be started immediately (within 7 days) if:
 - There are no severe complications requiring further treatment
 - Woman receives adequate counseling and help in selecting most appropriate contraceptive method

Contraceptive Methods After Abortion

Method	Advise to Start
Hormonal (pills, injections, implants)	Immediately
Condoms	Immediately
IUD	Immediately If infection present or suspected, delay insertion until cleared If Hb < 7 g/dL, delay until anemia improves Provide interim method (e.g., condom)
Voluntary tubal ligation	Immediately If infection present or suspected, delay surgery until cleared If Hb < 7 g/dL, delay until anemia improves Provide interim method (e.g., condom)

Signs and Symptoms of Unruptured Ectopic Pregnancy

- Symptoms of early pregnancy
 - Irregular spotting or bleeding
 - Nausea
 - Swelling of breasts
 - Bluish discoloration of vagina and cervix
 - Softening of cervix
 - Slight uterine enlargement
 - Increased urinary frequency
- Abdominal and pelvic pain

Vaginal Bleeding in Early Pregnancy

13

Signs and Symptoms of Ruptured Ectopic Pregnancy

- Collapse and weakness
- Fast, weak pulse (110 beats/min.)
- Hypotension
- Hypovolemia
- Acute abdominal and pelvic pain
- Abdominal distension
- Rebound tenderness
- Pallor

Vaginal Bleeding in Early Pregnancy

14

Differential Diagnosis for Ectopic Pregnancy

- Threatened abortion
- Acute or chronic pelvic inflammatory disease
- Ovarian cysts (torsion or rupture)
- Acute appendicitis

Vaginal Bleeding in Early Pregnancy

15

Immediate Management of Molar Pregnancy

- If diagnosis is certain, evacuate uterus:
 - If cervical dilatation is needed, use a paracervical block
 - Use vacuum aspiration (MVA preferred)
 - Have three syringes cocked and ready for use during evacuation
- Infuse oxytocin 20 units in 1 L IV fluids at 60 drops per min.

Subsequent Management of Molar Pregnancy

- Recommend hormonal family planning method for at least 1 year to prevent pregnancy
- Follow up every 8 weeks for at least 1 year with urine pregnancy tests because of the risk of persistent trophoblastic disease
- If urine pregnancy test is not negative after 8 weeks or becomes positive again within the first year, refer woman to tertiary care center for more followup and management

Summary

- Vaginal bleeding in early pregnancy has a wide differential diagnosis:
 - Threatened abortion
 - Inevitable abortion
 - Incomplete abortion
 - Complete abortion
 - Ectopic pregnancy
 - Molar pregnancy
- Diagnosis can often be made clinically, saving time and expense

Vaginal Bleeding in Later Pregnancy and Labor

Managing Complications in Pregnancy and Childbirth

Session Objectives

- To review best practices for the diagnosis and management of vaginal bleeding in later pregnancy and labor
- To review strategy for specifically diagnosing placenta previa

Vaginal Bleeding in Later Pregnancy and Labor

2

Definition

Vaginal bleeding that occurs:

- After 22 weeks of pregnancy (late)
- During labor before childbirth

Vaginal Bleeding in Later Pregnancy and Labor

3

General Management

- Shout for help—mobilize personnel
- Rapidly evaluate breathing and state of consciousness
- Check airway, pulse and blood pressure
- If shock suspected, immediately begin treatment
- Infuse IV fluids

Vaginal Bleeding in Later Pregnancy and Labor

4

Diagnosis of Bleeding in Late Pregnancy

- Abruptio placenta
- Placenta previa
- Ruptured uterus

Vaginal Bleeding in Later Pregnancy and Labor

5

Abruptio Placenta

Detachment of normally located placenta from uterus before fetus is delivered

Vaginal Bleeding in Later Pregnancy and Labor

6

Diagnosis of Abruption Placenta

- Bleeding (may be retained in uterus) after 22 weeks gestation
- Intermittent or constant abdominal pain

Symptoms sometimes present:

- Shock
- Tense/tender uterus
- Decreased/absent fetal movements
- Fetal distress or absent fetal heart sounds

Vaginal Bleeding in Later Pregnancy and Labor

7

Management of Abruption Placenta

- Assess clotting status using bedside clotting test (No clot after 7 min. or soft clot that breaks down easily, suggests coagulopathy)
- Transfuse as necessary
- If bleeding is heavy, deliver as soon as possible:
 - If the cervix is fully dilated, deliver by vacuum extraction
 - If vaginal delivery not imminent, deliver by cesarean section
- Note: In every case of abruption placenta, be prepared for postpartum hemorrhage

Vaginal Bleeding in Later Pregnancy and Labor

8

Management of Abruption Placenta (continued)

- If bleeding is light to moderate (the mother is not in immediate danger), the course of action depends on fetal heart sounds:
 - If fetal heart sounds are normal or absent, rupture membranes with amniotic hook or Kocher clamp:
 - If contractions are poor, augment labor with oxytocin
 - If cervix is unfavorable, perform cesarean section
 - If fetal heart sounds abnormal (< 100 or > 180 beats/min.):
 - Perform rapid vaginal delivery
 - If vaginal delivery is not possible, deliver by immediate cesarean section

Vaginal Bleeding in Later Pregnancy and Labor

9

Placenta Previa

- Placenta previa: Implantation of placenta at or near cervix
- Three types:
 - Low placental implantation
 - Partial placenta previa
 - Complete placenta previa

Vaginal Bleeding in Later Pregnancy and Labor

10

Diagnosis of Placenta Previa

- Bleeding after 22 weeks gestation

Symptoms sometimes present:

- Shock
- Bleeding may be precipitated by intercourse
- Relaxed uterus
- Fetal presentation not in pelvis/lower uterine pole feels empty
- Normal fetal condition

Vaginal Bleeding in Later Pregnancy and Labor

11

Confirming Placenta Previa

- Localize placenta with ultrasound, if available
- If placenta previa is confirmed, plan childbirth if fetus is mature
- If diagnosis is uncertain:
 - Manage expectantly as placenta previa until 37 weeks gestation
 - If pregnancy is 37 weeks or more, examine under double set-up

Vaginal Bleeding in Later Pregnancy and Labor

12

Expectant Management of Placenta Previa

- Assess amount of bleeding:
 - Do not perform a vaginal examination
 - If bleeding is heavy and continuous, deliver by cesarean section regardless of gestation
- Consider expectant management if:
 - Bleeding is light or has stopped
 - Fetus is alive but less than 37 weeks gestation

Vaginal Bleeding in Later Pregnancy and Labor

13

Expectant Management of Placenta Previa (continued)

- Keep woman in hospital until childbirth or heavy bleeding occurs
- Correct anemia with ferrous sulfate 60 mg by mouth daily for 6 months
- Ensure blood is available for transfusion
- If bleeding recurs, weigh benefits and risks for woman and fetus of further expectant management versus childbirth

Vaginal Bleeding in Later Pregnancy and Labor

14

Childbirth for Placenta Previa

- Plan delivery by cesarean section if:
 - Hemorrhage is severe enough to cause risk to mother
 - Fetus is at least 37 weeks gestation
 - Fetus is dead or cannot survive
- Vaginal delivery may be possible with low placental implantation
- Women with placenta previa are at high risk for postpartum hemorrhage and placenta accreta/increta

Vaginal Bleeding in Later Pregnancy and Labor

15

Management of Ruptured Uterus

- Perform cesarean section
- Repair uterus if it can be repaired with less operative risk than hysterectomy would entail and edges of tear are not necrotic
- Perform subtotal hysterectomy if uterus cannot be repaired or total hysterectomy if tear extends through cervix and vagina

Vaginal Bleeding in Later Pregnancy and Labor

16

Summary

- Vaginal bleeding in later pregnancy and labor can be catastrophic:
 - Evaluate rapidly
 - Resuscitate if patient in shock
 - Differentiate abruptio placenta and placenta previa because of difference in mode of childbirth

Vaginal Bleeding in Later Pregnancy and Labor

17

Postabortion Care

Managing Complications in Pregnancy and Childbirth

Session Objective

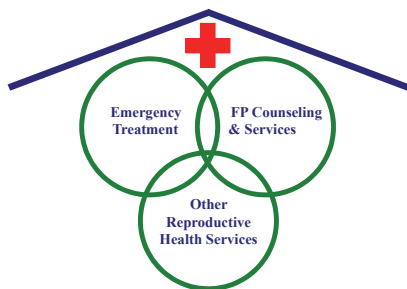
To discuss the essential elements of postabortion care:

- Emergency treatment of abortions and potentially life-threatening complications following abortions
- Postabortion family planning (FP) counseling and services
- Links between postabortion emergency services and the reproductive healthcare system

Postabortion Care

2

Elements of Postabortion Care



Postabortion Care

3

Postabortion Care: Emergency Treatment

- Initial screening (triage) for emergency conditions
- Talking to the client regarding her condition
- Medical assessment
- Stabilization (IVs, antibiotics) prior to manual vacuum aspiration (MVA)
- Uterine evacuation by MVA
- Referral or transfer for extensive treatment (e.g., major surgery)

Postabortion Care

4

Rationale for Using Manual Vacuum Aspiration (MVA)

MVA is the preferred treatment of incomplete abortion because:

- Risk of post-evacuation complications is reduced
- Less expensive, reusable equipment is used
- Emergency postabortion care can be provided at remote sites (small clinics) not just in urban centers

Postabortion Care

5

Comparison of Complication Rates

Summary of 13 Studies

Complications (major only)	Vacuum Asp. (Range %)	D&C (Range %)	Summary (Rate < D&C)
Excessive blood loss	0–15.7	0.5–28	10/13 (78%)
Pelvic infection	0.2–5.4	0.7–6	7/9 (78%)
Cervical injury	0–3.1	0.3–6.4	6/7 (86%)
Uterine perforation	0–0.5	0–3.3	10/12 (83%)

D&C=Dilatation and Curettage

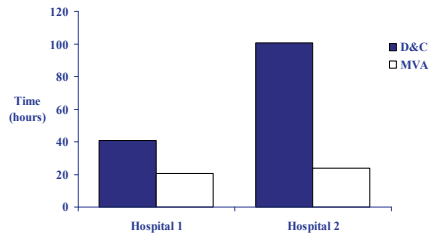
Greenslade et al 1993.

Postabortion Care

6

Average Total Patient Stay for Manual Vacuum Aspiration vs. Dilatation & Curettage

Kenya



Johnson, Benson and Hawkins 1992.

Postabortion Care

7

Need for Postabortion Family Planning Services

- Unsafe abortion is a prime indicator of unmet need for FP
- Failure to provide FP is a major contributor to the problem of unsafe abortion
- Emergency treatment is not linked to FP counseling or services

Postabortion Care

8

Importance of Starting Postabortion Family Planning Immediately

Increased risk of repeat pregnancy because:

- Ovulation may occur by day 11 postabortion
- 75% of women will have ovulated within 6 weeks postabortion

Lähteenmäki 1993;
Lähteenmäki et al 1980.

Postabortion Care

9

Which Family Planning Methods to Use Postabortion

All modern methods are acceptable provided that:

- Thorough counseling is given to ensure voluntarism and choice
- Clients are screened for precautions

Postabortion Care

10

Providing Postabortion Contraception

Method	When to Start	Remarks
Hormonal	Immediate	Can be started even if there is infection or anemia
Condom		
IUD	Immediate or delayed	If there is infection, delay until it clears. If hemoglobin is less than 7 g/dL, delay until it improves. Give an interim method.
Less than 12 weeks		
More than 12 weeks	4-6 weeks after abortion	Similar to postpartum
Tubal Ligation	Immediate	Clean procedure
	Delayed	If infection or hemoglobin is less than 7 g/dL

Postabortion Care

11

Linkages to Other Reproductive Health Services

- Linkages are essential and logical if the reproductive health of women is to improve
- Lack of linkages contributes to women's continued poor health status

Postabortion Care

12

Examples of Other Reproductive Health Services

- Treatment of sexually transmitted infections
- Cervical cancer screening for women over age 30–35
- Infertility services
- Pre-pregnancy advice (e.g., nutrition, immunization, management of existing medical conditions)

Postabortion Care

13

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Postabortion Care

14

Headaches, Blurred Vision, Convulsions, Loss of Consciousness or Elevated Blood Pressure

Managing Complications in Pregnancy and Childbirth

Session Objectives

- To discuss best practices for diagnosing and managing hypertension, pre-eclampsia and eclampsia
- To describe strategies for controlling hypertension
- To describe strategies for preventing and treating convulsions in pre-eclampsia and eclampsia

Headaches, Blurred Vision, Convulsions

2

Problem

- Pregnant or recently postpartum woman who:
 - Has elevated blood pressure
 - Complains of headache or blurred vision
 - Is found unconscious or convulsing

Headaches, Blurred Vision, Convulsions

3

General Management

- Shout for help—mobilize personnel
- Evaluate woman's condition including vital signs
- If not breathing, check airway and intubate if required
- If unconscious, check airway and temperature, position her on her left side
- If convulsing, position her on her left side, protect from injury but do not restrain

Headaches, Blurred Vision, Convulsions

4

Diagnosis of Elevated Blood Pressure

- Before first 20 weeks of gestation:
 - Chronic hypertension
 - Chronic hypertension with superimposed mild pre-eclampsia
- After 20 weeks gestation:
 - Hypertension without proteinuria
 - Mild pre-eclampsia
 - Severe pre-eclampsia
 - Eclampsia

Headaches, Blurred Vision, Convulsions

5

Management of Pregnancy-Induced Hypertension

- Monitor blood pressure, urine and fetal condition
- If blood pressure worsens, manage as mild pre-eclampsia
- If there are signs of severe fetal growth restriction or fetal compromise, admit woman to hospital for assessment
- Counsel woman and family about danger signals of pre-eclampsia and eclampsia

Headaches, Blurred Vision, Convulsions

6

Pre-Eclampsia

- Woman over 20 weeks gestation with:
 - Diastolic blood pressure > 90 mm Hg AND
 - Proteinuria

Headaches, Blurred Vision, Convulsions

7

Mild Pre-Eclampsia

- Two readings of diastolic blood pressure 90–110 mm Hg 4 hours apart after 20 weeks gestation
- Proteinuria up to 2+
- No other signs/symptoms of severe pre-eclampsia

Headaches, Blurred Vision, Convulsions

8

Management of Mild Pre-Eclampsia: Gestation Less than 37 Weeks

- Monitor blood pressure, urine, reflexes and fetal condition
- Counsel woman and family about danger signals of pre-eclampsia and eclampsia
- Encourage additional periods of rest
- Encourage woman to eat a normal diet
- Do not give anticonvulsants, antihypertensives, sedatives or tranquilizers

Headaches, Blurred Vision, Convulsions

9

Management of Mild Pre-Eclampsia: Gestation Less than 37 Weeks (continued)

Admit woman to hospital if outpatient followup not possible:

- Provide normal diet
- Monitor blood pressure (twice daily) and urine for proteinuria (daily)
- Do not give anticonvulsants, antihypertensives, sedatives or tranquilizers unless blood pressure or urinary protein level increases
- Do not give diuretics
- If diastolic pressure decreases to normal, send woman home
- If signs remain unchanged, keep woman in hospital
- If there are signs of growth restriction, consider early childbirth
- If urinary protein level increases, manage as severe pre-eclampsia

Headaches, Blurred Vision, Convulsions

10

Management of Mild Pre-Eclampsia: Gestation More than 37 Weeks

- If there are signs of fetal compromise, assess cervix and expedite childbirth:
 - If cervix is favorable, rupture membranes with amniotic hook or a Kocher clamp and induce labor using oxytocin or prostaglandins
 - If cervix is unfavorable, ripen the cervix using prostaglandins or Foley catheter or deliver by cesarean section

Headaches, Blurred Vision, Convulsions

11

Severe Pre-Eclampsia

- Diastolic blood pressure > 110 mm Hg
 - Proteinuria > 3+
- Other signs and symptoms sometimes present:
 - Epigastric tenderness
 - Headache
 - Visual changes
 - Hyperreflexia
 - Pulmonary edema
 - Oliguria

Headaches, Blurred Vision, Convulsions

12

Management of Severe Pre-Eclampsia

- If diastolic blood pressure remains above 110 mm Hg, give antihypertensive drugs. Reduce diastolic blood pressure to less than 100 mm Hg but not below 90 mm Hg
- Start IV fluids
- Maintain strict fluid balance chart and monitor amount of fluids administered and urine output
- Catheterize bladder to monitor urine output and proteinuria
- If urine output is less than 30 mL/hour:
 - Withhold magnesium sulfate and infuse IV fluids at 1 L in 8 hours
 - Monitor for development of pulmonary edema

Headaches, Blurred Vision, Convulsions

13

Management of Severe Pre-Eclampsia (continued)

- Never leave woman alone
- Observe vital signs, reflexes and fetal heart rate every hour
- Auscultate lung bases every hour for rales indicating pulmonary edema. If rales are heard, withhold fluids and give furosemide 40 mg IV once
- Perform bedside clotting test

Headaches, Blurred Vision, Convulsions

14

Management During a Convulsion

- Give anticonvulsive drugs:
 - Magnesium sulfate (first choice)
 - Diazepam
- Give oxygen at 4–6 L/min.
- Protect woman from injury but do not restrain her
- Place woman on left side
- After convulsion, aspirate mouth and throat as necessary

Headaches, Blurred Vision, Convulsions

15

Magnesium Sulfate Loading Dose

- Give magnesium sulfate 20% solution 4 g IV slowly over 5 min.
- Follow promptly with magnesium sulfate 50% solution 5 g deep IM injection in each buttock with lignocaine 2% solution 1 mL deep IM injection into each buttock
- If convulsions recur after 15 min., give magnesium sulfate 50% solution 2 g IV over 5 min.

Headaches, Blurred Vision, Convulsions

16

Magnesium Sulfate Maintenance Dose

- IM injections:
 - Magnesium sulfate 50% solution 5 g IM + lignocaine 2% solution 1 mL
 - Give every 4 hours into alternating buttocks
 - Continue treatment with magnesium sulfate for 24 hours after childbirth or after the last convulsion, whichever occurs last
- Before each injection ensure that:
 - Respirations > 16 breaths/min.
 - Patellar reflex present
 - Urine output > 30 mL/hour over 4 hours

Headaches, Blurred Vision, Convulsions

17

Guidelines for Administration of Magnesium Sulfate

- Withhold magnesium sulfate temporarily if:
 - Respiration rate < 16 breaths/min.
 - Patellar reflexes are absent
 - Urine output < 30 mL/hour during preceding 4 hours
- If woman is unarousable or in case of respiratory arrest:
 - Assist ventilation
 - Give calcium gluconate 1 g (10 mL of 10% solution) IV slowly

Headaches, Blurred Vision, Convulsions

18

IV Administration of Diazepam

- Loading dose
 - 10 mg IV slowly over 2 min.
 - If convulsions recur, repeat dose
 - Maintenance dose
 - 40 mg in 500 mL IV fluids
 - Titrate to keep woman sedated but arousable
- Caution
 - Do not give more than 100 mg in 24 hours
 - Maternal respiratory depression may occur when dose exceeds 30 mg in 1 hour
 - Assist ventilation, if necessary

Headaches, Blurred Vision, Convulsions

19

Rectal Administration of Diazepam

- Use when IV access not possible
- Loading dose is 20 mg in 10 mL syringe
- Remove needle, lubricate barrel and insert syringe into rectum to half its length
- Discharge contents and hold barrel in place for 10 min.
- If convulsions are not controlled in 10 min., repeat with 10 mg

Headaches, Blurred Vision, Convulsions

20

Administration of Antihypertensive Drugs

- Hydralazine 5 mg IV slowly every 5 min. until blood pressure less than 110 mm Hg (goal is to have between 90 and 100 mm Hg)
 - Repeat hourly as needed or give hydralazine 12.5 mg IM every 2 hours as needed
- Labetolol 10 mg IV
 - If no response in 10 min., give 20 mg IV
 - If no response, give 40 mg, then 80 mg IV to maximum dose of 300 mg
- Nifedipine 5 mg sublingually
 - Repeat once if needed

Headaches, Blurred Vision, Convulsions

21

Childbirth

- Assess cervix
- If cervix is favorable, rupture the membranes with an amniotic hook or a Kocher clamp and induce labor using oxytocin or prostaglandins
- Deliver by cesarean section if:
 - Vaginal delivery is not anticipated within 12 hours (for eclampsia) or 24 hours (for severe pre-eclampsia)
 - Fetal heart rate is less than 100 or more than 180 beats/min.
 - Cervix is not favorable

Headaches, Blurred Vision, Convulsions

22

Childbirth (continued)

- If safe anesthesia is not available for cesarean section or if fetus is dead or too premature for survival:
 - Attempt vaginal delivery
 - Ripen cervix (if necessary) using misoprostol, prostaglandins or Foley catheter

Headaches, Blurred Vision, Convulsions

23

Postpartum Care

- Anticonvulsive therapy should be maintained for 24 hours after childbirth or last convulsion, whichever occurs last
- Continue antihypertensive therapy as long as diastolic pressure is 110 mm Hg or more
- Continue to monitor urine output

Headaches, Blurred Vision, Convulsions

24

Referral for Tertiary Level Care

- Consider referral of women who have:
 - Oliguria that persists for 48 hours after childbirth
 - Coagulation failure
 - Persistent coma lasting more than 24 hours after convulsion

Headaches, Blurred Vision, Convulsions

25

Complications of Pregnancy-Induced Hypertension

- Severe fetal growth restriction: Expedite childbirth
- Increasing drowsiness or coma: Suspect cerebral hemorrhage
 - Reduce blood pressure slowly
 - Provide supportive therapy
- Heart, kidney or liver failure: Provide supportive therapy
- Failure of clot to form after 7 min.: Suspect coagulopathy
- Woman has IV lines and catheters: Use proper infection prevention techniques
- Woman is receiving IV fluids: Maintain strict balance chart and monitor amount of fluids administered and urine output

Headaches, Blurred Vision, Convulsions

26

Chronic Hypertension

- Encourage additional rest
- Determine whether to lower blood pressure using medication:
 - If woman was on antihypertensive drugs before pregnancy and disease is well-controlled, continue same medication if acceptable in pregnancy
 - If diastolic blood pressure is 110 mm Hg or more or systolic blood pressure is 160 mm Hg or more, treat with antihypertensive drugs
 - If proteinuria or other signs and symptoms are present, consider superimposed pre-eclampsia and manage as mild pre-eclampsia

Headaches, Blurred Vision, Convulsions

27

Chronic Hypertension (continued)

- Monitor fetal growth and condition
- If there are no complications, deliver at term
- If pre-eclampsia develops, manage as mild pre-eclampsia or severe pre-eclampsia
- If there are fetal heart rate abnormalities, suspect fetal distress
- If fetal growth restriction is severe and pregnancy dating is accurate, assess the cervix and consider childbirth:
 - If cervix is favorable, rupture membranes and induce labor
 - If cervix is unfavorable, ripen cervix
- Observe for complications

Headaches, Blurred Vision, Convulsions

28

Normal Labor and Childbirth

Advances in Maternal and Neonatal Health

Session Objectives

- To identify best practices for managing labor and childbirth:
 - Skilled provider
 - Birth preparedness/complication readiness
 - Partograph
 - Restricted episiotomy
- To identify harmful practices with the goal of eliminating them from practice

Normal Labor and Childbirth

2

Objectives of Care During Labor and Childbirth

- Protect the life of the mother and newborn
- Support normal labor and detect and treat complications in a timely fashion
- Support and respond to needs of the woman, her partner and family during labor and childbirth

Normal Labor and Childbirth

3

Skilled Provider

- Is a professional caregiver
- Has the knowledge and skills to:
 - Manage labor, childbirth and postpartum period
 - Recognize complications
 - Diagnose, manage or refer woman or newborn to higher level of care if complications occur that require interventions beyond caregiver's competence
- Performs all basic midwifery interventions

WHO 1999.

Normal Labor and Childbirth

4

Birth Preparedness and Complication Readiness for the Woman and Family

- Recognize danger signs
- Plan for managing complications
- Save money or access funds
- Arrange transportation
- Plan route
- Plan place for childbirth
- Choose provider
- Follow instructions for self-care

Normal Labor and Childbirth

5

Birth Preparedness and Complication Readiness for the Provider

- Diagnose and manage problems and complications appropriately and in a timely manner
- Arrange referral to higher level of care if needed
- Provide women-centered counseling about birth preparedness and complication readiness
- Educate community about birth preparedness and complication readiness

Normal Labor and Childbirth

6

Complication Readiness for the Provider

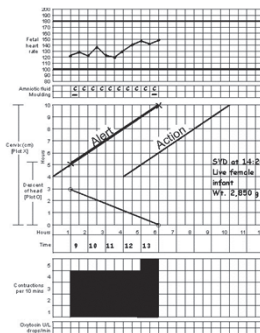
- Recognize and respond to danger signs
- Establish plan and determine who is in authority to make decisions in case of emergency
- Develop plan for immediate access to funds (savings or community loan)
- Identify and plan for blood donors and donation

Normal Labor and Childbirth

7

Partograph and Criteria for Active Labor

- Label with patient identifying information
- Note fetal heart rate, color of amniotic fluid, presence of moulding, contraction pattern, medications given
- Plot cervical dilatation
- Alert line starts at 4 cm—from here, expect to dilate at rate of 1 cm/hour
- Action line: If patient does not progress as above, action is required



Normal Labor and Childbirth

8

World Health Organization Partograph Trial

- Objectives:
 - To evaluate impact of World Health Organization (WHO) partograph on labor management and outcome
 - To devise and test protocol for labor management with partograph
- Design: Multicenter trial randomizing hospitals in Indonesia, Malaysia and Thailand
- No intervention in latent phase until after 8 hours
- At active phase action line consider: Oxytocin augmentation, cesarean section, or observation AND supportive treatment

WHO 1994.

Normal Labor and Childbirth

9

WHO Partograph: Results of Study

All Women	Before Implementation	After Implementation	<i>p</i>
Total childbirths	18,254	17,230	
Labor > 18 hours	6.4%	3.4%	0.002
Labor augmented	20.7%	9.1%	0.023
Postpartum sepsis	0.70%	0.21%	0.028
Normal Women			
Mode of childbirth			
Spontaneous cephalic	8,428 (83.9%)	7,869 (86.3%)	< 0.001
Forceps	341 (3.4%)	227 (2.5%)	0.005

WHO 1994.

Normal Labor and Childbirth

10

Cochrane Review of Specific Criteria to Diagnose Active Labor: Objective and Design

- Objective: Assess effectiveness of use by caregivers of specific criteria for diagnosis of active labor in term pregnancy
- Design: Meta analysis of randomized control trials; only one study found
- Criteria:
 - Cervix dilated 4–9 cm
 - Rate of dilation ≥ 1 cm/hour
 - Fetal descent begins

Lauzon and Hodnett 2000.

Normal Labor and Childbirth

11

Criteria to Diagnose Active Labor: Results with Statistical Significance

	Experimental Group (105)	Control Group (104)	Odds Ratio (95% CI)
Cesarean section for labor dystocia	2	8	0.28 (0.08–1.00)
Intrapartum oxytocics	24	42	0.45 (0.25–0.80)
Any intrapartum analgesia	84	96	0.36 (0.16–0.78)
Epidural analgesia	83	94	0.42 (0.20–0.89)

Lauzon and Hodnett 2000.

Normal Labor and Childbirth

12

Criteria to Diagnose Active Labor: Discussion

- Use of strict criteria for diagnosis of active labor:
 - May prevent misdiagnosis of dystocia in latent phase labor
 - Prevent unnecessary (and potentially risky) interventions including cesarean section
- Insufficient power to test effects of intervention on rates of cesarean section, unplanned out-of-hospital birth or other important maternal and newborn outcomes

Lauzon and Hodnett 2000.

Normal Labor and Childbirth

13

Restricted Use of Episiotomy: Objectives and Design

- Objective: To evaluate possible benefits, risks and costs of restricted use of episiotomy vs. routine episiotomy
- Design: Meta analysis of six randomized control trials

Carroli and Belizan 2000.

Normal Labor and Childbirth

14

Restricted Use of Episiotomy: Maternal Outcomes Assessed

- Severe vaginal/perineal trauma
- Need for suturing
- Posterior/anterior perineal trauma
- Perineal pain
- Dyspareunia
- Urinary incontinence
- Healing complications
- Perineal infection

Carroli and Belizan 2000.

Normal Labor and Childbirth

15

Restricted Use of Episiotomy: Results of Cochrane Review

Clinically Relevant Morbidities	Relative Risk	95% CI
Posterior perineal trauma	0.88	0.84-0.92
Need for suturing	0.74	0.71-0.77
Healing complications at 7 days	0.69	0.56-0.85
Anterior perineal trauma	1.79	1.55-2.07

- No increase in incidence of major outcomes (e.g., severe vaginal or perineal trauma nor in pain, dyspareunia or urinary incontinence)
- Incidence of 3rd degree tear reduced (1.2% with episiotomy, 0.4% without)
- No controlled trials on controlled childbirth or guarding the perineum to prevent trauma

Carroll and Belizan 2000; Eason
et al 2000; WHO 1999.

Normal Labor and Childbirth

16

Indicated Use of Episiotomy: Reviewer's Conclusions

- Implications for practice: Clear evidence to restrict use of episiotomy in normal labor
- Implications for research: Further trials needed to assess use of episiotomy at:
 - Assisted delivery (forceps or vacuum)
 - Preterm delivery
 - Breech delivery
 - Predicted macrosomia
 - Presumed imminent tears (threatened 3rd degree tear or history of 3rd degree tear with previous childbirth)

Carroll and Belizan 2000;
WHO 1999.

Normal Labor and Childbirth

17

Clean Childbirth

- Infection accounts for 14.9% of all maternal deaths
- These deaths can be avoided with infection prevention practices

Normal Labor and Childbirth

18

Infection Prevention Practices

- Use disposable materials once and decontaminate reusable materials throughout labor and childbirth
- Wear gloves during vaginal examination, during birth of newborn and when handling placenta
- Wear protective clothing (shoes, apron, glasses)
- Wash hands
- Wash woman's perineum with soap and water and keep it clean
- Ensure that surface on which newborn is delivered is kept clean
- Use high-level disinfected instruments, gauze and ties for cutting cord

Normal Labor and Childbirth

19

Best Practices: Third Stage of Labor

- Active management of third stage for ALL women:
 - Oxytocin administration
 - Controlled cord traction
 - Uterine massage after delivery of the placenta to keep the uterus contracted
- Routine examination of the placenta and membranes
 - 22% of maternal deaths caused by retained placenta
- Routine examination of vagina and perineum for lacerations and injury

WHO 1999.

Normal Labor and Childbirth

20

Best Practices: Labor and Childbirth

- Use non-invasive, non-pharmacological methods of pain relief during labor (massage, relaxation techniques, etc.):
 - Less use of analgesia OR 0.68 (CI 0.58–0.79)
 - Fewer operative vaginal deliveries OR 0.73 (95% CI 0.62–0.88)
 - Less postpartum depression at 6 weeks OR 0.12 (CI 0.04–0.33)
- Offer oral fluids throughout labor and childbirth

Neilson 1998.

Normal Labor and Childbirth

21

Best Practices: Postpartum

- Close monitoring and surveillance during first 6 hours postpartum
 - Parameters:
 - Blood pressure, pulse, vaginal bleeding, uterine hardness
 - Timing:
 - Every 15 min. for 2 hours
 - Every 30 min. for 1 hour
 - Every hour for 3 hours

Normal Labor and Childbirth

22

Position in Labor and Childbirth

- Allow freedom in position and movement throughout labor and childbirth
- Encourage any non-supine position:
 - Side lying
 - Squatting
 - Hands and knees
 - Semi-sitting
 - Sitting

Normal Labor and Childbirth

23

Position in Labor and Childbirth (continued)

Use of upright or lateral position compared with supine or lithotomy position is associated with:

- Shorter second stage of labor (5.4 minutes, 95% CI 3.9–6.9)
- Fewer assisted deliveries (OR 0.82, CI 0.69–0.98)
- Fewer episiotomies (OR 0.73, CI 0.64–0.84)
- Fewer reports of severe pain (OR 0.59, CI 0.41–0.83)
- Less abnormal heart rate patterns for fetus (OR 0.31, CI 0.11–0.91)
- More perineal tears (OR 1.30, CI 1.09–1.54)
- Blood loss > 500 mL (OR 1.76, CI 1.34–3.32)

Gupta and Nikodem 2000.

Normal Labor and Childbirth

24

Support of Woman

- Give woman as much information and explanation as she desires
- Provide care in labor and childbirth at a level where woman feels safe and confident
- Provide empathetic support during labor and childbirth
- Facilitate good communication between caregivers, the woman and her companions
- Continuous empathetic and physical support is associated with shorter labor, less medication and epidural analgesia and fewer operative deliveries

WHO 1999.

Normal Labor and Childbirth

25

Presence of Female Relative During Labor: Results

Randomized controlled trial in Botswana: 53 women with relative; 56 without

Labor Outcome	Experimental Group (%)	Control Group (%)	<i>p</i>
Spontaneous vaginal delivery	91	71	0.03
Vacuum delivery	4	16	0.03
Cesarean section	6	13	0.03
Analgesia	53	73	0.03
Amniotomy	30	54	0.01
Oxytocin	13	30	0.03

Madi et al 1999.

Normal Labor and Childbirth

26

Presence of Female Relative During Labor: Conclusion

Support from female relative improves labor outcomes

Madi et al 1999.

Normal Labor and Childbirth

27

Harmful Routines

- Use of enema: Uncomfortable, may damage bowel, does not change duration of labor, incidence of neonatal infection or perinatal wound infection
- Pubic shaving: Discomfort with regrowth of hair, does not reduce infection, may increase transmission of HIV and hepatitis
- Lavage of the uterus after childbirth: Can cause infection, mechanical trauma or shock
- Manual exploration of the uterus after childbirth

Nielson 1998; WHO 1999.

Normal Labor and Childbirth

28

Harmful Practices

- Examinations:
 - Rectal examination: Similar incidence of puerperal infection, uncomfortable for woman
 - Routine use of x-ray pelvimetry: Increases incidence of childhood leukemia
- Position:
 - Routine use of supine position during labor
 - Routine use of lithotomy position with or without stirrups during labor

Normal Labor and Childbirth

29

Harmful Interventions

- Administration of oxytocin at any time before childbirth in such a way that the effect cannot be controlled
- Sustained, directed bearing down efforts during the second stage of labor
- Massaging and stretching the perineum during the second stage of labor (no evidence)
- Fundal pressure during labor

Eason et al 2000.

Normal Labor and Childbirth

30

Inappropriate Practices

- Restriction of food and fluids during labor
- Routine intravenous infusion in labor
- Repeated or frequent vaginal examinations, especially by more than one caregiver
- Routinely moving laboring woman to a different room at onset of second stage
- Encouraging woman to push when full dilatation or nearly full dilatation of cervix has been diagnosed, before woman feels urge to bear down

Nielson 1998; Ludka and Roberts 1993.

Normal Labor and Childbirth

31

Inappropriate Practices

- Rigid adherence to a stipulated duration of the second stage of labor (e.g., 1 hour) if maternal and fetal conditions are good and there is progress of labor
- Liberal or routine use of episiotomy
- Liberal or routine use of amniotomy

Normal Labor and Childbirth

32

Practices Used for Specific Clinical Indications

- Bladder catheterization
- Operative delivery
- Oxytocin augmentation
- Pain control with systemic agents
- Pain control with epidural analgesia
- Continuous electronic fetal monitoring

Normal Labor and Childbirth

33

Normal Labor and Childbirth: Conclusion

- Have a skilled provider present
- Use partograph
- Use specific criteria to diagnose active labor
- Restrict use of unnecessary interventions
- Use active management of third stage of labor
- Support woman's choice for position during labor and childbirth
- Provide continuous emotional and physical support to woman throughout labor

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Managing Labor Using the Partograph

The Partograph

- Assessment of fetal well being
- Assessment of maternal well being
- Assessment of progress of labor

Using the Partograph

2

Measuring Fetal Well Being During Labor

- Fetal heart rates and pattern
- Degree of molding, caput
- Color of amniotic fluid

Using the Partograph

3

Measuring Maternal Well Being During Labor

- Pulse, temperature, blood pressure, respiration
- Urine output, ketones, protein

Using the Partograph

4

Measuring Progress of Labor

- Cervical dilatation
- Descent of presenting part
- Contractions
 - Duration
 - Frequency
- Alert and action lines

Using the Partograph

5

Using the Partograph

- Patient information: Name, gravida, para, hospital number, date and time of admission, and time of ruptured membranes
- Fetal heart rate: Record every half hour
- Amniotic fluid: Record the color at every vaginal examination:
 - I: membranes intact
 - C: membranes ruptured, clear fluid
 - M: meconium-stained fluid
 - B: blood-stained fluid

Using the Partograph

6

Using the Partograph (continued)

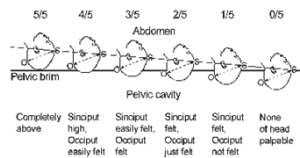
- **Molding:**
 - 1: sutures apposed
 - 2: sutures overlapped but reducible
 - 3: sutures overlapped and not reducible
- **Cervical dilatation:** Assess at every vaginal examination, mark with cross (X)
- **Alert line:** Line starts at 4 cm of cervical dilatation to the point of expected full dilatation at the rate of 1 cm per hour
- **Action line:** Parallel and 4 hours to the right of the alert line

Using the Partograph

7

Using the Partograph (continued)

- **Descent assessed by abdominal palpation:** Part of head (divided into 5 parts) palpable above the symphysis pubis; recorded as a circle (O) at every vaginal examination. At 0/5, the sinciput (S) is at the level of the symphysis pubis



Using the Partograph

8

Using the Partograph (continued)

- **Hours:** Time elapsed since onset of active phase of labor (observed or extrapolated)
- **Time:** Record actual time
- **Contractions:** Chart every half hour; palpate the number of contractions in 10 minutes and their duration in seconds
 - Less than 20 seconds: □
 - Between 20 and 40 seconds: ▨
 - More than 40 seconds: ■
- **Oxytocin:** Record amount per volume IV fluids in drops/min. every 30 min. when used
- **Drugs given:** Record any additional drugs given

Using the Partograph

9

Using the Partograph (continued)

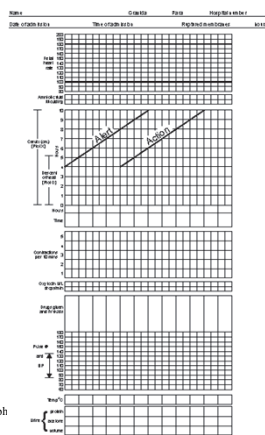
- Temperature: Record every 2 hours
- Pulse: Record every 30 minutes and mark with a dot (•)
- Blood pressure: Record every 4 hours and mark with arrows
- Protein, acetone and volume: Record every time urine is passed

Using the Partograph

10

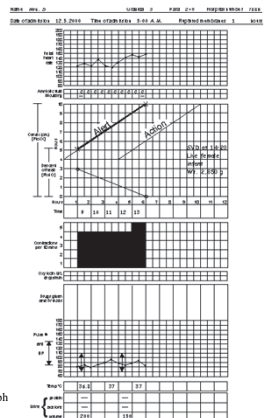
The Modified WHO Partograph (Figure C-10)

Using the Partograph

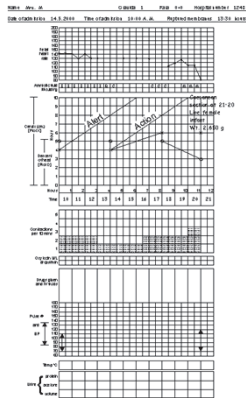


Sample Partograph for Normal Labor (Figure C-11)

Using the Partograph

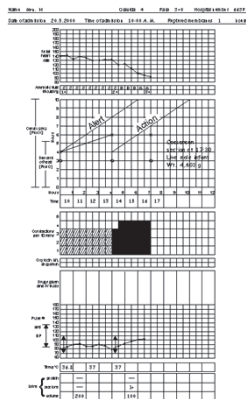


Partograph Showing Prolonged Active Phase of Labor (Figure S-6)



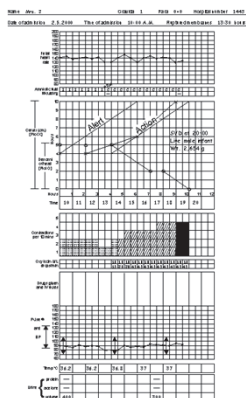
Using the Partograph

Partograph Showing Obstructed Labor (Figure S-7)



Using the Partograph

Partograph Showing Inadequate Uterine Contractions Corrected with Oxytocin (Figure S-8)



Using the Partograph

Postpartum Care

Managing Complications in Pregnancy and Childbirth

Session Objectives

- To define essential elements of postpartum care
- To discuss best practices and technologies for postpartum care

Postpartum Care

2

Objectives of Postpartum Care

- Prevent or detect and manage complications arising during postpartum period, whether medical, surgical or obstetric
- Support mother and her family in transition to a new family constellation
- Promote and maintain physical, mental and social well-being of both mother and newborn by providing education on danger signals, nutrition, rest, sleep and personal hygiene, and by providing micronutrients, if necessary

Postpartum Care

3

Objectives of Postpartum Care (continued)

- Counsel on newborn care
- Support breastfeeding
- Counsel and provide services for contraception and resumption of sexual activity
- Immunize mother against tetanus
- Work with mother, her family and her community to prepare a plan in case of complication

Postpartum Care

4

What is Good Postpartum Care?

- Visits at 6 hours, 6 days and 6 weeks postpartum
- Care provided by skilled provider who attended childbirth (midwife, general practitioner or obstetrician/gynecologist)
- Integration of postpartum and newborn care

Postpartum Care

5

Components of Postpartum Care Visit

- Early detection and management of complications
- Complication readiness
- Promoting health and preventing disease
- Woman-centered education and counseling

Postpartum Care

6

Early Detection and Management of Complications

- **Malnutrition:** General health, night blindness, goiter
- **Depression/psychosis:** Mood
- **Infection:** Temperature
- **Pre-eclampsia:** Blood pressure, proteinuria
- **Anemia:** Hemoglobin, conjunctiva/tongue/palms
- **Breast problems:** Breast examination, assessment of breastfeeding, newborn's weight

Postpartum Care

7

Early Detection and Management of Complications (continued)

- **Subinvolution:** Fundal height
- **Incontinence/fistula:** Bowel and bladder function
- **Thrombophlebitis:** Homan's sign, inspection of legs
- **Genital infection:** Perineum, lochia/bleeding/discharge, rapid plasma reagin (RPR)

Postpartum Care

8

Complication Readiness

- **Establish savings plan/scheme**
- **Make plan for decision-making**
- **Arrange system of transport**
- **Establish plan for blood donation**

Postpartum Care

9

Promoting Health and Preventing Disease

- Iron/Folate: 1 tablet to be taken by mouth once a day for at least 40 days postpartum
- Six monthly presumptive treatments with broad-spectrum anti-helminthics in areas of significant prevalence
- Sleeping under a bednet
- Vitamin A: One dose of 200,000 IU within 30 days after childbirth in vitamin A deficient regions

Postpartum Care

10

Promoting Health and Preventing Disease (continued)

- Iodine supplementation: 400–600 mg by mouth or IM as soon as possible after childbirth if never given, or if given before the third trimester (only in areas where deficiencies exist)
- Tetanus toxoid
- RPR, HIV (voluntary testing)

Postpartum Care

11

Woman-Centered Education and Counseling: Danger Signals for Woman

- Heavy or sudden increase in vaginal bleeding
- Fever
- Vaginal discharge with unpleasant odor
- Painful or hot breast(s)
- Abdominal pain
- Excessive tiredness
- Edema in hands and face
- Severe headache

Postpartum Care

12

Woman-Centered Education and Counseling: Danger Signals for Newborn

- Cord red or draining pus
- Suckling poorly
- Eyes swollen, sticky or draining pus
- Cold to touch in spite of rewarming
- Hot to touch in spite of undressing
- Difficulty breathing
- Lethargy
- Convulsions

Postpartum Care

13

Woman-Centered Education and Counseling: Nutrition

- Intake should be increased by 10% (not physically active) to 20% (moderately or very active) to cover energy cost of lactation
- Eating more of staple food (cereal or tuber)
- Greater consumption of non-saturated fats
- Avoid all dietary restrictions
- Encourage foods rich in iron (e.g., liver, dark green leafy vegetables, etc.)

Postpartum Care

14

Woman-Centered Education and Counseling: Factors that Affect Women's Sexual Desire After Childbirth

- Fatigue and disturbed sleep patterns
- Genital lacerations/episiotomy
- Hypo-estrogenization of the vagina
- Libido
- Power issues in marriage
- Resumption of sexual activity

Postpartum Care

15

Woman-Centered Education and Counseling: Family Planning

- Inform about all contraceptive choices in postpartum period (ideally done antenatal as well)
- Facilitate free informed choice for all women
- Reinforce that non-hormonal methods (lactational amenorrhea, barrier methods, IUD and sterilization) are best options for lactating mothers
- Initiate progestogen-only methods after 6 weeks postpartum to breastfeeding women, if woman chooses a hormonal method
- Advise against use of combined oral contraceptives in breastfeeding women in the first 6 months after childbirth or until weaning, whichever comes first

Postpartum Care

16

Woman-Centered Education and Counseling: Breastfeeding

- Importance, benefits and management of breastfeeding
- Positioning and attaching newborn to breast
- Need to avoid supplementary feeds
- Encourage breastfeeding on demand

Postpartum Care

17

Forms of Postpartum Care Likely to Be Ineffective or Even Harmful

Breastfeeding

- Limiting suckling time to 10 min. on each breast or any other arbitrary period
- Restricting frequency of breastfeeds to once in 3 hours or to any other arbitrary period
- Giving artificial teats and pacifiers to breastfed infants
- Providing bottle supplements with water, glucose or formula while breastfeeding is becoming established
- Prescribing hormonal contraceptives during first 6 weeks postpartum

Postpartum Care

18

Forms of Postpartum Care Likely to Be Ineffective or Even Harmful (continued)

- Hormonal treatment of postpartum depression
- Separate counseling of woman on breastfeeding and on contraception
- Lactation inhibition by estrogens or bromocriptine

Postpartum Care

19

Summary

Good postpartum care includes:

- Care by skilled provider
- Focus on mother and newborn
- Multiple visits
- Detection and management of complications in a timely fashion
- Interventions and education to promote continued good health of the mother and newborn

Postpartum Care

20

Week 2

Vaginal Bleeding After Childbirth

Managing Complications in Pregnancy and Childbirth

Session Objectives

- To discuss best practices for postpartum hemorrhage
- To describe strategies for prevention of postpartum hemorrhage

Vaginal Bleeding after Childbirth

2

Definition

Vaginal bleeding of more than 500 mL after childbirth:

- Bleeding underestimated because visual quantification is difficult
- Blood is mixed with other fluids (amniotic fluid, urine) and therefore underestimated
- Bleeding may occur slowly over several hours and condition may not be recognized until woman suddenly enters shock

Vaginal Bleeding after Childbirth

3

Initial Assessment and Management

- Shout for help—mobilize personnel
- Evaluate woman's condition including vital signs
- If shock suspected, immediately begin treatment
- Massage uterus to expel clots and feel to see that it is contracted—recheck intermittently
- Give oxytocin 10 units IM

Vaginal Bleeding after Childbirth

4

Initial Assessment and Management (continued)

- Infuse IV fluids
- Catheterize bladder, if needed
- Check to see that placenta has been expelled—examine for completeness
- Examine the cervix, vagina and perineum for tears
- After bleeding is controlled, check for anemia

Vaginal Bleeding after Childbirth

5

Differential Diagnosis of Postpartum Hemorrhage

- Atonic uterus
- Retained placenta
- Tears of cervix, vagina or perineum
- Retained placental fragments
- Ruptured uterus
- Inverted uterus

Vaginal Bleeding after Childbirth

6

Management of Atonic Uterus

- Continue IV fluids
- Continue to massage uterus
- Continue oxytocic drugs
- Perform bimanual compression or perform aortic compression
- Consider uterine and utero-ovarian artery ligation or hysterectomy

All the while:

- Transfuse blood as needed
- Consider other diagnoses
- Do not pack uterus

Oxytocic Drugs

	Oxytocin	Ergometrine/ Methylergometrine	15-methyl prostaglandin F _{2α}
Dose and Route	IV: Infuse 20 units in 1 L at 60 drop/min. IM: 10 units	IM or IV: 0.2 mg	IM: 0.25 mg
Continuing Dose	IV: Infuse 20 units in 1 L at 40 drop/min.	Repeat 0.2 mg IM after 15 min. If required, give 0.2 mg IM or IV every 4 hours	0.25 mg every 15 min.
Maximum Dose	Not more than 3 L of IV fluids	5 doses	8 doses
Precautions/ Contraindications	Do not give as IV bolus	Pre-eclampsia, hypertension, heart disease	Asthma

Management of Retained Placenta

- If placenta is seen, ask woman to push; if in vagina, remove
- Ensure bladder is empty; catheterize if necessary
- Give oxytocin 10 units IM if not already done
- Attempt controlled cord traction
- Manually remove placenta
- Assess clotting status if bleeding continues

All the while:

- Transfuse blood as needed
- Give oxytocin if not already done
- Give antibiotics if manual removal of placenta
 - Ampicillin 2 g IV one dose

Management of Genital Tract Tears

- Inspect cervix, vagina and perineum
- Repair tears that are:
 - Bleeding
 - More than first degree
 - Away from urethra
- Place catheter if necessary

All the while:

- Transfuse blood as needed
- Consider concurrent diagnoses if bleeding still heavy

Vaginal Bleeding after Childbirth

10

Management of Retained Placental Fragments

- Feel inside uterus for placental fragments.
- Remove placental fragments by hand, ovum forceps or large curette
- Assess clotting status if bleeding continues

Vaginal Bleeding after Childbirth

11

Management of Ruptured Uterus

- Repair uterus if it can be repaired with less operative risk than hysterectomy would entail and edges of tear are not necrotic
- Perform subtotal hysterectomy if uterus cannot be repaired or total hysterectomy if tear extends through cervix and vagina

Vaginal Bleeding after Childbirth

12

Management of Inverted Uterus

- Act quickly
- Assess clotting status
- Reposition uterus
- Hold oxytocics until uterus is repositioned
- Give antibiotics as for metritis if signs of infection are present
- Perform vaginal hysterectomy if necrosis is suspected

All the while:

- Give IV fluids
- Transfuse blood as needed
- Give pain medication and antibiotics
 - Ampicillin 2 g IV one dose and metronidazole 500 mg IV OR
 - Cefazolin 1 g IV and metronidazole 500 mg IV

Vaginal Bleeding after Childbirth

13

Delayed Postpartum Hemorrhage

- If severe anemia, arrange for transfusion and provide oral iron and folic acid
- If signs of infection are present, give antibiotics as for metritis
- Give oxytocics
- Remove large clots and placental fragments if cervix is dilated
- Evacuate uterus if cervix is not dilated
- Consider uterine and utero-ovarian artery ligation if bleeding continues

Vaginal Bleeding after Childbirth

14

Prevention Strategies

- Birth preparedness
- Skilled provider at childbirth
- Treatment of anemia
- Active management of third stage of labor
- Avoid unnecessary procedures (e.g., episiotomy)

Active management of third stage of labor:

- Oxytocin 10 units IM within 2 min. of childbirth
- Controlled cord traction
- Fundal massage after delivery of placenta

Vaginal Bleeding after Childbirth

15

Oxytocic Drugs

- Oxytocin - posterior pituitary extract
- Ergometrine - preparation of ergot
- Syntometrine - combination of oxytocin and ergometrine

Vaginal Bleeding after Childbirth

16

Oxytocic Drugs: Misoprostol

- Misoprostol - prostoglandin E1 analogue

Vaginal Bleeding after Childbirth

17

Oxytocic Drugs: Oxytocin

- Advantages
 - Causes uterus to contract
 - Acts within 2 1/2 min. when given IM
 - Generally does not cause side effects
- Disadvantages
 - More expensive than ergometrine
 - IM or IV preparations only
 - Not heat stable

Vaginal Bleeding after Childbirth

18

Oxytocic Drugs: Ergometrine

- Advantages
 - Low price
 - Effect lasts 2–4 hours
- Disadvantages
 - Takes 6–7 minutes to become effective when given IM; oral form insufficiently effective
 - Causes tonic uterine contraction
 - Increased risk of hypertension, vomiting, headache
 - Contraindicated in women with hypertension or heart disease
 - Not heat stable

Vaginal Bleeding after Childbirth

19

Oxytocic Drugs: Syntometrine

- Advantages
 - Combined effect of rapid action of oxytocin and sustained action of ergometrine
- Disadvantages
 - Increased risk of hypertension, nausea and vomiting
 - Not heat stable

Vaginal Bleeding after Childbirth

20

Summary

- Postpartum hemorrhage is a leading cause of death in mothers
- Stop bleeding
 - Uterine massage
 - Examine perineum, vagina and cervix
 - Oxytocics (first choice oxytocin)
 - Empty bladder
 - Examine placenta
- Begin resuscitation immediately

Vaginal Bleeding after Childbirth

21

Fever During and After Childbirth

Advances in Maternal and Neonatal Health

Session Objectives

- To discuss best practices for management of infection during and after childbirth, especially:
 - Amnionitis
 - Metritis
- To describe strategies for prevention of infection
- To distinguish between prophylactic and therapeutic use of antibiotics

Fever During and After Childbirth

2

Providing Prophylactic Antibiotics

- Help prevent infection, which can result from certain procedures, including:
 - Cesarean section
 - Manual removal of placenta
 - Correction of uterine inversion
 - Repair of ruptured uterus
 - Postpartum hysterectomy
 - Prolonged rupture of membranes (Group B streptococcus)
- If infection is suspected or diagnosed, therapeutic antibiotics are more appropriate

Fever During and After Childbirth

3

Providing Prophylactic Antibiotics (continued)

- Should be given 30 minutes before procedure to allow adequate blood levels at time of procedure
- Except with cesarean section, give antibiotics when cord is clamped after delivery of newborn
- One dose is enough (as effective as 3 doses or 24 hours of antibiotics)
- If procedure is longer than 6 hours or blood loss is 1,500 mL or more, give second dose

Gyssens 1999; Polk and
Christmas 2000.

Fever During and After Childbirth

4

Providing Prophylactic Antibiotics for Cesarean Section: Objective and Design

- Objective: To determine which antibiotic regimen is most effective in reducing infectious morbidity in women undergoing cesarean section
- Methods: 51 randomized controlled trials
- Outcomes: Fever, wound infection, urinary tract infection, other serious infections, adverse reactions, cost, newborn outcomes

Hopkins and Smaill 2000.

Fever During and After Childbirth

5

Providing Prophylactic Antibiotics for Cesarean Section: Results

- Ampicillin and 1st generation cephalosporin have similar efficacy in reducing postoperative endometritis
 - No need for more broad spectrum agents or multiple doses
 - Need randomized controlled trial to test optimal timing (pre-operative vs. at cord clamp)

Hopkins and Smaill 2000.

Fever During and After Childbirth

6

Providing Therapeutic Antibiotics

- For general treatment of obstetrical infection or until diagnosis is made, give broad spectrum antibiotics
- Treat specific infection with specific antibiotics
- If response is poor after 48 hours:
 - Ensure adequate dosages of antibiotics are being given
 - Re-evaluate woman for other infection or abscess
 - Treat based on reported microbial sensitivity
- End point is when:
 - Woman is fever-free for 48 hours
 - Clinical examination shows woman is improving
 - Woman completes course of antibiotics (in all cases except metritis)

Fever During and After Childbirth

7

Principles of Treatment with Antibiotics

- Adequate dosing
- Adequate duration
- Continued re-evaluation of the patient

Fever During and After Childbirth

8

Fever During Pregnancy and Labor: Differential Diagnosis

- Cystitis
- Acute pyelonephritis
- Septic abortion
- Amnionitis
- Pneumonia
- Malaria
- Typhoid
- Hepatitis

Fever During and After Childbirth

9

Acute Pyelonephritis

- Treat, because of risks of:
 - Preterm labor
 - Sepsis
- Easy to treat
- Inexpensive

Fever During and After Childbirth

10

Management of Acute Pyelonephritis

- If in shock or preterm labor, manage as indicated
- Check urine culture and sensitivity and give appropriate antibiotic
- If no culture available, give IV antibiotics until woman is fever-free for 48 hours:
 - Ampicillin every 6 hours
 - PLUS gentamicin daily
- Ensure adequate hydration by mouth or IV
- Give paracetamol by mouth for pain and to lower temperature

Fever During and After Childbirth

11

Acute Pyelonephritis: Subsequent Prophylaxis

- Recurrence of acute pyelonephritis in the same gestation is reported to be 10–18%
- Suppressive therapy: 2.7% will get another urinary tract infection
- No suppressive therapy: 20–30% will get another urinary tract infection
- To prevent further infections, give antibiotics once daily at bedtime for remainder of pregnancy and 2 weeks postpartum:
 - Trimethoprim/sulfamethoxazole
 - Amoxicillin

Sweet and Gibbs 1998; Duff 1996.

Fever During and After Childbirth

12

Septic Abortion

- Cause of 12.9% of maternal deaths
- Postabortion care has had tremendous impact on reducing mortality, particularly with use of manual vacuum aspiration

Fever During and After Childbirth

13

Management of Septic Abortion

- Begin antibiotics as soon as possible before evacuation:
 - Ampicillin every 6 hours
 - PLUS gentamicin daily
 - PLUS metronidazole every 8 hours
- Continue until fever-free for 48 hours
- Manual vacuum aspiration

Fever During and After Childbirth

14

Amnionitis: Antibiotics

- Prompt intrapartum initiation (rather than delay until after childbirth) of broad spectrum antibiotics results in:
 - Less newborn bacteremia
 - Less newborn pneumonia
 - Reduced maternal febrile morbidity
 - Shorter duration of hospitalization
- Treatment initiated intrapartum will not mask newborn infection

Gibbs et al 1988.

Fever During and After Childbirth

15

Amnionitis: Antibiotics (continued)

- Ampicillin and gentamicin
 - Broad coverage for wide variety of organisms
 - Crosses placenta and achieves adequate concentrations in the fetus
 - Excellent activity against group B streptococci and E. coli—major causes of newborn sepsis
- Anaerobic coverage is not necessary (unless cesarean section performed)

Hauth et al 1985.

Fever During and After Childbirth

16

Management of Amnionitis

- Give combination of antibiotics until childbirth:
 - Ampicillin every 6 hours
 - PLUS gentamicin daily
- If woman delivers vaginally, discontinue antibiotics postpartum
- If woman has cesarean section:
 - Continue above antibiotics
 - Add metronidazole every 8 hours
 - Continue until fever-free for 48 hours

ACOG 1998.

Fever During and After Childbirth

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Management of Amnionitis (continued)

- If cervix is favorable, induce labor with oxytocin
- If cervix is unfavorable, ripen with prostaglandins and infuse oxytocin or deliver by cesarean section

Fever During and After Childbirth

18

Aminoglycosides During Pregnancy: Objective and Design

- **Objective:** To evaluate teratogenic potential of aminoglycosides
- **Methods:**
 - Selected cases of congenital anomalies from Hungarian congenital anomaly registry from 1980–1996
 - Gleaned exposure data from antenatal care records, medical documents, questionnaire to mother

Czeizel et al 2000.

Fever During and After Childbirth

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Aminoglycosides During Pregnancy: Results

No detectable teratogenesis from parenteral gentamicin, streptomycin, tobramycin or oral neomycin

Czeizel et al 2000.

Fever During and After Childbirth

20

Fever After Childbirth: Differential Diagnosis

- | | |
|---|------------------------------|
| • Metritis | • Cystitis |
| • Pelvic abscess | • Acute pyelonephritis |
| • Peritonitis | • Deep vein thrombosis |
| • Breast engorgement | • Pneumonia |
| • Mastitis | • Atelectasis |
| • Breast abscess | • Uncomplicated malaria |
| • Wound abscess, wound seroma or wound hematoma | • Severe/complicated malaria |
| • Wound cellulitis | • Typhoid |
| | • Hepatitis |

Fever During and After Childbirth

21

Obstetric and Medical Factors Affecting Postpartum Sepsis

- Intervention during labor and childbirth
- Dangerous infections following prolonged and obstructed labor
- Thrombophlebitis, pulmonary embolism, coagulopathy and septic shock may complicate the infection
- Remember that clostridium infections may be difficult to detect and occur where contamination with earth or cow dung is possible

Kwast 1991.

Fever During and After Childbirth

22

Health Service Factors Affecting Postpartum Sepsis

- Majority of deaths occur between first and second week of puerperium and are linked to medical and midwifery/nursing staff factors:
 - Inadequate:
 - Monitoring of temperature
 - Bacteriological investigations
 - Treatment with antibiotics or operative intervention
 - Lack of:
 - Asepsis and antisepsis
 - Blood for transfusion
 - Appropriate drugs

Kwast 1991.

Fever During and After Childbirth

23

Fever After Childbirth: General Management

- Encourage bedrest
- Ensure adequate hydration by mouth or IV
- Decrease temperature with fan or tepid sponging
- If shock suspected, begin treatment immediately

Fever During and After Childbirth

24

Management of Metritis

- Start antibiotics:
 - Ampicillin every 6 hours
 - Gentamicin every 24 hours
 - Metronidazole every 8 hours
 - Assess if retained placental fragments
- All the while:

 - Give fluids
 - Transfuse blood as needed
 - Give pain medication
 - Continue close monitoring
 - Watch for shock
 - Watch for development of abscess

Fever During and After Childbirth

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Antibiotics for Metritis

- IV antibiotics:
 - Ampicillin every 6 hours
 - Gentamicin every 24 hours
 - Metronidazole every 8 hours
- Continue until fever-free for 48 hours
- No oral antibiotics after treatment:
 - Not proven to add any benefit
 - Only add to expense

Fever During and After Childbirth

26

Managing Metritis: Objective and Design

- Objective: To assess the effects of different regimens and their complications in the treatment of endometritis
- Methods: 41 randomized controlled trials
- Outcomes: Duration of fever, treatment failure, other complication (infectious), drug reaction, costs

French and Smaill 2000.

Fever During and After Childbirth

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Managing Metritis: Results

- More treatment failure with regimens other than clindamycin and an aminoglycoside RR 1.37 (1.10–1.70)
- Three studies looked at once-daily gentamicin vs. three-times daily:
No difference in failure rates, but a trend toward fewer failures with once-daily dosing RR 0.60 (0.30–1.20)
- No difference in nephrotoxicity, lower cost

French and Smaill 2000.

Fever During and After Childbirth

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Septic Shock

- IV antibiotics for sick patients
- Antibiotics for
 - Gram + (penicillin, ampicillin)
 - Gram - (gentamicin)
 - Anaerobes (metronidazole)
- Adequate doses of antibiotics are necessary
- Aggressive fluid resuscitation (2–3 L to start)
- Look for abscess, peritonitis or other condition requiring surgery
- IV antibiotics may be necessary for longer if bacteremia

Fever During and After Childbirth

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Prevention Strategies

- Infection prevention practices for every childbirth:
 - Minimum manipulation
 - High-level disinfected or sterile gloves for examination
 - Avoid unnecessary procedures (e.g., episiotomy)
- Three Cleans:
 - Clean hands
 - Clean surface
 - Clean blade
- Plus:
 - Clean tie
 - Clean perineum
 - Clean nails

Fever During and After Childbirth

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Summary

- Many causes of fever during and after childbirth
- Therapeutic antibiotics **ONLY** if disease is diagnosed
- Duration of treatment dependent on disease, whether or not cesarean section has occurred and presence of bacteremia

Fever During and After Childbirth

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Fever During and After Childbirth

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Fever During and After Childbirth

33

Normal Newborn Care

Advances in Maternal and Neonatal Health

Session Objectives

- To define essential elements of early newborn care
- To discuss best practices and technologies for promoting newborn health
- To use relevant data and information to develop appropriate essential newborn recommendations

Normal Newborn Care

2

Newborn Deaths

- 8.1 million infant deaths (1993)
- 3.9 million (48%) newborn deaths
- 2.8 million (67%) early newborn deaths
- Major causes of newborn deaths
 - Birth asphyxia: 21%
 - Infections: 42% (tetanus, sepsis, meningitis, pneumonia, diarrhea)



Normal Newborn Care

3

Newborn Deaths (continued)

- Birth process was the antecedent cause of 2/3 of deaths due to infections
 - Lack of hygiene at childbirth and during newborn period
 - Home births without skilled providers
- Birth asphyxia in developing countries
 - 3% of newborns suffer mild to moderate birth asphyxia
 - Prompt resuscitation is often not initiated or procedure is inadequate or incorrect

Normal Newborn Care

4

Newborn Deaths (continued)

- Hypothermia and newborn deaths
 - Significant contribution to deaths in low birth weight infants and preterm newborns
 - Social, cultural and health practices delaying care to the newborn
- Countries with high sexually transmitted infection (STI) prevalence and inconsistent prophylactic practices
 - Ophthalmia neonatorum is a common cause of blindness

Normal Newborn Care

5

Newborn Deaths (continued)

- Low birth weight
 - An extremely important factor in newborn mortality
- Place of childbirth
 - At least 2 out of 3 childbirths in developing countries occur at home
 - Only half are attended by skilled providers
 - Strategies for improving newborn health should target:
 - Birth attendants, families and communities
 - Healthcare providers within the formal health system

Normal Newborn Care

6

Essential Newborn Care Interventions

- Clean childbirth and cord care
 - Prevent newborn infection
- Thermal protection
 - Prevent and manage newborn hypo/hyperthermia
- Early and exclusive breastfeeding
 - Started within 1 hour after childbirth
- Initiation of breathing and resuscitation
 - Early asphyxia identification and management

Normal Newborn Care

7

Essential Newborn Care Interventions (continued)

- Eye care
 - Prevent and manage ophthalmia neonatorum
- Immunization
 - At birth: Bacille Calmette-Guerin (BCG) vaccine, oral poliovirus vaccine (OPV) and hepatitis B virus (HBV) vaccine
- Identification and management of sick newborn
- Care of preterm and/or low birth weight newborn

WHO 1999.

Normal Newborn Care

8

Cleanliness to Prevent Infection

- Principles of cleanliness essential in both home and health facilities childbirths
- Principles of cleanliness at childbirth
 - Clean hands
 - Clean perineum
 - Nothing unclean introduced vaginally
 - Clean childbirth surface
 - Cleanliness in cord clamping and cutting
 - Cleanliness for cord care
- Infection prevention/control measures at healthcare facilities

Normal Newborn Care

9

Thermal Protection

- Newborn physiology
 - Normal temperature: 36.5–37.5°C
 - Hypothermia: < 36.5°C
 - Stabilization period: First 6–12 hours after birth
 - Large surface area
 - Poor thermal insulation
 - Small body mass to produce and conserve heat
 - Inability to change posture or adjust clothing to respond to thermal stress
- Increase hypothermia
 - Newborn left wet while waiting for delivery of placenta
 - Early bathing of newborn (within 24 hours)

Normal Newborn Care

10

Hypothermia Prevention

- Deliver in a warm room
- Dry newborn thoroughly and wrap in dry, warm cloth
- Keep out of draft and place on a warm surface
- Give to mother as soon as possible
 - Skin-to-skin contact first few hours after childbirth
 - Promotes bonding
 - Enables early breastfeeding
- Check warmth by feeling newborn's feet every 15 minutes
- Bathe when temperature is stable (after 24 hours)

Normal Newborn Care

11

Early and Exclusive Breastfeeding

- Early contact between mother and newborn
 - Enables breastfeeding
 - Rooming-in policies in health facilities prevents nosocomial infection
- Best practices
 - No prelacteal feeds or other supplement
 - Giving first breastfeed within one hour of birth
 - Correct positioning to enable good attachment of the newborn
 - Breastfeeding on demand
 - Psycho-social support to breastfeeding mother

WHO 1999.

Normal Newborn Care

12

Breathing Initiation and Resuscitation

- Spontaneous breathing (> 30 breaths/min.) in most newborns
 - Gentle stimulation, if at all
- Effectiveness of routine oro-nasal suctioning is unknown
 - Biologically plausible advantages—clear airway
 - Potentially real disadvantages—cardiac arrhythmia
 - Bulb suctioning preferred
- Newborn resuscitation may be needed
 - Fetal distress
 - Thick meconium staining
 - Vaginal breech deliveries
 - Preterm

Hamilton 1999.

Normal Newborn Care

13

Eye Care to Prevent or Manage Ophthalmia Neonatorum

- Ophthalmia neonatorum
 - Conjunctivitis with discharge during first 2 weeks of life
 - Appears usually 2–5 days after birth
 - Corneal damage if untreated
 - Systemic progression if not managed
- Etiology
 - *N. gonorrhea*
 - More severe and rapid development of complications
 - 30–50% mother-newborn transmission rate
 - *C. trachomatis*

Normal Newborn Care

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Eye Care to Prevent or Manage Ophthalmia Neonatorum (continued)

- Prophylaxis
 - Clean eyes immediately
 - 1% silver nitrate solution
 - Not effective for chlamydia
 - 2.5% povidone-iodine solution
 - 1% tetracycline ointment
 - Not effective vs. some *N. gonorrhea* strains
- Common causes of prophylaxis failure
 - Giving prophylaxis after first hour
 - Flushing of eyes after silver nitrate application
 - Using old prophylactic solutions

Normal Newborn Care

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Efficacy of Prophylaxis for Conjunctivitis in China

- Objective: To assess etiology of newborn conjunctivitis and evaluate the efficacy of regimens in China
- Design: November 1989 to October 1991 rotated regimens monthly: tetracycline, erythromycin, silver nitrate
- 302 (6.7%) infants developed conjunctivitis, most *S. aureus* (26.2%) and chlamydia (22.5%)
- Silver nitrate, tetracycline: Fewer cases than no prophylaxis ($p < 0.05$), erythromycin: not significant

Chen 1992.

Normal Newborn Care

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Prophylaxis for Conjunctivitis: Objective and Design

- Objective: To compare efficacy in prevention of nongonococcal conjunctivitis
- Design: Randomized control trial to compare erythromycin, silver nitrate, no prophylaxis
 - Examined with test for leukocyte esterase and *chlamydia trachomatis* antibody probe 30–48 hours postpartum, 13–15 days later and telephone contact up to 60 days of life
- Main outcome measured: Conjunctivitis within 60 days of life and nasolacrimal duct patency

Bell et al 1993.

Normal Newborn Care

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Prophylaxis for Conjunctivitis: Results and Conclusion

- Results: 630 infants
- 109 with conjunctivitis
 - Silver nitrate vs. no prophylaxis: Hazard ratio 0.61 (0.39–0.97)
 - Chemical conjunctivitis with silver nitrate resolves within 48 hours
 - Erythromycin vs. no prophylaxis: Hazard ratio 0.69 (not significant)
- Conclusion: Parental choice of prophylaxis, including no prophylaxis, is reasonable IF antenatal care and STI screening

Bell et al 1993.

Normal Newborn Care

18

Povidone-Iodine for Conjunctivitis: Objective and Design

- **Objective:** To determine incidence and type of conjunctivitis after povidone-iodine in Kenya
- **Design:** Rotate regimen weekly: erythromycin, silver nitrate, povidone-iodine
- **Results:**
 - **Conjunctivitis:**
 - Chlamydia in 50.5%
 - S. aureus in 39.7%
 - More infections in silver nitrate than povidone-iodine, OR 1.76, $p < 0.001$
 - More infections in erythromycin OR 1.38, $p=0.001$

Isenberg, Apt and Wood 1995.

Normal Newborn Care

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Povidone-Iodine for Conjunctivitis: Conclusion

Povidone-iodine:

- Is good prophylaxis
- Has wider antibacterial spectrum
- Causes greater reduction in colony-forming units and number of bacterial species
- Is active against viruses
- Is inexpensive

Isenberg, Apt and Wood 1995.

Normal Newborn Care

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Immunization

- BCG vaccinations in all populations at high risk for tuberculosis infection
- Single dose of OPV at birth or in the two weeks after birth
- HBV vaccination as soon as possible where perinatal infections are common

Normal Newborn Care

21

Summary

The essential components of normal newborn care include:

- Clean childbirth and cord care
- Thermal protection
- Early and exclusive breastfeeding
- Monitoring
- Eye care
- Immunization

Normal Newborn Care

22

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Normal Newborn Care

23

Analgesia and Anesthesia in Emergency Obstetric Care

Managing Complications in Pregnancy and Childbirth

Session Objectives

- To describe the principles of pain relief in emergency obstetric care
- To describe different methods of pain relief in emergency obstetric care

Analgesia and Anesthesia

2

Basic Requirements of Pain Relief

- Supportive attention from staff before, during and after procedure to reduce anxiety
- Method of pain relief that is:
 - Appropriate for procedure
 - Adequate for pain relief
 - Safe for woman (and baby)
- Skill and expertise of provider in using instruments gently and minimizing tissue damage

Analgesia and Anesthesia

3

Pain Relief in Labor

Non-pharmacological methods of pain relief include:

- Support from birth companion
- Encouragement, compassion and support from provider
- Ambulation and change of position
- Back massage
- Breathing techniques
- Warm showers and baths

Pain Relief in Labor (continued)

If non-pharmacological methods of pain relief are not adequate:

- Give:
 - Pethidine 1 mg/kg body weight (maximum dose 100 mg) IM or IV slowly OR
 - Morphine 0.1 mg/kg body weight IM
- Give drug every 4 hours as needed
- Give promethazine 25 mg IM or IV if vomiting occurs

WARNING: The newborn may suffer from respiratory depression if the woman is given these drugs. Be prepared to initiate resuscitation and give naloxone.

Local Anesthesia

- Blocks sensory nerves
- Commonly used preparation is 0.5% with or without adrenaline
- Addition of adrenaline reduces absorption and prolongs action
- Premedication with pethidine and diazepam may be required for longer procedures

Local Anesthesia (continued)

Because the woman will be awake during the procedure:

- Counsel her before the procedure to increase cooperation and reduce fears
- Tell her what you are doing at each step of the procedure
- Wait until the anesthetic has taken full effect before performing procedure

Local Anesthesia (continued)

Prevent complications of local anesthesia by:

- Using dilute solutions (0.5% preferred)
- Adding adrenaline when more than 40 mL will be used (e.g., cesarean section)
- Using lowest effective dose
- Not exceeding maximum dose
 - Without adrenaline 4 mg/kg body weight
 - With adrenaline 7 mg/kg body weight
- Injecting slowly
- Avoiding IV injection

Nerve Blocks

Target specific nerves to anesthetize a region of the body

- Paracervical block can be used for dilatation and curettage and manual vacuum aspiration
- Pudendal block can be used for instrumental delivery, breech delivery, episiotomy, repair of perineal tears, craniotomy/craniocentesis

Spinal (Subarachnoid) Anesthesia

Produces anesthesia in the lower part of the body by introducing an anesthetic solution into the the subarachnoid space around the spinal cord

- Can be used for cesarean section, laparotomy, repair of extensive perineal tears, manual removal of placenta
- Pre-load woman with 500–1,000 mL IV fluids to avoid hypotension
- Ensure sterile technique
- Use finest needle available
- Keep the woman flat on her back for at least 6 hours after procedure to prevent post-spinal headache

Ketamine

Ketamine is a general anesthetic

- Can be used for any relatively short procedure where muscle relaxation is not required
- AVOID ketamine in women with hypertension, pre-eclampsia, eclampsia or heart disease

Ketamine (continued)

- Usual dose:
 - 6–10 mg/kg body weight IM OR
 - 2 mg/kg body weight IV slowly over 2 minutes
- When used alone, ketamine can cause unpleasant hallucinations
- For ketamine infusion, premedicate with:
 - Atropine sulfate 0.6 mg IM 30 minutes before surgery AND
 - Diazepam (for cesarean section, give after the newborn is delivered)

Postoperative Analgesia

- Good postoperative pain control regimens include:
 - Paracetamol 500 mg by mouth as needed
 - Pethidine 1 mg/kg body weight IM or IV slowly
 - Morphine 0.1 mg/kg body weight IM
- Repeat every 4 hours as needed
- Give Promethazine 25 mg IM or IV every 4 hours if vomiting occurs

Operative Care Principles

Managing Complications in Pregnancy and Childbirth

Session Objective

- To review the principles and practices of operative care in emergency obstetrics:
 - Preoperative care
 - Intraoperative care
 - Postoperative care

Operative Care Principles

2

Basic Principle

The woman is the primary focus of the doctor, midwife and nurse during any operative procedure

Operative Care Principles

3

Preoperative Care

- Prepare the operating theater by ensuring that:
 - The area is clean
 - Necessary supplies and equipment are available, including drugs and oxygen
 - Functioning emergency equipment is available
 - Adequate sterile supplies are available
 - Adequate supply of surgical gowns and other protective gear is available for all members of surgical team

Preoperative Care (continued)

- Prepare the woman for surgery by:
 - Explaining the procedure and its purpose, and obtaining informed consent
 - Preparing her emotionally and psychologically
 - Reviewing her medical history for problems, performing appropriate laboratory tests and monitoring vital signs
 - Cleaning proposed surgical area
 - Administering appropriate pre-anesthetic medications and catheterizing her bladder, if necessary
 - Providing relevant information to other team members

Intraoperative Care

- Place the woman in a position appropriate for the procedure while ensuring:
 - Optimum exposure of operative site
 - Access for anesthesia and monitoring
 - Safety of woman (and her baby)
 - Dignity and modesty of woman

Intraoperative Care (continued)

- Perform a surgical handscrub before gowning:
 - Remove all jewelry
 - Hold hands above level of elbows
 - Wash from fingertips to elbows with soap and water for 3–5 minutes
 - Rinse each hand and arm separately with clean running water, holding hands above level of elbows
 - Dry each hand with a separate clean or disposable towel, wiping from fingertips to elbows

Operative Care Principles

7

Intraoperative Care (continued)

- Clean incision site with antiseptic solution and a cotton or gauze swab:
 - Begin at incision site and clean outward in a circular motion
 - Repeat two more times, using a new swab each time
- Drape the woman, leaving only the surgical site exposed
- Monitor vital signs throughout procedure and initiate treatment if condition worsens
- Maintain adequate pain relief and hydration
- Give prophylactic antibiotics if appropriate

Operative Care Principles

8

Intraoperative Care (continued)

- Make incision only as large as necessary for procedure
- Handle tissue gently to minimize tissue damage and decrease risk of infection
- Keep blood loss to a minimum
- Leave an abdominal drain in place if bleeding persists or if infection is present or suspected
- Ensure correct counts of instruments, sharps and sponges at end of procedure
- Use appropriate type and size of suture for the tissue
- Cover wound with sterile dressing

Operative Care Principles

9

Postoperative Care

Initial postoperative care:

- Place the woman in the recovery position
- Assess woman's condition:
 - Monitor vital signs every 15 minutes for first hour and then every 30 minutes for next hour
 - Monitor level of consciousness every 15 minutes until woman is alert
 - Intervene if condition worsens
- Ensure clear airway and adequate ventilation
- Maintain adequate hydration and transfuse if necessary
- Ensure adequate pain relief

Operative Care Principles

10

Postoperative Care (continued)

Subsequent care:

- Monitor vital signs and urine output
- Start on oral fluids as tolerated and move to normal meal; if necessary, give IV fluids until oral fluids are well tolerated
- Remove dressing after first postoperative day
- Remove drain after infection has cleared or when there is no drainage for 48 hours
- Provide adequate pain relief and give antibiotics if indicated
- Remove urinary catheter as soon as urine is clear
- Encourage ambulation
- Remove skin sutures 5 days after surgery

Operative Care Principles

11

Obstetric Surgery

Managing Complications in Pregnancy and Childbirth

Session Objectives

- To describe general principles of obstetric surgery
- To describe common surgical procedures in emergency obstetric care

Obstetric Surgery

2

Basic Principle

The woman is the primary focus of the doctor, midwife and nurse during any operative procedure

Obstetric Surgery

3

Pre-Operative Care

- Ensure that the operating room is fully functional
- Prepare the woman for surgery by explaining to her the procedure to be done and its purpose. Obtain her informed consent
- Review her medical history for problems and indication for surgery and do appropriate laboratory tests
- Administer appropriate pre-anesthetic medications

Obstetric Surgery

4

Intra-Operative Care

- Place the woman in a position appropriate for the procedure
- Ensure sterile technique
- Handle tissue gently—minimize tissue damage
- Ensure hemostasis, adequate pain relief and hydration
- Monitor her condition throughout the procedure and initiate treatment if condition worsens

Obstetric Surgery

5

Postoperative Care

- Ensure clear airway, ventilation, hydration and pain relief
- Monitor vital signs and level of consciousness every 15 minutes until she is awake and her condition is stable
- Start on oral fluids as tolerated and change to normal meal
- Encourage ambulation
- Remove skin sutures when the wound has healed

Obstetric Surgery

6

Common Obstetric Surgery

- Cesarean section
- Salpingectomy for ectopic pregnancy
- Laparotomy for ruptured uterus
- Postpartum hysterectomy

Obstetric Surgery

7

Cesarean Section

- May be done under local, spinal or general anesthesia
- Anticipate and prepare for problems during childbirth (e.g., difficulty in delivering a head deep in the pelvis)
- Vertical abdominal incision is preferred if local anesthesia is used
- Open the lower segment of the uterus transversely and deliver the newborn, placenta and membranes
- Give prophylactic antibiotic and oxytocin
- Close the uterus and abdomen after ensuring hemostasis

Obstetric Surgery

8

Problems Encountered During Cesarean Section

- Difficulty in controlling bleeding
 - Oxytocics, massage, sutures
 - Uterine and utero-ovarian artery ligation, hysterectomy
- Difficulty in delivering malpresentation
 - Anticipate and perform appropriate manipulations for childbirth
- Placenta previa/Adherent placenta
 - Incise placenta and deliver
 - Hysterectomy if placenta cannot be removed or uncontrollable bleeding

Obstetric Surgery

9

Cesarean Section: Post-Procedure Care

- Watch for postpartum bleeding
 - Give oxytocin infusion after surgery
- Give adequate analgesia and hydration
- Encourage early feeding and ambulation
- Explain what was done and its implications to the woman

Obstetric Surgery

10

Salpingectomy for Ectopic Pregnancy

- May be done under spinal or general anesthesia
- Open the abdomen and identify the fallopian tube with the ectopic pregnancy
- Clamp the mesosalpinx to stop bleeding
- Do a salpingectomy
- Check the other tube, ovaries and other pelvic organs for pathology
- Close the abdomen after giving prophylactic antibiotics
- Give adequate analgesia and hydration
- Encourage early feeding and ambulation
- Explain what was done and its implications to the woman

Obstetric Surgery

11

Laparotomy for Ruptured Uterus

- May be done under spinal or general anesthesia
- Open the abdomen and deliver the newborn and placenta
- Lift the uterus out of the incision to visualize the extent of the rupture. Suture together the edges of the rupture. If repair is not possible, do hysterectomy
- Examine the bladder for rupture and repair if ruptured

Obstetric Surgery

12

Laparotomy for Ruptured Uterus (continued)

- Close the abdomen after giving prophylactic antibiotics and oxytocin infusion
- Leave drain if hemostasis is not satisfactory
- Give adequate analgesia and hydration
- Encourage early feeding and ambulation
- Explain what was done and its implications to the woman

Obstetric Surgery

13

Postpartum Hysterectomy

- May be done under spinal or general anesthesia
- Hysterectomy may be
 - Subtotal if cervix is left behind
 - Total if the cervix is removed
- Lift the uterus out through the incision and compress it to reduce bleeding
- Clamp and divide round ligament, tubes and ovarian ligaments but ligate pedicles after uterine artery has been tied
- Separate the urinary bladder away from the lower segment

Obstetric Surgery

14

Postpartum Hysterectomy (continued)

- **WARNING:** The ureters are close to the uterine vessels
- For sub-total hysterectomy: Ligate the uterine arteries and amputate the uterus just above this level
- For total hysterectomy: Divide cardinal ligaments to remove cervix
- Close the stump
- Ensure hemostasis. Leave drain if hemostasis is not satisfactory
- Give adequate analgesia and hydration
- Encourage early feeding and ambulation
- Explain what was done and its implications to the woman

Obstetric Surgery

15

Weeks 4 and 5

Improving Emergency Obstetric Care through Criterion-Based Audit

Managing Complications in Pregnancy and Childbirth

Definition of an Audit

“The systematic and critical analysis of the quality of medical care, including the procedures used for diagnosis and treatment, the use of resources and the resulting outcome and quality of life for the patient.”

Crombie et al 1997

Criterion-Based Audit

2

Areas to Be Audited

- Technical: Clinical care patients receive
- Managerial: Management (or organization) of the health facility
- Human rights aspects of medical care

Criterion-Based Audit

3

Why Conduct an Audit?

- To improve practices
- To enhance rational use of limited resources
- To improve staff morale and motivation
- To increase utilization of services
- To increase met need for emergency obstetric care
- To improve case fatality rates

Criterion-Based Audit

4

Types of Medical Audits

- Case reviews and case-note presentations
- National-level Confidential Enquiries
- Criterion-based audits

Criterion-Based Audit

5

Criterion-Based Audit

- Criterion-based audit compares current practices against written and agreed upon criteria
- Criteria are based on standards of evidence-based care
- Criteria are “measurable activities that are appropriate for the setting in which they are used”

Criterion-Based Audit

6

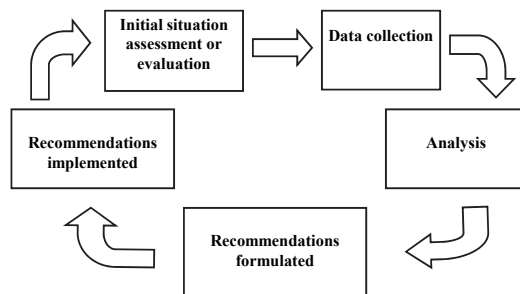
Resources for Standards and Quality

- Enkin et al. 2000. *Cochrane Collaboration: A Guide to Effective Care in Pregnancy and Childbirth*.
- World Health Organization (WHO). 2000. *Managing Complications in Pregnancy and Childbirth: A Guide for Midwives and Doctors*.
- American College of Nurse-Midwives. 1998. *Life Saving Skills for Midwives*.
- WHO guidelines for rational use of blood, sharps disposal and infection control
- National standards and guidelines

Criterion-Based Audit

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Audit Cycle



Criterion-Based Audit

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Advantages of Criterion-Based Audits

- Process is objective: Problem identification is easier and less threatening because the criteria and standards for assessing a practice were agreed upon in advance by the participants of the audit process. Case reviews often place blame
- Allow measurement of change
- Address whole process of care or just parts of it
- Non-medical personnel may be able to extract data

Criterion-Based Audit

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Steps in the Audit Process

Step 1: Form an Audit Team

Team should have people with:

- A desire to examine current practice
- Enough knowledge to identify criteria
- Willingness to implement change

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Steps in the Audit Process

Step 2: Choose Your Topic

- Local relevance
- Problem is amenable to change

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Steps in the Audit Process

Step 3: Define Your Cases Clearly

- Adverse outcomes
 - Deaths, near misses or severe obstetric complications
- All cesarean section deliveries
- All blood transfusions
- All referrals
- All emergency hysterectomies

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Steps in the Audit Process Step 4: Set Your Criteria

- Criteria should be essential (not optional)
- Evidence should support criteria
- Patient records need to exist for auditing
- Practices realistically can be changed

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Example: Criteria-Setting for Clinical Case

- Clinical management of ruptured uterus
 - Patient treated for shock with IV blood replacement before laparotomy
 - Ampicillin 2 g IV or cefazolin 1 g IV was given before surgery
 - Oxytocin 20 units in 1 L of IV fluids was infused after newborn and placenta were delivered

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Example: Criteria for Evaluating Referral Procedures

- Referral slip included:
 - Patient stabilized prior to referral
 - What drugs or procedures were given
 - Reason(s) for referral
 - Patient history

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Steps in the Audit Process Steps 5–7

5. Identify information sources
6. Design a data extraction sheet
7. Data collection

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Steps in the Audit Process Step 8: Analysis

Management of postpartum hemorrhage

Treatment Criteria	First Assessment	Second Assessment
Oxytocics given	96%	93%
Urine output measured hourly	64%	79%
Blood typed and cross-matched	49%	74%

Wagaarachchi et al 2001.

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Steps in the Audit Process Steps 9–11

9. Recommendations formulated
10. Implementation of the recommendations
11. Repeat the audit cycle

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How Auditing Human Rights May Differ from Clinical Topics

- Standards of 'evidence-based care' may not come from randomized clinical trials
- Definitions of cases and of criteria may require more participation of audit team
- Patient records unlikely to provide the necessary information; patients themselves may be interviewed

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References

Crombie I et al. 1997. *The Audit Handbook. Improving health care through audit*. John Wiley & Sons: New York.

Wagaarachchi P et al. 2001. Holding up a mirror: Changing obstetric practice through criterion-based clinical audit in developing countries. *Int J Gyn Obstet* 74: 119–130.

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Section Four: EmOC Procedure Checklists

EMERGENCY OBSTETRIC CARE COURSE

TRAINER'S NOTEBOOK

SECTION FOUR: CHECKLISTS FOR EMERGENCY OBSTETRIC CARE PROCEDURES

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CHECKLISTS FOR EMERGENCY OBSTETRIC CARE PROCEDURES

USING THE CHECKLISTS

The checklists for emergency obstetric care procedures are used by the clinical trainer to evaluate each participant's performance in doing the procedures with women. These checklists are derived from the information provided in the reference manual(s) as well as that in the learning guides. Unlike the learning guides, which are quite detailed, the checklists focus on the **key** steps in the entire process.

Criteria for satisfactory performance by the participant are based on the knowledge, attitudes and skills set forth in the reference manual(s) and learning guides.

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

Evaluation of the **counseling skills** of each participant may be done with women. It may, however, also be accomplished through observation during role plays with volunteers or women in real situations at any time during the course.

Evaluation of **clinical skills** usually will be done during the last days of the course (depending on class size and client caseload). In a participant's first few cases, it is not mandatory (or even possible) for the trainer to observe the participant perform a procedure from beginning to end. What is important is that each participant demonstrates the steps or tasks at least once for feedback and coaching prior to the final evaluation. (If a step or task is not done correctly, the participant should repeat the entire skill or activity sequence, **not** just the incorrect step.) In addition, it is recommended that the clinical trainer not stop the participant at the incorrect step unless the safety of the woman is at stake. If it is not, the clinical trainer should allow her/him to finish the skill/activity before providing coaching and feedback on her/his overall performance.

In determining whether the participant is qualified, the clinical trainer(s) will observe and rate the participant's performance on each step of a skill or activity. The participant must be rated "Satisfactory" for each skill/activity group covered in the checklist in order to be evaluated as qualified.

Finally, during the course, it is the clinical trainer's responsibility to observe each participant's overall performance in performing emergency obstetric care procedures. Only by doing this can the clinical trainer assess the way the participant uses what s/he has learned (e.g., her/his attitude toward women). This provides a key opportunity to observe the impact of the participant's **attitude** on women—a critical component of quality service delivery.

Qualification

The number of procedures each participant needs to observe, assist with and perform will vary depending on her/his previous training and experience as well as how the current training is being conducted (e.g., are models being used for initial skill acquisition). The number of clinical cases needed must be assessed on an individual basis; there is no "magic number" of cases that automatically makes a person qualified to perform emergency obstetric care procedures.

When anatomic models are used for initial skill acquisition, nearly all participants will be judged to be competent after only two to four cases. Proficiency, however, invariably requires additional practice. Therefore, when training participants who will become **new** healthcare providers (i.e., participants without prior training or experience), each participant may need to perform emergency obstetric care procedures on at least 5 to 10 women in order to "feel confident" about her/his skills. Thus, in the final analysis, the judgment of a skilled clinical trainer is the most important factor in determining competence (i.e., whether the participant is qualified).

The goal of this training is to enable **every** participant to achieve competency (i.e., be qualified to perform emergency obstetric care procedures). Therefore, if additional practice is needed, for example, manual vacuum aspiration is needed, sufficient extra cases should be allocated during the course to ensure that the participant is qualified. Finally, once qualified, each participant should have the opportunity to apply her/his new knowledge and skills as soon as possible. Failure to do so quickly leads to loss of **provider confidence** and ultimately **loss of competence**.

CHECKLIST FOR ADULT RESUSCITATION

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

Place a “✓” in case box if step/task is performed **satisfactorily**, an “X” if it is **not** performed **satisfactorily**, or N/O if not observed.

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

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

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

PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR ADULT RESUSCITATION (Many of the following steps/tasks should be performed simultaneously.)						
STEP/TASK	CASES					
GENERAL MANAGEMENT						
1. Shout for help.						
2. Greet woman respectfully and with kindness.						
3. Provide continual emotional support and reassurance, as feasible.						
SKILL/ACTIVITY PERFORMED SATISFACTORILY						
IMMEDIATE MANAGEMENT						
1. Check the woman's vital signs.						
2. Ensure that her airway is open.						
3. Give oxygen at 6–8 L/minute by face mask or nasal cannula.						
4. Ensure that she is warm.						
5. Elevate the woman's legs.						
SKILL/ACTIVITY PERFORMED SATISFACTORILY						
BLOOD COLLECTION, FLUID REPLACEMENT AND BLADDER CATHETERIZATION						
1. Use antiseptic handrub or wash hands thoroughly and put on new examination or high-level disinfected surgical gloves.						
2. Draw blood for hemoglobin, cross-matching and bedside clotting test before beginning IV infusion.						
3. Infuse IV fluid at the rate of 1 L in 15–20 minutes.						
4. Do a bedside clotting test.						
5. If the woman is not breathing, or is not breathing well, perform endotracheal intubation and ventilate with a self-inflating bag.						
6. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.						
7. Remove gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.						

CHECKLIST FOR ADULT RESUSCITATION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
8. Use antiseptic handrub or wash hands thoroughly and put on new examination or high-level disinfected surgical gloves.					
9. Catheterize the bladder.					
10. Remove gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.					
11. Use antiseptic handrub or wash hands thoroughly.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
REASSESSMENT AND FURTHER MANAGEMENT					
1. Reassess the woman's response to IV fluids and adjust rate accordingly.					
2. Continue to monitor vital signs every 15 minutes and intake and output every hour.					
3. Check for bleeding and transfuse blood if necessary.					
4. Perform history, physical examination and tests to determine cause of shock.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

CHECKLIST FOR POSTABORTION CARE (MANUAL VACUUM ASPIRATION [MVA])

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

Place a “✓” in case box if step/task is performed **satisfactorily**, an “X” if it is **not** performed **satisfactorily**, or N/O if not observed.

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

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

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

PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR POSTABORTION CARE (MVA) (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
INITIAL ASSESSMENT					
1. Greet woman respectfully and with kindness.					
2. Assess patient for shock or complications.					
MEDICAL EVALUATION					
1. Take a reproductive history and perform physical examination and laboratory tests.					
2. Give her information about her condition.					
3. Discuss her reproductive goals.					
GETTING READY					
1. Tell 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 procedure.					
4. Ask about allergies to antiseptics and anesthetics.					
5. Determine that required sterile or high-level disinfected instruments are present.					
6. Ensure that appropriate size cannula and adapters are available. Check MVA syringe and charge it (establish vacuum).					
7. Check that patient has recently emptied her bladder and washed her perineal area.					
8. Put on personal protective equipment.					
9. Use antiseptic handrub or wash hands thoroughly and put on high-level disinfected or sterile surgical gloves.					
10. Arrange sterile or high-level disinfected instruments on sterile tray or in high-level disinfected container.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

CHECKLIST FOR POSTABORTION CARE (MVA) (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
PREPROCEDURE TASKS					
1. Explain each step of the procedure prior to performing it.					
2. If patient is in second trimester of pregnancy, give oxytocin 10 units IM or ergometrine 0.2 mg IM.					
3. Perform bimanual examination.					
4. Insert speculum.					
5. Apply antiseptic to cervix and vagina three times.					
6. Remove any products of conception (POC) and check for any cervical tears.					
MVA PROCEDURE					
1. Put single-toothed tenaculum or vulsellum forceps on lower lip of cervix.					
2. Administer paracervical block (if necessary).					
3. Apply traction on cervix.					
4. Dilate the cervix (if needed).					
5. Insert the cannula gently through the cervix into the uterine cavity.					
6. Attach the prepared syringe to the cannula.					
7. Evacuate contents of the uterus.					
8. When signs of completion are present, withdraw cannula and MVA syringe. Empty contents of MVA syringe into a strainer.					
9. Remove tenaculum or forceps and speculum.					
10. Perform bimanual examination.					
11. Inspect tissue removed from uterus to ensure complete evacuation.					
12. Insert speculum and check for bleeding.					
13. If uterus is still soft or bleeding persists, repeat steps 5–10.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
POSTPROCEDURE TASKS					
1. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
2. Flush MVA syringe and cannula with 0.5% chlorine solution and submerge in solution for decontamination.					
3. If reusing needle or syringe, fill syringe (with needle attached) with 0.5% chlorine solution and submerge in solution for decontamination. If disposing of needle and syringe, place in puncture-proof container.					
4. Remove gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.					
5. Use antiseptic handrub or wash hands thoroughly.					
6. Check for bleeding and ensure cramping has decreased before discharge.					

CHECKLIST FOR POSTABORTION CARE (MVA) (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK					CASES
7. Instruct patient regarding postabortion care.					
8. Discuss reproductive goals and, as appropriate, provide family planning.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

CHECKLIST FOR POSTABORTION FAMILY PLANNING COUNSELING

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

Place a “✓” in case box if step/task is performed **satisfactorily**, an “X” if it is **not** performed **satisfactorily**, or **N/O** if not observed.

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

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

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

PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR POSTABORTION FAMILY PLANNING COUNSELING (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
INITIAL INTERVIEW					
1. Greet woman respectfully and with kindness.					
2. Assess whether counseling is appropriate at this time (if not, arrange for counseling at another time).					
3. Assure necessary privacy.					
4. Obtain biographic information (name, address, etc.).					
5. Ask about her previous experience with contraception. Provide general information about family planning.					
6. Give the woman information about the contraceptive choices available and the benefits and limitations of each.					
7. Discuss woman's needs, concerns and fears. Help her begin to choose an appropriate method.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
SCREENING					
1. Screen woman carefully to make sure there is no medical condition that would be a problem (complete Screening Checklist).					
2. Perform physical examination, if indicated. (Nonmedical counselors must refer woman for further evaluation.)					
3. Discuss what to do if the woman experiences any side effects or problems.					
4. Provide followup visit instructions and assure woman that she can return to the same clinic at any time.					
5. Ask the woman to repeat instructions and answer any questions.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

CHECKLIST FOR CONDUCTING A CHILDBIRTH

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

Place a “✓” in case box if step/task is performed **satisfactorily**, an “X” if it is **not** performed **satisfactorily**, or N/O if not observed.

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

PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR CONDUCTING A CHILDBIRTH (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
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. Tell 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.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
CONDUCTING THE CHILDBIRTH					
1. Put on personal protective equipment.					
2. Use antiseptic handrub or wash hands thoroughly and put on high-level disinfected or sterile surgical gloves.					
3. Clean the perineum with antiseptic solution.					
4. As the perineum distends, decide whether an episiotomy is necessary and perform as necessary.					
5. After crowning, allow the head to gradually extend and feel around the newborn's neck for the cord: <ul style="list-style-type: none"> • If found, slacken the cord and slip over head or allow the shoulders to pass through, or clamp and cut the cord. 					
6. Allow restitution and external rotation of the head to occur.					
7. Apply gentle downward traction on the head to allow the anterior shoulder to slip beneath the symphysis pubis.					
8. Guide the head and trunk in an upward curve to allow the posterior shoulder to escape over the perineum.					
9. Grasp the newborn around the chest to aid the birth of the trunk and lift it toward the woman's abdomen.					

CHECKLIST FOR CONDUCTING A CHILDBIRTH (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
10. Note the time of birth.					
11. Dry the newborn quickly and thoroughly with a clean, dry towel/cloth immediately after birth.					
12. Wipe the newborn's eyes with a clean piece of cloth.					
13. Place the newborn in skin-to-skin contact on the mother's abdomen and cover with a clean, dry towel/cloth.					
14. Observe the newborn's breathing (see Learning Guide for Newborn Resuscitation).					
15. Clamp and cut, or tie and cut, cord.					
16. Perform active management of the third stage of labor: Palpate the mother's abdomen to rule out presence of another baby and give 10 units of oxytocin intramuscularly.					
17. Apply gentle but firm traction to the cord during a contraction, while at the same time applying counter-traction to the uterus.					
18. If the placenta is not delivered with the first contraction, wait for the next contraction and repeat controlled cord traction with counter-traction to the uterus.					
19. Hold the placenta in both hands, when it is visible.					
20. Use a gentle upward and downward movement or twisting action to deliver the membranes.					
21. Examine the placenta and membranes for completeness and abnormalities					
22. Check that the uterus is well contracted.					
23. Massage uterus if it is not contracted.					
24. Inspect the lower vagina and perineum for lacerations/tears and repair, if necessary.					
25. Repair episiotomy, if one was performed.					
26. Wash and dry, and place clean cloth or pad on the perineum.					
27. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
28. Place all instruments in 0.5% chlorine solution for decontamination.					
29. If reusing needle and syringe, fill syringe (with needle attached) with 0.5% chlorine solution and submerge in solution for decontamination. If disposing of needle and syringe, place in puncture-proof container.					
30. Remove gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing					
31. Use antiseptic handrub or wash hands thoroughly.					
32. Record all findings on woman's record.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

CHECKLIST FOR EPISIOTOMY AND REPAIR

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

Place a “✓” in case box if step/task is performed **satisfactorily**, an “X” if it is **not** performed **satisfactorily**, or N/O if not observed.

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

PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR EPISIOTOMY AND REPAIR (Many of the following steps/tasks should be performed simultaneously.)						
STEP/TASK	CASES					
GETTING READY						
1. Prepare the necessary equipment.						
2. Tell 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 anesthetics.						
5. Put on personal protective equipment.						
SKILL/ACTIVITY PERFORMED SATISFACTORILY						
MAKING THE EPISIOTOMY						
1. Use antiseptic handrub or wash hands thoroughly and put on high-level disinfected or sterile surgical gloves.						
2. Clean the perineum with antiseptic solution.						
3. Administer local anesthetic.						
4. Perform episiotomy when perineum is thinned out and newborn's head is visible during a contraction.						
5. Insert two fingers into the vagina between the newborn's head and the perineum.						
6. Insert the open blade of the scissors between the perineum and the fingers. Make a single cut in a mediolateral direction.						
7. If delivery of the head does not follow immediately, apply pressure to the episiotomy site between contractions.						
8. Control delivery of the head to avoid extension of the episiotomy.						
SKILL/ACTIVITY PERFORMED SATISFACTORILY						

CHECKLIST FOR EPISIOTOMY AND REPAIR (Many of the following steps/tasks should be performed simultaneously.)						
STEP/TASK	CASES					
REPAIRING THE EPISIOTOMY						
1. Clean the woman's perineum with antiseptic solution.						
2. Repeat local anesthetic, if necessary.						
3. Use a continuous suture from the apex downward to repair the vaginal incision.						
4. At the vaginal opening, bring the cut edges together.						
5. Bring the needle under the vaginal opening and out through the incision and tie.						
6. Use interrupted sutures to repair the perineal muscle, working from the top of the perineal incision downward and to bring the skin edges together.						
7. Place a clean cloth or pad on the woman's perineum.						
POSTPROCEDURE TASKS						
1. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.						
2. Place all instruments in 0.5% chlorine solution for decontamination.						
3. If reusing needle or syringe, fill syringe (with needle attached) with 0.5% chlorine solution and submerge in solution for decontamination. If disposing of needle and syringe, place in puncture-proof container.						
4. Remove gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.						
5. Use antiseptic handrub or wash hands thoroughly.						
6. Record procedure on woman's record.						
SKILL/ACTIVITY PERFORMED SATISFACTORILY						

CHECKLIST FOR REPAIR OF CERVICAL TEARS

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

Place a “✓” in case box if step/task is performed **satisfactorily**, an “X” if it is **not** performed **satisfactorily**, or N/O if not observed.

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

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

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

PARTICIPANT _____ **Date Observed** _____

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

CHECKLIST FOR REPAIR OF CERVICAL TEARS (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK		CASES			
3. Remove gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.					
4. Use antiseptic handrub or wash hands thoroughly.					
5. Record procedure on woman's record.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

CHECKLIST FOR BREECH DELIVERY

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

Place a “✓” in case box if step/task is performed **satisfactorily**, an “X” if it is **not** performed **satisfactorily**, or N/O if not observed.

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

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

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

PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR BREECH DELIVERY (Many of the following steps/tasks should be performed simultaneously.)						
STEP/TASK	CASES					
GETTING READY						
1. Prepare the necessary equipment.						
2. Tell the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.						
3. Provide continual emotional support and reassurance, as feasible.						
4. Ensure that the conditions for breech delivery are present.						
5. Put on personal protective equipment.						
SKILL/ACTIVITY PERFORMED SATISFACTORILY						
PREPROCEDURE TASKS						
1. Use antiseptic handrub or wash hands thoroughly and put on high-level disinfected or sterile surgical gloves.						
2. Clean the vulva with antiseptic solution.						
3. Catheterize the bladder, if necessary.						
SKILL/ACTIVITY PERFORMED SATISFACTORILY						
BREECH DELIVERY						
Delivery of the Buttocks and Legs						
1. When the buttocks have entered the vagina and the cervix is fully dilated, tell the woman she can bear down with contractions.						
2. Perform an episiotomy, if necessary.						
3. Let the buttocks deliver until the lower back and shoulder blades are seen.						
4. Gently hold the buttocks in one hand.						
5. If the legs do not deliver spontaneously, deliver one leg at a time.						
6. Hold the newborn by the hips.						

CHECKLIST FOR BREECH DELIVERY (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
Delivery of the Arms					
7. If the arms are felt on the chest, allow them to disengage spontaneously.					
8. If the arms are stretched above the head or folded around the neck, use Lovset's maneuver.					
9. If the newborn's body cannot be turned to deliver the arm that is anterior first, deliver the arm that is posterior.					
Delivery of the Head					
10. Deliver the head using the Mauriceau Smellie Veit maneuver.					
11. Complete steps for active management of the third stage of labor.					
12. Following childbirth, check the birth canal for tears and repair, if necessary. Repair the episiotomy, if one was performed.					
13. Provide immediate postpartum and newborn care, as required.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
POSTPROCEDURE TASKS					
1. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
2. Place all instruments in 0.5% chlorine solution for decontamination.					
3. Remove gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.					
4. Use antiseptic handrub or wash hands thoroughly.					
5. Record procedure and findings on woman's record.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

CHECKLIST FOR VACUUM EXTRACTION

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

Place a “✓” in case box if step/task is performed **satisfactorily**, an “X” if it is **not** performed **satisfactorily**, or N/O if not observed.

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

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

PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR VACUUM EXTRACTION (Many of the following steps/tasks should be performed simultaneously.)						
STEP/TASK	CASES					
GETTING READY						
1. Prepare the necessary equipment.						
2. Tell the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.						
3. Provide continual emotional support and reassurance, as feasible.						
4. Ensure that the conditions for vacuum extraction are present.						
5. Make sure an assistant is available.						
6. Put on personal protective equipment.						
SKILL/ACTIVITY PERFORMED SATISFACTORILY						
PREPROCEDURE TASKS						
1. Use antiseptic handrub or wash hands thoroughly and put on high-level disinfected or sterile surgical gloves.						
2. Clean the vulva with antiseptic solution.						
3. Catheterize the bladder, if necessary.						
4. Check all connections on the vacuum extractor and test the vacuum.						
SKILL/ACTIVITY PERFORMED SATISFACTORILY						
VACUUM EXTRACTION						
1. Assess the position of the fetal head and identify the posterior fontanelle.						
2. Apply the largest cup that will fit.						
3. Perform an episiotomy, if necessary, for placement of the cup.						
4. Check the application and ensure that there is no maternal soft tissue within the rim of the cup.						
5. Have assistant create a vacuum of negative pressure and check the application of the cup.						

CHECKLIST FOR VACUUM EXTRACTION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
6. Increase the vacuum to the maximum and then apply traction. Correct the tilt or deflexion of the head.					
7. With each contraction, apply traction in a line perpendicular to the plane of the cup rim and assess potential slippage and descent of the vertex.					
8. Between each contraction, have assistant check fetal heart rate and application of the cup.					
9. Continue the “guiding” pulls for a maximum of 30 minutes. Release the vacuum when the head has been delivered.					
10. Complete birth of newborn and delivery of placenta.					
11. Following childbirth, check the birth canal for tears and repair, if necessary. Repair the episiotomy, if one was performed.					
12. Provide immediate postpartum and newborn care, as required.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
POSTPROCEDURE TASKS					
1. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
2. Place all instruments in 0.5% chlorine solution for decontamination.					
3. Remove gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.					
4. Use antiseptic handrub or wash hands thoroughly.					
5. Record procedure and findings on woman’s record.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

CHECKLIST FOR BIMANUAL COMPRESSION OF THE UTERUS

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

Place a “✓” in case box if step/task is performed **satisfactorily**, an “X” if it is **not** performed **satisfactorily**, or N/O if not observed.

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PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR BIMANUAL COMPRESSION OF THE UTERUS (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
GETTING READY					
1. Tell 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.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
BIMANUAL COMPRESSION					
1. Use antiseptic handrub or wash hands thoroughly and put on high-level disinfected or sterile surgical gloves.					
2. Clean the vulva and perineum with antiseptic solution.					
3. Insert fist into anterior vaginal fornix and apply pressure against the anterior wall of the uterus.					
4. Place other hand on abdomen behind uterus, press the hand deeply into the abdomen and apply pressure against the posterior wall of the uterus.					
5. Maintain compression until bleeding is controlled and the uterus contracts.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
POSTPROCEDURE TASKS					
1. Remove gloves and discard them in leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.					
2. Use antiseptic handrub or wash hands thoroughly.					
3. Monitor vaginal bleeding, take the woman’s vital signs and make sure that the uterus is firmly contracted.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

CHECKLIST FOR COMPRESSION OF THE ABDOMINAL AORTA

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

Place a “✓” in case box if step/task is performed **satisfactorily**, an “X” if it is **not** performed **satisfactorily**, or N/O if not observed.

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

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

PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR COMPRESSION OF THE ABDOMINAL AORTA (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
GETTING READY					
1. Tell 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.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
COMPRESSION OF THE ABDOMINAL AORTA					
1. Place a closed fist just above the umbilicus and slightly to the left.					
2. Apply downward pressure over the abdominal aorta directly through the abdominal wall.					
3. With the other hand, palpate the femoral pulse to check the adequacy of compression.					
4. Maintain compression until bleeding is controlled.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
POSTPROCEDURE TASKS					
1. Monitor vaginal bleeding, take the woman’s vital signs and make sure that the uterus is firmly contracted.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

CHECKLIST FOR MANUAL REMOVAL OF PLACENTA

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

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PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR MANUAL REMOVAL OF PLACENTA (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
GETTING READY					
1. Prepare the necessary equipment.					
2. Tell the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.					
3. Provide continual emotional support and reassurance, as feasible.					
4. Have the woman empty her bladder or insert a catheter.					
5. Give anesthesia.					
6. Give prophylactic antibiotics.					
7. Put on personal protective equipment.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
MANUAL REMOVAL OF PLACENTA					
1. Use antiseptic handrub or wash hands and forearms thoroughly and put on high-level disinfected or sterile surgical gloves (use elbow-length gloves, if available).					
2. Hold the umbilical cord with a clamp and pull the cord gently.					
3. Place the fingers of one hand into the uterine cavity and locate the placenta.					
4. Provide counter-traction abdominally.					
5. Move the hand back and forth in a smooth lateral motion until the whole placenta is separated from the uterine wall.					
6. Withdraw the hand from the uterus, bringing the placenta with it while continuing to provide counter-traction abdominally.					
7. Give oxytocin in IV fluid.					
8. Have an assistant massage the fundus to encourage atonic uterine contraction.					
9. If there is continued heavy bleeding, give ergometrine by IM injection or prostaglandins.					

CHECKLIST FOR MANUAL REMOVAL OF PLACENTA (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
10. Examine the uterine surface of the placenta to ensure that it is complete.					
11. Examine the woman carefully and repair any tears to the cervix or vagina or repair episiotomy.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
POSTPROCEDURE TASKS					
1. Remove gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.					
2. Use antiseptic handrub or wash hands thoroughly.					
3. Monitor vaginal bleeding, take the woman's vital signs and make sure that the uterus is firmly contracted.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

CHECKLIST FOR NEWBORN RESUSCITATION

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

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PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR NEWBORN RESUSCITATION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
GETTING READY					
1. Quickly wrap or cover the newborn and place on a clean, warm surface.					
2. Tell 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.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
RESUSCITATION USING BAG AND MASK					
1. Position the head in a slightly extended position to open the airway.					
2. Clear the airway by suctioning the mouth and nose.					
3. Position the newborn's neck and place the mask on the newborn's face so that it covers the chin, mouth and nose. Form a seal between mask and newborn's face.					
4. Ventilate at a rate of 40 breaths/minute for 1 minute and then stop and quickly assess if the newborn is breathing spontaneously.					
5. If breathing is normal, and there is no indrawing of the chest and no grunting, put in skin-to-skin contact with mother.					
6. If newborn is not breathing, breathing is less than 30 breaths/minute or severe chest indrawing is present, ventilate with oxygen if available. Arrange immediate transfer for special care.					
7. If there is no gasping or breathing at all after 20 minutes of ventilation, check heart sounds. If absent, stop ventilating.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
POSTPROCEDURE TASKS					
1. Dispose of disposable suction catheters and mucus extractors in a leakproof container or plastic bag. Place reusable catheters and mucus extractors in 0.5% chlorine solution for decontamination. Then, clean and process.					
2. Clean and decontaminate the valve and mask and check for damage.					

CHECKLIST FOR NEWBORN RESUSCITATION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
3. Use antiseptic handrub or wash hands thoroughly.					
4. Record pertinent information on the mother's/newborn's record.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

CHECKLIST FOR ENDOTRACHEAL INTUBATION

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

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PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR ENDOTRACHEAL INTUBATION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
GETTING READY					
1. Prepare the necessary equipment.					
2. If the woman is conscious and responsive, tell 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.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
INTUBATION					
1. Use antiseptic handrub or wash hands thoroughly and put on new examination or high-level disinfected surgical gloves.					
2. Give oxygen.					
3. Position the woman's head.					
4. Give diazepam, if necessary.					
5. Ask an assistant to apply pressure to the cricoid against the esophagus.					
6. Insert the laryngoscope. If necessary, suction out any secretions in the throat. Visualize the glottis.					
7. Insert the endotracheal tube, remove the laryngoscope and withdraw the stylet.					
8. Inflate the cuff of the endotracheal tube and connect it to the Ambu bag.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
ENSURING CORRECT PLACEMENT OF ENDOTRACHEAL TUBE					
1. Observe inflation of the chest and auscultate the chest to ensure correct placement of the endotracheal tube.					
2. Once the endotracheal tube is properly positioned, fix the tube to the woman's face.					
3. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					

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

CHECKLIST FOR CESAREAN SECTION

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

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PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR CESAREAN SECTION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
GETTING READY					
1. Prepare the necessary equipment.					
2. Tell 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 hemoglobin and blood type and cross-match 2 units of blood.					
5. Set up an IV line and infuse 500 cc of IV fluids.					
6. Give premedication including: <ul style="list-style-type: none"> • Atropine 0.6 mg IM (or IV if in theater) • Magnesium trisilicate 300 mg 					
7. Catheterize the woman's bladder.					
8. Help the woman to put on a gown and cap.					
9. Evaluate anesthetic options: <ul style="list-style-type: none"> • General anesthetic • Local anesthetic • Spinal anesthetic 					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
PREPROCEDURE TASKS					
1. Put on theater clothes, protective footwear, cap, facemask, protective eyeglasses and a plastic apron.					
2. Perform a surgical handscrub and put on high-level disinfected or sterile surgical gloves and a sterile gown.					
3. Ensure that the instruments and supplies are available and arrange them on a sterile tray or in a high-level disinfected container. Conduct an instrument and swab count and ask an assistant to note on board.					

CHECKLIST FOR CESAREAN SECTION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
4. Ensure that an assistant is scrubbed and dressed.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
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 anesthesia has taken full effect.					
3. Apply antiseptic solution to the abdomen, allow to dry, and place a drape over the woman.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
PROCEDURE					
1. Make a 2–3 cm midline vertical incision below the umbilicus to the pubic hair (or transverse incision if using Pfannenstiel's incision) through skin and fascia.					
2. Lengthen the incision and separate the rectus muscle.					
3. Open the lower part of the peritoneum.					
4. Place a bladder retractor over the pubic bone.					
5. Extend the incision by 3 cm on each side.					
6. Push the bladder downward off the lower uterine segment and replace the bladder retractor over the pubic bone to retract the bladder downward.					
7. Make a 3 cm transverse incision in the lower segment of the uterus.					
8. Widen the incision. Extend the incision, if necessary.					
9. If the membranes are intact, rupture them.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
DELIVERING THE NEWBORN					
1. Place one hand inside the uterine cavity between the uterus and the fetal head.					
2. Grasp and flex the head, and gently lift the fetal head through the incision.					
3. Gently press on the abdomen over the top of the uterus to help deliver the head. If necessary, ask an assistant to push the head up through the vagina from below.					
4. If uterine tone is inadequate, check the blood pressure and give ergometrine 0.2 mg IV/IM if blood pressure is <160/110. If the blood pressure is 160/110 or higher, give oxytocin 20 units in 1 L IV at 60 drops per minute for 2 hours.					
5. Suction the newborn's mouth and nose when delivered.					
6. Clamp the cord at two points and cut it.					
7. Ask an assistant to give a single dose of prophylactic antibiotics—ampicillin 2 g IV or cefazolin 1 g IV.					
8. Deliver the placenta and inspect it for completeness or abnormalities.					

CHECKLIST FOR CESAREAN SECTION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
9. Dilate cervix from above if necessary.					
10. Conduct an instrument and swab count.					
11. Repair the uterus and ensure hemostatsis.					
12. Ensure that there is no further bleeding.					
13. Check the bladder for injury and repair injury, if necessary.					
14. Inspect the wall of the uterus and close the fascia with a running suture, using a cutting needle and 0 chromic catgut (or polyglycolic) suture, ensuring that the peritoneum and intraperitoneal contents are not included in the suture.					
15. If there are signs of infection, pack the subcutaneous tissue with gauze and place loose 0 catgut (or polyglycolic) sutures. Close the skin with a delayed closure after the infection has cleared. If there are no signs of infection, close the fat layer, if necessary, with an interrupted suture, using a round needle and plain catgut, and close the skin with interrupted mattress sutures about 2 cm apart, using a cutting needle and 3-0 nylon or silk.					
16. Ensure there is no bleeding, clean the wound with gauze moistened in antiseptic solution and apply a sterile dressing.					
17. Evacuate clots from vagina using forceps and swab and put on sterile pad.					
18. Assist in getting woman off operating table.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
POSTPROCEDURE TASKS					
1. Before removing gloves, remove blade from knife handle. Dispose of blade and all suture needles in sharps container, and dispose of waste materials in a leakproof container or plastic bag.					
2. Place all instruments in 0.5% chlorine solution for decontamination.					
3. If reusing needle or syringe, fill syringe (with needle attached) with 0.5% chlorine solution and submerge in solution for decontamination. If disposing of needle and syringe, place in puncture-proof container.					
4. Remove gown and gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.					
5. Use antiseptic handrub or wash hands thoroughly.					
6. Write operation notes and post-operative management instructions.					
7. Monitor pulse, blood pressure, respiration rate and bleeding, wound and vaginally.					
8. Assess the woman before she is transferred out of the recovery area.					
9. Check woman on the ward daily or as frequently as necessary.					

CHECKLIST FOR CESAREAN SECTION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK		CASES			
10. Discuss reasons for cesarean section, family planning and future pregnancies before discharge.					
11. Schedule appointment for postpartum care.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

CHECKLIST FOR EMERGENCY LAPAROTOMY

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

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PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR EMERGENCY LAPAROTOMY (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
GETTING READY					
1. Prepare the necessary equipment.					
2. Tell the woman (and her support person) what is going to be done, listen to her, respond attentively to her questions and concerns and obtain informed consent.					
3. Examine the woman, assess her condition and examine the medical record for information and completeness.					
4. Set up an IV line and infuse IV fluids.					
5. Catheterize the woman's bladder.					
6. Have anesthetist give anesthesia and prophylactic antibiotics.					
7. Put on personal protective equipment.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
PREPROCEDURE TASKS					
1. Put on theater clothes, protective footwear, cap, facemask, protective eyeglasses and a plastic apron.					
2. Perform a surgical handscrub and put on high-level disinfected or sterile surgical gloves and a sterile gown.					
3. Ensure that the instruments and supplies are available and arrange them on a sterile tray or in a high-level disinfected container. Conduct an instrument and swab count and ask an assistant to note on board.					
4. Ensure that an assistant is scrubbed and dressed.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
PREPARING THE WOMAN					
1. Place the woman in the supine position on the operating table.					
2. Ensure that the anesthesia has taken full effect.					

CHECKLIST FOR EMERGENCY LAPAROTOMY (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
3. Apply antiseptic solution to the abdomen and place a drape over the woman.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
OPENING THE ABDOMEN					
1. Make a 2–3 cm midline vertical incision below the umbilicus to the pubic hair through skin and fascia.					
2. Lengthen the incision and separate the rectus muscle.					
3. Place a bladder retractor and self-retaining abdominal retractors.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
INSPECTING THE ABDOMEN					
1. Conduct a general examination of the peritoneal cavity to detect any abnormality and operative diagnosis; treat accordingly.					
2. Check the bladder for injury and repair injury, if necessary.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
CLOSING THE ABDOMEN					
1. Conduct an instrument and swab count.					
2. Close the fascia with a running suture, using a cutting needle and 0 chromic catgut (or polyglycolic) suture, ensuring that the peritoneum and intraperitoneal contents are not included in the suture.					
3. If there are signs of infection, pack the subcutaneous tissue with gauze and place loose 0 catgut (or polyglycolic) sutures. Close the skin with a delayed closure after the infection has cleared. If there are no signs of infection, close the fat layer, if necessary, with an interrupted suture, using a round needle and plain catgut, and close the skin with interrupted mattress sutures about 2 cm apart, using a cutting needle and 3-0 nylon or silk.					
4. Ensure there is no bleeding, clean the wound with gauze moistened in antiseptic solution and apply a sterile dressing.					
5. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
6. Place all instruments in 0.5% chlorine solution for decontamination.					
7. If reusing needle or syringe, fill syringe (with needle attached) with 0.5% chlorine solution and submerge in solution for decontamination. If disposing of needle and syringe, place in puncture-proof container.					
8. Remove gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.					
9. Use antiseptic handrub or wash hands thoroughly.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

CHECKLIST FOR EMERGENCY LAPAROTOMY (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
POSTPROCEDURE CARE					
1. Do not leave the woman unattended until the effects of the anesthesia have worn off.					
2. Explain to the woman what was found at surgery and what procedures have been done.					
3. Ensure the woman has written postoperative instructions, necessary medications before discharge and instructions regarding a followup visit.					
4. Provide counseling on prognosis for fertility and, if appropriate, provide family planning.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

CHECKLIST FOR SALPINGECTOMY FOR ECTOPIC PREGNANCY

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

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PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR SALPINGECTOMY FOR ECTOPIC PREGNANCY (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
GETTING READY					
1. Prepare the necessary equipment.					
2. Tell the woman (and her support person) what is going to be done, listen to her, respond attentively to her questions and concerns and obtain informed consent.					
3. Examine the woman, assess her condition and examine the medical record for information and completeness.					
4. Infuse IV fluids.					
5. Catheterize the woman's bladder.					
6. Have anesthetist give anesthesia and prophylactic antibiotics.					
7. Put on personal protective equipment.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
PREPROCEDURE TASKS					
1. Put on theater clothes, protective footwear, cap, facemask, protective eyeglasses and a plastic apron.					
2. Perform a surgical handscrub and put on high-level disinfected or sterile surgical gloves and a sterile gown.					
3. Ensure that the instruments and supplies are available and arrange them on a sterile tray or in a high-level disinfected container. Conduct an instrument and swab count and ask an assistant to note on board.					
4. Ensure that an assistant is scrubbed and dressed.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
PREPARING THE WOMAN					
1. Place the woman in the supine position on the operating table.					
2. Ensure that the anesthesia has taken full effect.					

CHECKLIST FOR SALPINGECTOMY FOR ECTOPIC PREGNANCY (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
3. Apply antiseptic solution to the abdomen and place a drape over the woman.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
OPENING THE ABDOMEN					
1. Make a 2–3 cm midline vertical incision below the umbilicus to the pubic hair through skin and fascia.					
2. Lengthen the incision and separate the rectus muscle.					
3. Place a bladder retractor and self-retaining abdominal retractors.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
SALPINGECTOMY					
1. Identify and bring to view the affected fallopian tube and its ovary.					
2. Clamp the mesosalpinx to stop bleeding, aspirate blood from the abdomen and remove any blood clots.					
3. Use moist gauze to pack away the bowel and omentum from the operative field.					
4. Divide the mesosalpinx using a series of clamps and tie the mesosalpinx with 2-0 chromic catgut (or polyglycolic) suture.					
5. Place a proximal suture around the tube at the isthmus end and excise the tube.					
6. Ensure that there is no bleeding.					
7. Check the bladder for injury and repair injury, if necessary.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
CLOSING THE ABDOMEN					
1. Check instruments and swabs.					
2. Close the fascia with a running suture, using a cutting needle and 0 chromic catgut (or polyglycolic) suture, ensuring that the peritoneum and intraperitoneal contents are not included in the suture.					
3. If there are signs of infection, pack the subcutaneous tissue with gauze and place loose 0 catgut (or polyglycolic) sutures. Close the skin with a delayed closure after the infection has cleared. If there are no signs of infection, close the fat layer, if necessary, with an interrupted suture, using a round needle and plain catgut, and close the skin with interrupted mattress sutures about 2 cm apart, using a cutting needle and 3-0 nylon or silk.					
4. Ensure there is no bleeding, clean the wound with gauze moistened in antiseptic solution and apply a sterile dressing.					
5. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
6. Place all instruments in 0.5% chlorine solution for decontamination.					

CHECKLIST FOR SALPINGECTOMY FOR ECTOPIC PREGNANCY (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
7. If reusing needle or syringe, fill syringe (with needle attached) with 0.5% chlorine solution and submerge in solution for decontamination. If disposing of needle and syringe, place in puncture-proof container.					
8. Remove gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.					
9. Use antiseptic handrub or wash hands thoroughly.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
POSTPROCEDURE CARE					
1. Do not leave the woman unattended until the effects of the anesthesia have worn off.					
2. Explain to the woman what was found at surgery and what procedures have been done.					
3. Ensure the woman has written postoperative instructions, necessary medications before discharge and instructions regarding a followup visit.					
4. Provide counseling on prognosis for fertility and, if appropriate, provide family planning.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

CHECKLIST FOR LAPAROTOMY AND REPAIR OF RUPTURED UTERUS

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

Place a “✓” in case box if step/task is performed **satisfactorily**, an “X” if it is **not** performed **satisfactorily**, or N/O if not observed.

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

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

PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR LAPAROTOMY AND REPAIR OF RUPTURED UTERUS (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
GETTING READY					
1. Prepare the necessary equipment.					
2. Tell the woman (and her support person) what is going to be done, listen to her, respond attentively to her questions and concerns and obtain informed consent.					
3. Examine the woman, assess her condition and examine the medical record for information and completeness.					
4. Infuse IV fluids.					
5. Catheterize the woman's bladder.					
6. Have anesthetist give anesthesia and prophylactic antibiotics.					
7. Put on personal protective equipment.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
PREPROCEDURE TASKS					
1. Put on theater clothes, protective footwear, cap, facemask, protective eyeglasses and a plastic apron.					
2. Perform a surgical handscrub and put on high-level disinfected or sterile surgical gloves and a sterile gown.					
3. Ensure that the instruments and supplies are available and arrange them on a sterile tray or in a high-level disinfected container. Conduct an instrument and swab count and ask an assistant to note on board.					
4. Ensure that an assistant is scrubbed and dressed.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
PREPARING THE WOMAN					
1. Place the woman in the supine position on the operating table.					
2. Ensure that the anesthesia has taken full effect.					

CHECKLIST FOR LAPAROTOMY AND REPAIR OF RUPTURED UTERUS (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
3. Apply antiseptic solution to the abdomen and place a drape over the woman.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
OPENING THE ABDOMEN					
1. Make a 2–3 cm midline vertical incision below the umbilicus to the pubic hair through skin and fascia.					
2. Lengthen the incision and separate the rectus muscle.					
3. Examine the uterus for the site of rupture.					
4. Aspirate blood from the abdomen and remove any blood clots.					
5. Place a bladder retractor and self-retaining abdominal retractors.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
REPAIR OF UTERINE RUPTURE					
1. Deliver the newborn and placenta.					
2. Infuse oxytocin.					
3. Separate urinary bladder from uterus.					
4. Determine if the tear is through the cervix and vagina or laterally through the uterine artery or if there is a broad ligament hematoma, and repair as necessary.					
5. Repair uterine tear using continuous locking sutures with 0 chromic catgut (or polyglycolic) suture.					
6. Check the fallopian tubes and ovaries, and perform tubal ligation, if requested.					
7. Control bleeding by clamping and using figure-of-eight sutures.					
8. Place an abdominal drain.					
9. Check the bladder for injury and repair injury, if necessary.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
CLOSING THE ABDOMEN					
1. Conduct an instrument and swab count.					
2. Inspect the wall of the uterus and close the fascia with a running suture, using a cutting needle and 0 chromic catgut (or polyglycolic) suture, ensuring that the peritoneum and intraperitoneal contents are not included in the suture.					
3. If there are signs of infection, pack the subcutaneous tissue with gauze and place loose 0 catgut (or polyglycolic) sutures. Close the skin with a delayed closure after the infection has cleared. If there are no signs of infection, close the fat layer, if necessary, with an interrupted suture, using a round needle and plain catgut, and close the skin with interrupted mattress sutures about 2 cm apart, using a cutting needle and 3-0 nylon or silk.					
4. Ensure there is no bleeding, clean the wound with gauze moistened in antiseptic solution and apply a sterile dressing.					

CHECKLIST FOR LAPAROTOMY AND REPAIR OF RUPTURED UTERUS (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
5. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
6. Place all instruments in 0.5% chlorine solution for decontamination.					
7. If reusing needle or syringe, fill syringe (with needle attached) with 0.5% chlorine solution and submerge in solution for decontamination. If disposing of needle and syringe, place in puncture-proof container.					
8. Remove gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.					
9. Use antiseptic handrub or wash hands thoroughly.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
POSTPROCEDURE CARE					
1. Do not leave the woman unattended until the effects of the anesthesia have worn off.					
2. Explain to the woman what was found at surgery and what procedures have been done.					
3. Ensure the woman has written postoperative instructions, necessary medications before discharge and instructions regarding a followup visit.					
4. If tubal ligation was not performed, discuss reproductive goals, provide counseling on prognosis for fertility and, if appropriate, provide family planning. If the woman wishes to have more children, advise her to have an elective cesarean section for future pregnancies.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

CHECKLIST FOR LAPAROTOMY AND SUBTOTAL HYSTERECTOMY FOR REMOVAL OF RUPTURED UTERUS

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

Place a “✓” in case box if step/task is performed **satisfactorily**, an “X” if it is **not** performed **satisfactorily**, or N/O if not observed.

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PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR LAPAROTOMY AND SUBTOTAL HYSTERECTOMY FOR REMOVAL OF RUPTURED UTERUS (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
GETTING READY					
1. Prepare the necessary equipment.					
2. Tell the woman (and her support person) what is going to be done, listen to her, respond attentively to her questions and concerns and obtain informed consent.					
3. Examine the woman, assess her condition and examine the medical record for information and completeness.					
4. Set up an IV line and infuse IV fluids.					
5. Catheterize the woman's bladder.					
6. Have anesthetist give anesthesia and prophylactic antibiotics.					
7. Put on personal protective equipment.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
PREPROCEDURE TASKS					
1. Put on theater clothes, protective footwear, cap, facemask, protective eyeglasses and a plastic apron.					
2. Perform a surgical handscrub and put on high-level disinfected or sterile surgical gloves and a sterile gown.					
3. Ensure that the instruments and supplies are available and arrange them on a sterile tray or in a high-level disinfected container. Conduct an instrument and swab count and ask an assistant to note on board.					
4. Ensure that an assistant is scrubbed and dressed.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

CHECKLIST FOR LAPAROTOMY AND SUBTOTAL HYSTERECTOMY FOR REMOVAL OF RUPTURED UTERUS (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
PREPARING THE WOMAN					
1. Place the woman in the supine position on the operating table.					
2. Ensure that the anesthesia has taken full effect.					
3. Apply antiseptic solution to the abdomen and place a drape over the woman.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
OPENING THE ABDOMEN					
1. Make a 2–3 cm midline vertical incision below the umbilicus to the pubic hair through skin and fascia.					
2. Lengthen the incision and separate the rectus muscle.					
3. Examine the uterus for the site of rupture.					
4. Aspirate blood from the abdomen and remove any blood clots.					
5. Place a bladder retractor and self-retaining abdominal retractors.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
SUBTOTAL HYSTERECTOMY					
1. Deliver the newborn and placenta.					
2. Separate urinary bladder from uterus.					
3. Determine if the tear is through the cervix and vagina or laterally through the uterine artery or if there is a broad ligament hematoma, and repair as necessary.					
4. <ul style="list-style-type: none"> • Apply 2 long clamps or artery forceps to tube, ovarian ligament and round ligament and divide between clamps. • Transfix the lateral pedicle. • Apply 2 long clamps to uterine vessels and divide between clamps. Transfix the lateral pedicle. 					
5. Apply long artery forceps to the uterine rupture edge and divide untorn muscle between clamps, at the lower segment above the bladder.					
6. Free the uterus from the cervical stump and apply hemostatic sutures to the edge of the cut lower segment walls.					
7. Check to ensure hemostasis.					
8. Control bleeding by clamping and using figure-of-eight sutures.					
9. Place an abdominal drain.					
10. Check the bladder for injury and repair injury, if necessary.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

CHECKLIST FOR LAPAROTOMY AND SUBTOTAL HYSTERECTOMY FOR REMOVAL OF RUPTURED UTERUS (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
CLOSING THE ABDOMEN					
1. Close the fascia with a running suture, using a cutting needle and 0 chromic catgut (or polyglycolic) suture, ensuring that the peritoneum and intraperitoneal contents are not included in the suture.					
2. If there are signs of infection, pack the subcutaneous tissue with gauze and place loose 0 catgut (or polyglycolic) sutures. Close the skin with a delayed closure after the infection has cleared. If there are no signs of infection, close the fat layer, if necessary, with an interrupted suture, using a round needle and plain catgut, and close the skin with interrupted mattress sutures about 2 cm apart, using a cutting needle and 3-0 nylon or silk.					
3. Ensure there is no bleeding, clean the wound with gauze moistened in antiseptic solution and apply a sterile dressing.					
4. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.					
5. Place all instruments in 0.5% chlorine solution for decontamination.					
6. If reusing needle or syringe, fill syringe (with needle attached) with 0.5% chlorine solution and submerge in solution for decontamination. If disposing of needle and syringe, place in puncture-proof container.					
7. Remove gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.					
8. Use antiseptic handrub or wash hands thoroughly.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
POSTPROCEDURE CARE					
1. Do not leave the woman unattended until the effects of the anesthesia have worn off.					
2. Explain to the woman what was found at surgery and what procedures have been done.					
3. Ensure the woman has written postoperative instructions, necessary medications before discharge and instructions regarding a followup visit.					
4. If tubal ligation was not performed, discuss reproductive goals, provide counseling on prognosis for fertility and, if appropriate, provide family planning. If the woman wishes to have more children, advise her to have an elective cesarean section for future pregnancies.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

CHECKLIST FOR POSTPARTUM ASSESSMENT AND BASIC CARE

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

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PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR POSTPARTUM ASSESSMENT AND BASIC CARE (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
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. Tell the woman (and her support person) what is going to be done, listen to her and respond attentively to her questions and concerns.					
5. Make sure that Quick Check has been performed to identify any danger signs, and stabilize and manage or refer if danger signs present.					
HISTORY					
1. Check the woman's record or ask for her name, age, reason for visit, contact information, financial and transportation situation, parity, and number of living children.					
2. Ask the woman about her daily habits and lifestyle, including workload, diet, harmful substances, household support/composition, potential gender violence.					
3. Check the woman's record or ask her about her childbirth and record her responses: <ul style="list-style-type: none"> • Date of baby's birth • Place of birth and birth attendant • Mode of childbirth (SVD, cesarean section, instrumental assistance) • Pregnancy complications (pre-eclampsia, convulsions, anemia, infection, syphilis, malaria) • Complications during or after birth (fever, heavy bleeding, convulsions, lacerations) • Condition of the baby at birth 					

CHECKLIST FOR POSTPARTUM ASSESSMENT AND BASIC CARE (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
4. Ask the woman about current postpartum period: <ul style="list-style-type: none"> • Pain, swelling or discharge from perineum • Bleeding/lochia • Breastfeeding (frequency, day-and-night, attachment and sucking, baby's satisfaction, problems) • Problems with passing or holding urine or stool • Neonatal complications • Thoughts and feelings about the baby • Other problems 					
5. Ask the woman about her previous postpartum experiences including breastfeeding and previous physical or mental problems.					
6. Ask the woman about her medical history including HIV status, anemia, chronic conditions, drugs/medications she is using, and tetanus toxoid immunization.					
7. Check the woman's record or ask her about (according to local prevalence/protocols) iron-folate, vitamin A, malaria prophylaxis, mebendazole.					
8. Ask the woman about family planning, including method preference.					
9. Ask the woman about social support , including support persons and resources to care for baby.					
PHYSICAL EXAMINATION					
1. Observe general appearance (gait, facial expression, hygiene, skin).					
2. Use antiseptic handrub or wash hands thoroughly.					
3. Explain each step of the physical examination.					
4. Take the woman's temperature, pulse and blood pressure.					
5. Check the woman's conjunctiva for pallor.					
6. Examine breasts for engorgement, cracked nipples, local tenderness, redness or swelling.					
7. Examine abdomen to check the uterus and detect tenderness.					
8. Examine legs for pain or tenderness.					
9. Put on new examination or high level-disinfected gloves.					
10. Examine perineum and genitalia for signs of trauma or infection.					
11. Observe color, odor and amount of lochia.					
12. Remove gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.					
13. Use antiseptic handrub or wash hands thoroughly.					

CHECKLIST FOR POSTPARTUM ASSESSMENT AND BASIC CARE (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
MOTHER-NEWBORN OBSERVATIONS					
1. Observe interaction/bonding.					
2. Observe breastfeeding (position, attachment, finishing feed, satisfaction).					
POST PHYSICAL 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.					
SCREENING PROCEDURES					
1. Do a hemoglobin test, if clinical signs of anemia.					
2. Do a RPR test (syphilis screening), if not done during pregnancy.					
3. Do HIV screening, if the woman agrees.					
PROVIDING CARE/TAKING ACTION					
Care for Mother					
1. Provide HIV voluntary counseling and testing.					
2. Treat according to results of RPR, if necessary.					
3. Facilitate complication readiness planning, including recognition of danger signs and what to do about them.					
4. Counsel on: <ul style="list-style-type: none"> • Nutrition and iron supplementation • Prevention of infection, including genital hygiene, hand hygiene, malaria, and hookworm • Rest and sleep • Sexual relations and safer sex • Mother-newborn and family relationships 					
5. Counsel on family planning: <ul style="list-style-type: none"> • Explain how lactational amenorrhea method (LAM) works. • Help the woman choose an appropriate method of contraception if she does not want to use LAM. • If the woman is not breastfeeding, explain the return of menstrual cycles and help her choose an appropriate method of contraception. • Provide method of choice and instructions for use. • Discuss what to do if side effects are experienced. • Provide followup instructions. 					
6. Provide immunizations and preventive therapy, including tetanus toxoid, iron-folate, malaria prophylaxis, mebendazole, and vitamin A.					

CHECKLIST FOR POSTPARTUM ASSESSMENT AND BASIC CARE (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
Care for Baby					
7. Provide breastfeeding counsel and support for good attachment, positioning, sucking, and feeding on-demand.					
8. Provide counseling about keeping the baby warm.					
9. Provide counseling about hygiene, including handwashing, bathing and cord care.					
10. Facilitate complication readiness planning including danger signs in the baby and what to do about them.					
11. Counsel additionally concerning: <ul style="list-style-type: none">• Importance of immunizations• Prevention of malaria (according to local prevalence/protocols)• Sleep and other behaviors• Feeding and elimination					
12. Provide newborn immunization, if not already immunized.					
13. Record the relevant details of care for mother and baby.					
14. Ask the mother if she has any further questions or concerns.					
15. Thank the mother for coming and tell her when she should come for her next postpartum visit, if necessary.					

CHECKLIST FOR POSTPARTUM FAMILY PLANNING

(To be completed by **Participants**)

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

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CHECKLIST FOR POSTPARTUM FAMILY PLANNING (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
PROVIDING CARE/TAKING ACTION – BREASTFEEDING WOMEN					
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 6 weeks postpartum, and if using lactational amenorrhea method (LAM) not for up to 6 months.					
4. Explain how LAM works.					
5. Explain the possible problems related to LAM.					
6. If the woman is breastfeeding but wants to use a contraceptive method other than LAM, provide information about: <ul style="list-style-type: none"> • 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 					
7. Make sure that the woman does not have a medical condition that would contraindicate use of a particular method (see the <i>JHPIEGO PocketGuide for Family Planning Service Providers</i> , 2nd edition).					
8. Help the woman choose an appropriate method if she does not want to use LAM.					
9. Provide method of choice and instructions for use. (Assumes that the healthcare provider has the skills needed to do this.)					
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 followup visit instructions, including assurance that the woman can return to the clinic at any time to receive advice and medical attention.					
13. Answer any questions that the woman has.					

CHECKLIST FOR POSTPARTUM FAMILY PLANNING (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
PROVIDING CARE/TAKING ACTION – NON-BREASTFEEDING WOMEN					
1. If the woman is not breastfeeding, explain that her menstrual cycles will probably resume within 4–6 weeks after the birth.					
2. 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 sterilization) the first sexual intercourse.					
3. Explain the recommended time for the non-breastfeeding woman to start the various available methods.					
4. Explain the potential side effects of the available methods and make sure that each is understood.					
5. Make sure that the woman does not have a medical condition that would contraindicate use of a particular method (see the <i>JHPIEGO PocketGuide for Family Planning Service Providers</i> , 2nd edition).					
6. Help the woman to choose an appropriate method.					
7. Provide method of choice and instructions for use. (Assumes that the healthcare provider has the skills needed to do this.)					
8. Ask the woman to repeat instructions.					
9. Discuss what to do if the woman experiences side effects or problems with the method of choice.					
10. Provide followup visit instructions, including assurance that the woman can return to the clinic at any time to receive advice and medical attention.					
11. Answer any questions that the woman has.					

CHECKLIST FOR NEWBORN EXAMINATION

(To be used by the **Participant** for practice and by the **Trainer** at the end of the course)

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

PARTICIPANT _____ **Date Observed** _____

CHECKLIST FOR NEWBORN EXAMINATION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
GETTING READY					
1. Prepare the necessary equipment.					
2. Greet the mother, acknowledge the newborn, tell the woman (and her support person) what is going to be done, and listen and respond to her questions and concerns.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
HISTORY					
1. Ask newborn's name, sex, contact information, date and time of birth, and any problem that brought mother to the healthcare provider.					
2. Check the mother's record or ask her about maternal and other conditions/factors that may affect the newborn.					
3. Ask the mother about breastfeeding.					
4. Ask about urination and stool.					
5. Check the mother's or newborn's record or ask if the newborn has had OPV, BCG, and HBV immunizations.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					
PHYSICAL EXAMINATION					
1. Use antiseptic handrub or wash hands thoroughly.					
2. Remove the newborn's clothing.					
3. Check the newborn's general appearance and alertness, breathing, heart rate, temperature, skin, and muscle tone.					
4. Weigh the newborn.					
5. Examine the head, face, mouth and eyes.					
6. Examine the chest for symmetrical movement.					
7. Examine the umbilicus for bleeding and infection.					
8. Examine the genitalia.					

CHECKLIST FOR NEWBORN EXAMINATION (Many of the following steps/tasks should be performed simultaneously.)					
STEP/TASK	CASES				
9. Examine the spine.					
10. Examine the upper and lower limbs, checking the skin, soft tissues and bones and symmetrical movement.					
11. Use antiseptic handrub or wash hands thoroughly.					
12. Inform mother of findings and ask her if she has additional questions.					
13. Record all relevant findings.					
SKILL/ACTIVITY PERFORMED SATISFACTORILY					

Section Five:

Tips for Trainers

EMERGENCY OBSTETRIC CARE COURSE NOTEBOOK FOR TRAINERS

SECTION FIVE: TIPS FOR TRAINERS

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BEING AN EFFECTIVE CLINICAL TRAINER

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

CHARACTERISTICS OF AN EFFECTIVE TRAINER AND COACH

Coaching is a training technique in which the clinical trainer:

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

An effective **clinical trainer**:

- Is **proficient** in the skills to be taught
- **Encourages** participants in learning new skills
- Promotes **open (two-way) communication**
- Provides **immediate feedback**:
 - Informs participants whether they are meeting the objectives
 - Does not allow a skill or activity to be performed incorrectly
 - Gives positive feedback as often as possible
 - Avoids negative feedback and instead offers specific suggestions for improvement

- Is able to receive feedback:
 - **Asks for it.** Find clinical trainers who will be direct with you. Ask them to be specific and descriptive.
 - **Directs it.** If you need information to answer a question or pursue a learning goal, ask for it.
 - **Accepts it.** Do not defend or justify your behavior. Listen to what people have to say and thank them. Use what is helpful; quietly discard the rest.
- Recognizes that training can be stressful and knows how to **regulate participant as well as trainer stress**:
 - Uses appropriate humor
 - Observes participants and watches for signs of stress
 - Provides for regular breaks
 - Provides for changes in the training routine
 - Focuses on participant success as opposed to failure

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

- Being patient and supportive
- Providing praise and positive reinforcement
- Correcting participant errors while maintaining participant self-esteem
- Listening and observing

SKILL TRANSFER AND ASSESSMENT: THE COACHING PROCESS

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

- First, during interactive classroom presentations, **explaining** the skill or activity to be learned
- Next, using a videotape or slide set, **showing** the skill or activity to be learned

- Following this, **demonstrating** the skill or activity using an anatomic model (if appropriate), role play (e.g., counseling demonstration) or clinical simulation
- Then, allowing the participants to **practice** the demonstrated skill or activity with an **anatomic model** or in a simulated environment (e.g., role play, clinical simulation) as the trainer functions as a coach
- After this, **reviewing** the practice session and giving constructive feedback
- After adequate practice, **assessing** each participant's performance of the skill or activity on models or in a **simulated situation**, using the competency-based checklist
- After competence is gained with models or practice in a simulated situation, having participants begin to **practice** the skill or activity with clients under a clinical trainer's guidance
- Finally, **evaluating** the participant's ability to perform the skill according to the standardized procedure as outlined in the competency-based checklist

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

CREATING A POSITIVE LEARNING ENVIRONMENT

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

PREPARING FOR THE COURSE

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

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

- **Check all anatomic models** (e.g., are they clean and in good condition? are all parts in place?).
- **Practice all clinical procedures** using the anatomic model(s) and the learning guides and checklists found in the trainer's notebook and participant's handbook.
- **Obtain information about the participants who will be attending the course.** It is important for the clinical trainer to know basic information about participants such as:
 - The **experience and educational background** of the participants. The clinical trainer should attempt to gather as much information about participants as possible before training. If this is not possible, the trainer should inquire about their backgrounds and expectations during the first day of the course.
 - The types of **clinical activities** the participants will perform in their daily work after training. Knowing the exact nature of the work that participants will perform after training is critical for the clinical trainer. The trainer must use appropriate, job-specific examples throughout the course so that participants can draw connections between what is being taught and what they will need to do. This is an excellent way to reinforce the importance of what is being learned.
- **Prepare the classroom and make sure that:**
 - Tables arranged in a U-shape or other formation that will allow as many of the participants as possible to see one another and the trainer (this may be difficult in a lecture hall where chairs are attached to the floor).
 - A table in the front of the room where the trainers can place their course materials.
 - Space for audiovisual equipment (e.g., flipchart, screen, overhead projector, video player, monitor); the trainer should make sure that participants will be able to see the projection screen and other audiovisuals.
 - Space for participants to work in small groups (i.e., either arrange chairs in small circles or work around the tables), unless separate breakout rooms (see below) are available.

- Space to set up simulated clinics (e.g., for activities with anatomic models or counseling practice).
- Breakout rooms for small group work (e.g., case studies, role plays, clinical simulations, problem-solving activities) are available if necessary, and are set up with tables, chairs and any materials that the participants will need.
- The room is properly heated or cooled and ventilated.
- The lighting is adequate, and the room can be darkened enough to show audiovisuals and still permit participants to take notes or follow along in their learning materials.
- There will be adequate electric power throughout the course, and contingency plans have been made in case the power fails.
- Furniture such as tables, chairs and desks is available. The chairs are comfortable and tablecloths are available.
- There is a writing board with chalk or marking pens, as well as an information board available for posting notes and messages for participants.
- There is audiovisual equipment in working order, with spare parts such as bulbs readily available. The video monitor is large enough so that all participants can see it well. There are sufficient electrical connections, and extension cords, electrical adaptors and power strips (multi-plugs) are available, if necessary.
- There are toilet facilities that are adequately maintained.
- Telephones are accessible and in working order, and emergency messages can be taken.

UNDERSTANDING HOW PEOPLE LEARN

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

- Require learning to be **relevant**. The clinical trainer should offer participants learning experiences that **relate directly to their current**

or future job responsibilities. At the beginning of the course, the objectives should be stated clearly and linked to job performance. The clinical trainer should take time to explain how each learning experience relates to the successful accomplishment of the course objectives.

- Are highly **motivated** if they believe learning is relevant. People bring **high levels of motivation and interest** to learning. Motivation can be increased and channeled by the clinical trainer who provides clear learning goals and objectives. To make the best use of a high level of participant interest, the clinical trainer should explore ways to incorporate the needs of each participant into the learning sessions. This means that the trainer needs to know quite a bit about the participants, either from studying background information about them or by allowing participants to talk early in the course about their experience and learning needs.
- Need **participation** and **active involvement** in the learning process.
- Few individuals prefer just to sit back and listen. The effective clinical trainer will design learning experiences that **actively involve the participants in the training process**. Examples of how the clinical trainer may involve participants include:
 - Allowing participants to provide input regarding schedules, activities and other events
 - Questioning and feedback
 - Brainstorming and discussions
 - Hands-on work
 - Group and individual projects
 - Classroom activities
- Desire a **variety** of learning experiences.
- Participants attending courses **desire variety**. The clinical trainer should use a variety of learning methods including:
 - Audiovisual aids
 - Illustrated lectures
 - Demonstrations
 - Brainstorming
 - Small group activities

- Group discussions
- Role plays, case studies and clinical simulations
- Desire **positive feedback**. Participants need to know **how they are doing**, particularly in light of the objectives and expectations of the course. Is their progress in learning clinical skills meeting the trainer's expectations? Is their level of clinical performance meeting the standards established for the procedure? **Positive feedback provides this information**. Learning experiences should be designed to move from the known to the unknown, or from simple activities to more complex ones. This progression provides positive experiences and feedback for the participant. To maintain positive feedback, the clinical trainer can:
 - Give verbal praise either in front of other participants or in private
 - Use positive responses during questioning
 - Recognize appropriate skills while coaching in a clinical setting
 - Let the participants know how they are progressing toward achieving learning objectives
- Have **personal concerns**. The clinical trainer must recognize that many participants fear failure and embarrassment in front of their colleagues. Participants often have concerns about their ability to:
 - Fit in with the other participants
 - Get along with the trainer
 - Understand the content of the training
 - Perform the skills being taught
- Need an **atmosphere of safety**. The clinical trainer should open the course with an introductory activity that will help participants feel at ease. It should communicate an atmosphere of safety so that participants do not judge one another or themselves. For example, a good introductory activity is one that acquaints participants with one another and helps them to associate the names of the other participants with their faces. Such an activity can be followed by learning experiences that support and encourage the participants.
- Need to be recognized as **individuals** with unique backgrounds, experiences and learning needs. People want to be **treated as individuals**, each of whom has a unique background, experience and learning needs. A person's past experiences is a good foundation

upon which the clinical trainer can base new learning. To help ensure that participants feel like individuals, the clinical trainer should:

- Use participant names as often as possible
 - Involve all participants as often as possible
 - Treat participants with respect
 - Allow participants to share information with others during classroom and clinical instruction
-
- Must maintain their **self-esteem**. Participants need to **maintain high self-esteem** to deal with the demands of a clinical training course. Often the clinical methods used in training are different from clinical practices used in the participants' clinics. It is essential that the clinical trainer show respect for the participants, no matter what practices and beliefs they hold to be correct, and continually support and challenge them. This requires the trainer to:
 - Reinforce those practices and beliefs embodied in the course content
 - Provide corrective feedback when needed, in a way that the participants can accept and use with confidence and satisfaction
 - Provide training that adds to, rather than subtracts from, their sense of competence and self-esteem
 - Recognize participants' own career accomplishments
-
- Have **high expectations** for themselves and their trainer. People attending courses tend to set **high expectations both for the trainers and for themselves**. Getting to know their clinical trainers is a real and important need. Clinical trainers should be prepared to talk modestly, and within limits, about themselves, their abilities and their backgrounds.
-
- Have **personal needs** that must be taken into consideration. All participants have **personal needs** during training. Taking timely breaks and providing the best possible ventilation, proper lighting and an environment as free from distraction as possible can help to reduce tension and contribute to a positive learning atmosphere.

USING EFFECTIVE PRESENTATION SKILLS

It is also important to use effective presentation skills. Establishing and maintaining a positive learning climate during training depends on how the clinical trainer delivers information because the **trainer sets the tone** for the course. In any course, **how** something is said may be just as important as **what** is said. Some common techniques for effective presentations are listed below:

- **Follow a plan and use trainer's notes**, which include the session objectives, introduction, body, activity, audiovisual reminders, summary and evaluation.
- **Communicate in a way that is easy to understand.** Many participants will be unfamiliar with the terms, jargon and acronyms of a new subject. The clinical trainer should use familiar words and expressions, explain new language and attempt to relate to the participants during the presentation.
- **Maintain eye contact with participants.** Use eye contact to “read” faces. This is an excellent technique for establishing rapport and getting feedback on how well participants understand the content.
- **Project your voice** so that those in the back of the room can hear clearly. Vary volume, voice pitch, tone and inflection to maintain participants' attention. Avoid using a monotone voice, which is guaranteed to put participants to sleep!
- **Avoid the use of slang or repetitive words, phrases or gestures** that may become distracting with extended use.
- **Display enthusiasm about the topic and its importance.** Smile, move with energy and interact with participants. The trainer's enthusiasm and excitement are contagious and directly affect the morale of the participants.
- **Move around the room.** Moving around the room helps ensure that the trainer is close to each participant at some time during the session. Participants are encouraged to interact when the clinical trainer moves toward them and maintains eye contact.
- **Use appropriate audiovisual aids** during the presentation to reinforce key content or help simplify complex concepts.
- Be sure to ask both **simple and more challenging questions**.

- **Provide positive feedback** to participants during the presentation.
- **Use participants' names as often as possible.** This will foster a positive learning climate and help keep the participants focused on the presenter.
- Display a **positive use of humor** related to the topic (e.g., humorous stories, cartoons on transparency or flipchart, cartoons for which participants are asked to create captions).
- **Provide smooth transitions between topics.** Within a given presentation, a number of separate yet related topics may be discussed. When shifts between topics are abrupt, participants may become confused and lose sight of how the different topics fit together in the bigger picture. Before moving on to the next topic, the clinical trainer can ensure that the transition from one topic to the next is smooth by:
 - providing a brief summary,
 - asking a series of questions,
 - relating content to practice, or
 - using an application exercise (case study, role play, etc.).
- **Be an effective role model.** The clinical trainer should be a positive role model in appearance (appropriate dress) and attitude (enthusiasm for the course), and by beginning and ending the session at the scheduled times.

CONDUCTING LEARNING ACTIVITIES

Every presentation (training session) should begin with an **introduction** to capture participant interest and prepare the participant for learning. After the introduction, the clinical trainer may deliver content using an **illustrated lecture, demonstration, small group activity** or **other learning activity**. Throughout the presentation, **questioning** techniques can be used to encourage interaction and maintain participant interest. Finally, the clinical trainer should conclude the presentation with a **summary** of the key points or steps.

DELIVERING INTERACTIVE PRESENTATIONS

Introducing Presentations

The first few minutes of any presentation are critical. Participants may be thinking about other matters, wondering what the session will be like, or have little interest in the topic. The **introduction** should:

- Capture the interest of the entire group and prepare participants for the information to follow
- Make participants aware of the trainer's expectations
- Help foster a positive learning climate

The clinical trainer can select from a number of techniques to provide variety and ensure that participants are not bored. Many introductory techniques are available, including:

- **Reviewing the session objectives.** Introducing the topic by a simple restatement of the objectives keeps the participant aware of what is expected of her/him.
- **Asking a series of questions about the topic.** The effective clinical trainer will recognize when participants have prior knowledge concerning the course content and encourage their contributions. The trainer can ask a few key questions, allow participants to respond, discuss answers and comments, and then move into the body of the presentation.
- **Relating the topic to previously covered content.** When a number of sessions are required to cover one subject, relate each session to

previously covered content. This ensures that participants understand the continuity of the sessions and how each relates to the overall topic. Where possible, link topics so that the concluding review or summary of one presentation can introduce the next topic.

- **Sharing a personal experience.** There are times when the clinical trainer can share a personal experience to create interest, emphasize a point or make a topic more job-related. Participants enjoy hearing these stories as long as they relate to the topic and are used only when appropriate.
- **Relating the topic to real-life experiences.** Many training topics can be related to situations most participants have experienced. This technique not only catches the participants' attention, but also facilitates learning because people learn best by "anchoring" new information to known material. The experience may be from the everyday world or relate to a specific process or piece of equipment.
- **Using a case study, clinical simulation or other problem-solving activity.** Problem-solving activities focus attention on a specific situation related to the training topic. Working in small groups generally increases interest in the topic.
- **Using a videotape or other audiovisual aid.** Use of appropriate audiovisuals can be stimulating and generate interest in a topic.
- **Giving a classroom demonstration.** Most clinical training courses involve equipment, instruments and techniques that lend themselves to demonstrations, which generally increase participant interest.
- **Using a game, role play or simulation.** Games, role plays and simulations generate tremendous interest through direct participant involvement and therefore are useful for introducing topics.
- **Relating the topic to future work experiences.** Participants' interest in a topic will increase when they see a relationship between training and their work. The clinical trainer can capitalize on this by relating objectives, content and activities of the course to real work situations.

Using Questioning Techniques

Questions can be used at anytime to:

- Introduce a topic
- Increase the effectiveness of the illustrated lecture
- Promote brainstorming
- Supplement the discussion process

Use a variety of questioning techniques to maintain interest and avoid a repetitive style.

- **Ask a question of the entire group.** The advantage of this technique is that those who wish to volunteer may do so; however, some participants may dominate while others may not participate.
- **Target the question to a specific participant by using her/his name prior to asking the question.** The participant is aware that a question is coming, can concentrate on the question, and respond accordingly. The disadvantage is that once a specific participant is targeted, other participants may not concentrate on the question.
- **State the question, pause and then direct the question to a specific participant.** All participants must listen to the question in the event that they are asked to respond. The primary disadvantage is that the participant receiving the question may be caught off guard and have to ask the trainer to repeat the question.

The key in asking questions is to avoid a pattern. The skilled clinical trainer uses all three of the above techniques to provide variety and maintain the participants' attention. Other techniques follow:

- **Use participants' names** during questioning. This is a powerful motivator and also helps ensure that all participants are involved.
- **Repeat a participant's correct response.** This provides positive reinforcement to the participant and ensures that the rest of the group heard the response.
- **Provide positive reinforcement for correct responses** to keep the participant involved in the topic. Positive reinforcement may take the form of praise, displaying a participant's work, using a participant as an assistant or using positive facial expressions, nods or other

nonverbal actions.

- **When a participant's response is partially correct**, the clinical trainer should reward the correct portion and then improve the incorrect portion or redirect a related question to that participant or to another participant.
- **When a participant's response is incorrect**, the clinical trainer should make a noncritical response and restate the question to lead the participant to the correct response.
- **When a participant makes no attempt to respond**, the clinical trainer may wish to follow the above procedure or redirect the question to another participant. Come back to the first participant after receiving the desired response and involve her/him in the discussion.
- **When participants ask questions**, the clinical trainer must determine an appropriate response by drawing upon personal experience and weighing the individual's needs against those of the group. If the question addresses a topic that is relevant but has not been previously discussed, the clinical trainer can either:
 - answer the question and move on, or
 - respond with another question, thereby beginning a discussion about the topic.

Summarizing Presentations

A **summary** is used to reinforce the content of a presentation and provide a review of its main points. The summary should:

- Be **brief**
- Draw together the **main points**
- **Involve** the participants

Many summary techniques are available to the clinical trainer:

- **Asking the participants for questions** gives participants an opportunity to clarify their understanding of the instructional content. This may result in a lively discussion focusing on those areas that seem to be the most troublesome.
- **Asking the participants questions** that focus on major points of the

presentation

- **Administering a practice exercise or test** gives participants an opportunity to demonstrate their understanding of the material. After the exercise or test, use the questions as the basis for a discussion by asking for correct answers and explaining why each answer is correct.
- **Using a game to review main points** provides some variety, when time permits. One popular game is to divide participants into two teams, give each team time to develop review questions, and then allow each team to ask questions of the other. The clinical trainer serves as moderator by judging the acceptability of questions, clarifying answers and keeping a record of team scores. This game can be highly motivational and serve as an excellent summary at the same time.

FACILITATING GROUP DISCUSSIONS

The **group discussion** is a learning method in which most of the ideas, thoughts, questions and answers are developed by the participants. The clinical trainer typically serves as the **facilitator** and guides the participants as the discussion develops.

Group discussion is useful:

- At the conclusion of a presentation
- After viewing a videotape
- Following a clinical demonstration or skills practice session
- After reviewing a case study or clinical simulation
- After a role play
- Any other time when participants have prior knowledge or experience related to the topic

Attempting to conduct a group discussion when participants have limited knowledge or experience with the topic often will result in little or no interaction and thus an ineffective discussion. When participants are familiar with the topic, the ensuing discussion is likely to **arouse participant interest, stimulate thinking and encourage active participation**. This interaction affords the facilitator an opportunity to:

- Provide positive feedback
- Stress key points
- Develop critical thinking skills
- Create a positive learning climate

The facilitator must consider a number of factors when selecting group discussion as the learning strategy:

- Discussions involving **more than 15 to 20 participants** may be difficult both to lead and may not give each participant an opportunity to participate.
- Discussion requires **more time** than an illustrated lecture because of extensive interaction among the participants.
- **A poorly directed discussion may move off target** and never reach the objectives established by the facilitator.
- **If control is not maintained**, a few participants may dominate the discussion while others lose interest.

In addition to a **group discussion** that focuses on the session objectives, there are two other types of discussions that may be used in a training situation:

- **General discussion** that addresses participant questions about a learning event (e.g., why one type of episiotomy is preferred over another)
- **Panel discussion** in which a moderator conducts a question and answer session between panel members and participants

Follow these key points to ensure successful group discussion:

- **Arrange seating to encourage interaction** (e.g., tables and chairs set up in a U-shape or a square or circle so that participants face each other).
- **State the topic** as part of the introduction.
- **Shift the conversation** from the facilitator to the participants

- **Act as a referee** and intercede only when necessary.

Example: “It is obvious that Alain and Ilka are taking two sides in this discussion. Alain, let me see if I can clarify your position. You seem to feel that....”

- **Summarize the key points** of the discussion periodically.

Example: “Let’s stop here for a minute and summarize the main points of our discussion.”

- **Ensure that the discussion stays on the topic.**

- **Use the contributions of each participant** and provide positive reinforcement.

Example: “That is an excellent point, Rosminah. Thank you for sharing that with the group.”

- **Minimize arguments** among participants.

- **Encourage all participants to get involved.**

- **Ensure that no one participant dominates the discussion.**

- **Conclude the discussion with a summary** of the main ideas. The facilitator must relate the summary to the objective presented during the introduction.

FACILITATING A BRAINSTORMING SESSION

Brainstorming is a learning strategy that **stimulates thought and creativity** and is often used in conjunction with group discussions. The primary purpose of brainstorming is to generate a list of ideas, thoughts or alternative solutions that focus on a specific topic or problem. This list may be used as the introduction to a topic or form the basis of a group discussion. Brainstorming requires that participants have some background related to the topic.

The following guidelines will facilitate the use of brainstorming:

- **Establish ground rules.**

Example: “During this brainstorming session we will be following two basic rules. All ideas will be accepted and Alain will write them on the flipchart. Also, at no time will we discuss or criticize any idea. Later, after we have our list of suggestions, we will go back and discuss each one. Are there any questions? If not. . . .”

- **Announce the topic or problem.**

Example: “During the next few minutes we will be brainstorming and will follow our usual rules. Our topic today is ‘Indications for cesarean section.’ I would like each of you to think of at least one indication. Maria will write these on the board so that we can discuss them later. Who would like to be first? Yes, Ilka. . . .”

- **Maintain a written record** of the ideas and suggestions on a flipchart or writing board. This will prevent repetition and keep participants focused on the topic. In addition, this written record is useful when it is time to discuss each item.
- **Involve the participants and provide positive feedback** in order to encourage more input.
- **Review written ideas and suggestions periodically** to stimulate additional ideas.
- **Conclude brainstorming by reviewing all of the suggestions** and clarifying those that are acceptable.

FACILITATING SMALL GROUP ACTIVITIES

There are many times during training that the participants will be divided into several **small groups**, which usually consist of four to six participants. Examples of small group activities include:

- **Reacting to a case study**, which may be presented in writing, orally by the clinical trainer or introduced through videotape or slides
- **Preparing a role play** within the small group and presenting it to the entire group as a whole
- **Dealing with a clinical situation/scenario**, such as in a **clinical**

simulation, that has been presented by the clinical trainer or another participant

- **Practicing a skill** that has been demonstrated by the clinical trainer using anatomic models

Small group activities offer many advantages including:

- Providing participants an opportunity to **learn from each other**
- **Involving** all participants
- Creating a sense of **teamwork** among members as they get to know each other
- Providing for a **variety of viewpoints**

When small group activities are being conducted, it is important that participants are not in the same group every time. Different ways the clinical trainer can create small groups include:

- **Assigning** participants to groups
- Asking participants to **count off** “1, 2, 3,” etc. and having all the “1s” meet together, all the “2s” meet together, etc.
- Asking participants to **form their own groups**
- Asking participants to **draw a group number** (or group name)

The room(s) used for small group activities should be large enough to allow different arrangements of tables, chairs and teaching aids (models, equipment) so that individual groups can work without disturbing one another. The clinical trainer should be able to move easily about the room to visit each group. If available, consider using smaller rooms near the primary training room where small groups can go to work on their problem-solving activity, case studies, clinical simulations or role plays. Note that it will be difficult to conduct more than one clinical simulation at the same time in the same room/area.

Activities assigned to small groups should be **challenging, interesting, relevant**; should require **only a short time to complete**; and should be **appropriate for the background of the participants**. Each small group may be working on the same activity or each group may be taking on a different problem, case study, clinical simulation or role play. Regardless of the type of activity, there is usually a time limit. When this is the case, inform groups when there are 5 minutes left and when their time is up.

Instructions to the groups may be presented:

- In a **handout**
- On a **flipchart**
- On a **transparency**
- **Verbally** by the clinical trainer

Instructions for small group activities typically include:

- **Directions**
- **Time limit**
- A **situation or problem** to discuss, resolve or role play
- Participant **roles** (if a role play)
- **Questions** for a group discussion

Once the groups have completed their activity, the clinical training facilitator will **bring them together** as a large group for a discussion of the activity. This discussion might involve:

- **Reports** from each group
- **Responses** to questions
- **Role plays** developed in each group and presented by participants in the small groups
- **Recommendations** from each group
- **Discussion of the experience** (if a clinical simulation)

It is important that the clinical trainer provide an effective summary discussion following small group activities. This provides closure and ensures that participants understand the point of the activity.

CONDUCTING AN EFFECTIVE CLINICAL DEMONSTRATION

When introducing a new clinical skill, a variety of methods can be used to demonstrate the procedure. For example:

- Show **slides** or a **videotape** in which the steps and their sequence are demonstrated in accordance with the accepted performance standards.
- Use **anatomic models** such as the childbirth simulator to demonstrate the procedure and skills.
- Perform **role plays** in which a participant or surrogate client simulates a client and responds much as a real client would.
- Demonstrate the procedure with **clients** in the clinical setting (clinic or hospital).

Whatever methods are used to demonstrate the procedure, the clinical trainer should set up the activities using the “**whole-part-whole**” approach.

- Demonstrate the **whole procedure** from beginning to end to give the participant a visual image of the entire procedure or activity.
- **Isolate or break down the procedure** into activities (e.g., pre-operative counseling, getting the client ready, pre-operative tasks, performing the procedure, etc.) and allow practice of the individual activities of the procedure.
- Demonstrate the **whole procedure** again and then allow participants to practice the procedure from beginning to end.

When planning and giving a demonstration of a clinical procedure, either using anatomic models (or with clients, if appropriate), the clinical trainer should use the following guidelines:

- Before beginning, **state the objectives** of the demonstration and point out what the participants should do (e.g., interrupt with questions, observe carefully, etc.).
- Make sure that **everyone can see** the steps involved.
- **Never** demonstrate the skill or activity incorrectly.

- Demonstrate the procedure in as **realistic** a manner as possible, using instruments and materials in a simulated clinical setting.
- Include **all steps** of the procedure in the **proper sequence** according to the approved performance standards. This includes demonstrating “nonclinical” steps such as pre- and postoperative counseling and communication with the client during surgery, use of recommended infection prevention practices, etc.
- During the demonstration, **explain to participants what is being done**, especially any difficult or hard-to-observe steps.
- **Ask questions** of participants to keep them involved.

Example: “What should I do next?” “What would happen if...?”

- **Encourage** questions and suggestions.
- **Take enough time** so that each step can be observed and understood. Remember that the objective of the demonstration is learning the skills, **not** for the clinical trainer to show her/his dexterity and speed.
- **Use equipment and instruments properly** and make sure participants clearly see how they are handled.

In addition, participants should use a clinical skills **learning guide** developed specifically for the clinical procedure to observe the clinical trainer’s performance during the initial demonstration. Doing this:

- Familiarizes the participant with the use of competency-based learning guides
- Reinforces the standard way of performing the procedure
- Communicates to participants that the clinical trainer, although very experienced, is not absolutely perfect and can accept constructive feedback on her/his performance

As the role model the participants will follow, the clinical trainer must practice what s/he **demonstrates** (i.e., the approved **standard method** as detailed in the learning guide). Therefore, it is essential that the clinical trainer use the standard method. During the demonstration, the clinical trainer also should provide supportive behavior and cordial, effective communication with **the client** and **staff** to reinforce the desired outcome.

TEACHING CLINICAL DECISION-MAKING

Clinical decision-making is the systematic process by which skilled providers make judgments regarding a patient's condition, diagnosis and treatment. Despite the importance of sound clinical decision-making to the provision of high quality services, it is not well taught in either preservice education or inservice training. There is so much basic knowledge to be acquired that it leaves little time for complex skills such as clinical decision-making. And even when there is enough time, decision-making is a difficult skill to teach and learn.

Until recently, very little was known about how decisions are made. For experienced providers, decision-making is an intuitive process based on knowledge and experience. Many of the steps necessary to arrive at a decision can be completed rapidly and unconsciously. Such providers are unable to explain how they make decisions, which in turn makes it difficult to teach this skill to others. Nor is it easy for learners to identify how a decision is made when simply observing other providers in action. Consequently, they have nothing to model for developing their own skill.

It is now known, however, that there is a process to clinical decision-making that can be broken down into a series of steps that help the provider to gather the information needed to form accurate judgments, begin appropriate care and evaluate the effectiveness of that care. There are a number of different ways to name these steps, but they describe the same process. Two such approaches are illustrated below.

- **Assessment**, or Gathering information
- **Diagnosis**, or Interpreting the information
- **Planning**, or Developing the care plan
- **Intervention**, or Implementing the care plan
- **Evaluation**, or Evaluating the care plan

An important strategy in teaching clinical decision-making is to be sure that learners are aware of this step-by-step process and what occurs in each step. They also must understand that, although there is a sequence of steps for clinical decision-making, movement through the steps is rarely linear or sequential. Rather, it is an ongoing, circular process, in which the provider moves back and forth between the steps as the clinical situation changes and different needs or problems emerge.

Learners should be introduced to the steps in clinical decision-making early in their education. After that, these steps should receive continual emphasis and be used in a variety of situations. Throughout the curriculum, learners should be given opportunities and appropriate situations in which to apply these steps and practice their decision-making skills. Whether they are actively practicing their own skills or observing more experienced providers, learners should focus on understanding the reasoning and judgment that are the basis for each step in the process. **How** a decision is made is as important as what decision is made. Explaining how a decision is made usually requires the active involvement of the teacher because the **process** of decision-making is not easy to observe or identify.

Another key strategy in teaching clinical decision-making is to provide as much experience and practice in decision-making as possible. This experience, together with clinical knowledge, is a key component of successful decision-making. Teachers should:

- Expose learners to as many and as wide a **variety of patients** as possible.
- Put learners in the **clinical setting** as early as possible and provide careful guidance as they gain their experience.
- Give learners as much **structured independence** as possible; they must be given the opportunity and time to draw their own conclusions and consider their own decisions.
- Provide learners with a forum, for example, case reviews or clinical conferences, for **comparing their decisions** with the decisions made by more experienced providers.

It is important that the teacher discuss the decision-making process with each learner, and that learners share their experiences with one another. By sharing experiences, learners get that many more cases or approaches to the same case to “file away” for future use, even though they may not have been directly involved in the cases themselves.

Finally, the teacher should give learners feedback on how the clinical decision-making process was applied in a given situation. This will strengthen future performance more effectively than focusing on whether or not the “correct answer” was identified. In fact, a wrong answer for the right reason should receive more positive feedback than a right answer for the wrong reason.

Often, it is not possible to give learners experience with all the types of

situations they will encounter as independent practitioners. Their “memory files” of experience can nevertheless be built up in other ways. Extensive use of case studies, role plays and simulations, in which specific clinical situations are acted out, can contribute significantly to learners’ experience. For example, true shoulder dystocia during childbirth is uncommon, but repeated drilling or practice on models of the corrective maneuvers for shoulder dystocia will help learners respond to the emergency when it happens.

Tools for teaching clinical decision-making are presented throughout this learning resource package. The case studies and clinical simulations have been designed to facilitate the teaching of decision-making by reinforcing the steps involved in the process. The partograph exercises are also effective tools for decision-making. Their purpose is not simply to help learners plot data on the partograph, but rather to use those data for identifying and responding to problems as soon as, or even before, they occur. The tools alone, however, will not effectively teach clinical decision-making. The teacher must take an active role in discussing, questioning, explaining and challenging the learners about **how** decisions are being made each time one of these tools is used. And this interaction must continue as the learners move into the clinical area and work with patients.

Clinical decision-making is still a difficult skill to teach. But by beginning early in the curriculum and continually providing practice opportunities and guidance—whether by using the tools included in this learning resource package or through experience with patients—teachers will help learners more fully understand the decision-making process and develop their decision-making skills. As a result, the quality of care received by patients will be improved.

MANAGING CLINICAL PRACTICE

Getting the most out of clinical practice requires that the trainer be well acquainted with the clinical practice sites. Being familiar with the healthcare facility before training begins allows the trainer to develop a relationship with the staff, overcome any inadequacies in the situation, and prepare for the best possible learning experience for participants. Even the best planning, however, is not always enough to ensure a successful clinical practice experience. In the classroom, the trainer is able to control the schedule and activities to a large extent; whereas in the clinic, the trainer must always be alert to unplanned learning opportunities that may arise at any time, and be ready to modify the schedule accordingly.

PERFORMING CLINICAL PROCEDURES WITH CLIENTS

The final stage of clinical skill development involves practicing procedures with clients. Anatomic models, no matter how realistic, cannot substitute entirely for the reality of performing the procedure with a living, breathing, feeling and reacting human being. The **disadvantages** of using real clients during clinical skills training are obvious. Clients may be subjected to increased discomfort or even increased risk of complications when procedures are performed by unskilled clinicians. Therefore, when possible and appropriate, participants should be allowed to work with clients only after they have **demonstrated skill competency** and some degree of **skill proficiency** on an anatomic model or in a simulated situation.

The **rights of clients** should be considered at all times during a clinical training course. The following practices will help ensure that clients' rights are routinely protected during clinical training.

- The right to **bodily privacy** must be respected whenever a client is undergoing a physical examination or procedure.
- The **confidentiality** of any client information obtained during counseling, history taking, physical examinations or procedures must be strictly observed. Clients should be reassured of this confidentiality. Confidentiality can be difficult to maintain when specific cases are used in learning exercises such as case studies and clinical meetings. Such discussions always should take place in a private area where other staff and clients cannot overhear and should be conducted without reference to the client by name.

- When receiving counseling, undergoing a physical examination or receiving maternal and neonatal health services, **the client should be informed about the role of each person involved** (e.g., clinical trainers, individuals undergoing training, support staff, researchers).
- The **client's permission should be obtained** before having a clinician-in-training observe, assist with or perform any procedures. Understanding the right to refuse care from a clinician-in-training is important for every client. Furthermore, care should not be rescheduled or denied if the client does not permit a clinician-in-training to be present or provide services. In such cases, the clinical trainer or other staff member should perform the procedure.
- The **clinical trainer should be present during any client contact** in a training situation and the client should be made aware of the trainer's role. Furthermore, the clinical trainer should be ready to intervene if the client's safety is in jeopardy or if the client is experiencing severe discomfort.
- The **trainer must be careful how coaching and feedback are given** during practice with clients. Corrective feedback in the presence of a client should be limited to errors that could harm or cause discomfort to the client. Excessive negative feedback can create anxiety for both the client and the clinician-in-training.
- **Clients should be chosen carefully** to ensure that they are appropriate for clinical training purposes. For example, participants should **not** practice with "difficult" clients until they are proficient in performing the procedure.

CREATING OPPORTUNITIES FOR LEARNING

Planning for Learning

The clinical trainer should **develop a plan for each day spent in the healthcare facility**. The plan will provide a daily focus that is consistent with the learning objectives and help to ensure that all required skills will be adequately addressed. When preparing the plan, the trainer should consider the following points.

- Clinical practice should progress from **basic to more complex skills**.

This not only helps ensure the safety and quality of care provided by participants, but also allows them to gain self-confidence as they demonstrate competency in the basic skills.

- **There may be more participants than can be accommodated** comfortably in one area of the healthcare facility at the same time. Generally, three or four participants are the most that a specific area of a facility can absorb without affecting service delivery. If there are more, the trainer should plan a rotation system that allows each participant to have equal time and opportunity in each clinical area.
- Some clinical experiences, such as **obstetrical emergencies (e.g., eclampsia, postpartum hemorrhage, obstructed labor), cannot be planned or predicted**. The trainer must be alert to identify appropriate clinical situations and distribute them equally among the participants. Before each day's practice, the trainer should ask the staff to notify him/her of any clients that may be of particular interest, so that participants can be assigned to work with them.
- In addition to daily practice of specific clinical skills, the **trainer's plan should include other areas of focus** such as infection prevention, facility logistics or client flow. Although these topics may not be directly assessed with a checklist or other competency-based assessment tool, they play an important role in the provision of high quality maternal and neonatal health services. To make sure that participants give adequate attention to these topics, the trainer should design and develop activities that address each one, such as:
 - Observing the infection prevention practices used in the facility. Which recommended practices are being used, and which are not? Are they being used consistently and correctly? Why or why not?
 - Reviewing facility records for the past several months to identify the types of obstetrical clients seen. Additional information could be obtained, such as the most common complaints and, in individual cases, course of labor (partograph review), progression of a specific condition, treatment provided, response to treatment, etc.
 - Taking an inventory of the supplies, equipment and drugs available in the service provision area to ensure rapid access when needed.

- Inevitably there will be **times when there are few or no clients in the facility**. The trainer should have ready additional activities, such as those described above, for the participants. Case studies and role plays also are very useful at such times. **Even without clients, learning must continue.** Taking extended breaks or leaving the clinical site early is not an acceptable option.

In the Healthcare Facility

As has been mentioned, planning alone is not sufficient to guarantee a successful clinical practice. There are several key strategies that a clinical trainer can use in the healthcare facility to increase the likelihood of success.

- The trainer must **actively monitor** the skills each participant is able to practice, and with what frequency, so that each participant has adequate opportunities to develop competency. A participant who demonstrates competency in performing a cesarean section operation or in administering spinal anesthesia should not be assigned additional patients requiring this operation or procedure until other participants have had an opportunity to develop such competency.
- It is essential that the trainer **be flexible and constantly alert** to learning opportunities as they arise. This requires knowing about the healthcare facility—how it is set up and functions, the client population, etc.—as well as having a good working relationship with the staff. The trainer will need to rely on the staff’s cooperation in notifying her/him of unique or unusual clients and allowing participants to provide services to these clients. This relationship is most easily established beforehand, during site preparation and other visits made by the trainer.
- The **participants also should be encouraged to watch** for such learning opportunities. The trainer may then decide which, and how many, of the participants will be assigned to a particular client. The trainer and participants should remember that clinical experiences need to be shared equally. Therefore, the participant who identifies a case may not be assigned to it if this participant has had a similar case before. It is not appropriate to subject the client to a procedure multiple times simply so that all participants can practice a skill.
- To take advantage of opportunities as they occur may require that the trainer **modify the plan for that day and subsequent days**, but with as little disruption as possible to the provision of services. Participants should be notified of any changes as soon as possible so that they can be well prepared for each clinical day.

- Rarely will all participants have the opportunity to work with all types of clients. The clinical trainer will need to **supplement, with case studies and role plays, the work done with clients**. The trainer should rapidly identify important but rare events or conditions, such as severe pre-eclampsia, and prepare activities in advance. Actual cases seen in the healthcare facility may also serve as the basis for such activities. These can then be used during clinical sessions to expand the participants' range of experiences.

CONDUCTING PRE- AND POST-CLINICAL PRACTICE MEETINGS

Although every healthcare facility will not have a meeting room, the clinical trainer must make every effort to find a space that:

- Allows **free discussion**, small group work and practice on models
- Is **away from the client care area** if possible, so as to not interfere with efficient client care or other staff duties

Pre-Clinical Practice Meetings

The trainer and participants should meet at the beginning of each clinical practice session. The meeting should be brief. Items to be covered include:

- The learning objectives for that day
- Any scheduling changes that may be needed
- Participants' roles and responsibilities for that day, including the work assignments and rotation schedule if applicable
- Special assignments to be completed that day
- The topic for the post-clinical practice meeting, so that the participants can take special note of anything happening during the day that would contribute to the discussion
- Questions related to that day's activities or from previous days if they can be answered concisely; if not, they should be deferred until the post-clinical practice meeting

Post-Clinical Practice Meetings

The clinical trainer should end each clinical day with a meeting to review the day's events and build on them as learning experiences. A minimum of 1 hour is recommended. These meetings are used to:

- Review the day's learning objectives and assess progress toward their completion
- Present cases seen that day, particularly those that were interesting, unusual or difficult
- Respond to clinical questions concerning situations and clients in the healthcare facility or information in the reference manual
- Plan for the next clinical session, making changes in the schedule as necessary
- Conduct additional practice with models if needed
- Review and discuss case studies, role plays or assignments that have been prepared in advance by the participants. These activities should complement the sessions conducted during the classroom portion of the course, especially when classroom time is limited and clinical experience is necessary to gain a better understanding of the issues to be discussed. Topics for case studies, role plays and assignments include:
 - Quality of care
 - Clinical services provided
 - Preventive care measures
 - Medical barriers to providing high quality services
 - Recommended follow up

THE TRAINER AS SUPERVISOR

In the role of supervisor, the trainer must monitor participant activities in the healthcare facility so that:

- Each participant receives appropriate and adequate opportunities for skill practice,
- Participants do not disrupt the efficient provision of services within the facility or interfere with staff and their duties, and
- The care provided by each participant does not harm clients or place them in an unsafe situation.

The trainer must always be with participants when they are working with clients, especially when they are performing clinical procedures. Trainers may have more than one or two participants to supervise. Because the trainer cannot be with all of them at the same time, other methods of supervision must be used.

- Participants must understand what they can do independently and what requires trainer supervision, so that they can keep busy when the trainer is involved with another participant. Participants should be made responsible for ensuring that they are supervised when necessary. The trainer, however, still holds the ultimate responsibility.
- Additional activities that require no direct supervision will give participants the opportunity to be actively engaged in learning when they are not with clients.
- Clinical staff also can act as supervisors if the trainer is confident of their clinical skills and ability to provide appropriate feedback. The possibility of having clinical staff supervise participants is another reason why the trainer should get to know the staff before the training begins. During clinical site preparation, the trainer can observe the skills of the staff members, and verify that they are competent, if not proficient, service providers. The trainer may also have the opportunity to assess their coaching skills. There may even be time to work with staff members to improve their skills so that they can serve as role models and support participant learning.
- The more participants there are in the facility, the more the trainer relies upon the staff also to act as trainers. Nevertheless, the ultimate responsibility for each participant, including that of final assessment of skill competency, is the trainer's. For this reason, if multiple clinical sites are used during a course, a trainer must be assigned to each site.
- Because clinical staff usually are not involved in the classroom

portion of a course, they do not have an opportunity to get to know the participants and their abilities before they arrive at the facility. Therefore, it is a good idea to share such information with the clinical staff whenever they will have to take over a large part of the participant supervision. Clinical staff should also be encouraged to do an initial assessment of participants' skills before allowing them to work with clients so that they can feel confident that the participants are well prepared.

- Clinical staff should also be aware of the feedback the trainer would like to receive from them about participants.
 - Will it be oral, written or both? If written feedback is needed, the trainer should design an instrument or form to guide the clinical staff. The trainer should furnish a sufficient number of copies of the form and instruct the staff in its use. The trainer should develop a form that staff members can complete quickly and easily.
 - How frequently will feedback be provided? Daily? Weekly? Only at the end of training?
 - Should both positive and corrective feedback be provided?
 - Are there appropriate administrative channels through which the feedback should be transmitted? In some clinics, for example, staff members provide their feedback to the individual in charge of the healthcare facility who then prepares a report for the trainer.
- When designing the feedback system, the trainer should keep in mind the time required to prepare and provide feedback. This will be extra work for the clinical staff, who already have a very busy schedule. It is best to keep the system as simple and easy to use as possible.

THE TRAINER AS COACH

One of the most difficult tasks for the trainer, and one with which even experienced trainers struggle, is to be a good coach and provide feedback in the clinical setting. No matter how comfortable a trainer may be in giving feedback in the classroom or while working with models, the situation changes in the facility. The clients, staff and other participants are nearby and the emergency services need to keep running smoothly and efficiently. The trainer often feels pressured to keep things moving because other clients need to be seen and the trainer needs to be available to all the participants. Spending “too much time” with any one client or

participant has an impact on everyone.

Feedback Sessions

The feedback sessions before and after practice are often skipped in an effort to save time. These sessions, however, are very important for the continued development of the participant's psycho-motor or decision-making skills. Without adequate feedback and coaching, the participant may miss an important learning opportunity and take longer to achieve competency. Keep in mind that by this time the participant has already demonstrated competency on a model and may not need extensive feedback. To minimize disruption of services, the pre- and post-practice feedback sessions can take place in just a few minutes in a location away from the client care areas.

The structure of the feedback session is essentially the same regardless of whether the session takes place before or after practice, and whether it is for a participant's performance with models or with clients.

- The participant should first identify personal strengths and the areas where improvement is needed.
- Next, the trainer should provide specific, descriptive feedback that includes suggestions of not only what, but also how, to improve.
- Finally, the participant and the trainer should agree on what will be the focus of the practice session, including how they will interact while they are with the client. For example, they may agree that if the trainer places a hand on the participant's shoulder, it is a signal to stop and wait for further instructions.

The feedback session before practice should be given before entering the room to work with the client. The feedback session after practice can be delayed until the client's care has been completed or the client is in stable condition so that continuous care is no longer needed. The trainer should try not to delay feedback any longer than necessary. Feedback is always more effective when given as soon after care as possible. This will also allow the participant to use the feedback with the next client for whom services are provided, if appropriate.

Feedback during a Procedure

Be sure the client knows that the participant, although already a service provider, is also a learner. Reassure the client that the participant has had extensive practice and mastered the skill on models. The client should expect to hear the trainer talk to the participant and understand that it does not mean that something is wrong. Finally, the client should clearly

understand that the trainer is a proficient service provider and is there to ensure that the procedure is completed safely and without delay.

Positive Feedback

Positive feedback is often easy to give and can be provided in the presence of the client. Trainers often think that hearing feedback, even positive feedback, will disturb the client. Many clients, however, find it comforting to hear the service provider being given positive feedback.

- Keep the feedback restrained and low-key; overly exuberant praise can be as worrisome to the client as hearing negative comments. Too much praise may cause the client to wonder, “What is being hidden?” “Why is it so surprising that this person is doing a good job?”
- Positive feedback can be conveyed by facial expression and tone of voice rather than words, and still be highly effective.

At the same time, the **absence** of feedback of any kind can be disturbing to the participant. By this phase of skill development the participant is expected to do a good job even with the first client, and is accustomed to hearing positive comments. Therefore, in order to maintain the participant’s confidence, it is still important to give positive feedback.

Corrective Feedback

Corrective feedback is difficult to give under any circumstances, but particularly when a client is present. It is important to keep such feedback low-key and restrained. There are a number of techniques that will make it easier.

- Often a look or hand gesture (e.g., a touch on the shoulder) can be as effective as words and less worrisome to the client.
- Simple suggestions to facilitate the procedure can be made in a quiet, direct manner. Do not go into lengthy explanations of why you are making the suggestion or offering an observation—save that for the post-practice feedback session.
- To help a participant avoid making a mistake, the trainer can calmly ask a simple, straightforward question about the procedure itself. If a step in a procedure is about to be missed, for example, asking the participant to name the next step **before** doing anything further could help avoid an error. This is **not** the time to ask hypothetical questions about potential side effects and complications, as this may distract the participant and alarm the client.

- Sometimes, even though they have had extensive practice on models, participants make mistakes that can potentially harm the client. In these instances, the trainer must be prepared to step in and take over the procedure at a moment's notice. This should be done calmly and with complete control to avoid unnecessarily alarming the client.