

Education material for teachers of midwifery

Midwifery education modules - second edition

Managing incomplete abortion



**World Health
Organization**

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INTRODUCTION

INTRODUCTION

Every year it is estimated that worldwide, more than 500 000 women die of complications of pregnancy and childbirth. At least 7 million women who survive childbirth suffer serious health problems and a further 50 million women suffer adverse health consequences after childbirth. The overwhelming majority of these deaths and complications occur in developing countries.

To support the upgrading of midwifery skills so that countries can respond to this situation by strengthening maternal and newborn health services, a set of midwifery training modules was developed by the World Health Organization (WHO). The need for the modules was identified by the midwives and teachers of midwives from around the world who attended the Pre-Congress Workshop on Midwifery Education: Action for Safe Motherhood, held in Kobe, Japan in 1990 under the joint sponsorship of WHO, the International Confederation of Midwives (ICM) and the United Nations Children's Fund (UNICEF). The framework for midwifery education developed at the workshop formed the basis for the modules.

The modules, while primarily intended for in-service training programmes for midwives and nurse-midwives, can also be used in basic and post-basic midwifery programmes. In addition, the modules can be used to update the midwifery skills of other health care professionals. It is important to note, however, that they are not meant to replace midwifery textbooks which deal with other aspects of care during pregnancy, childbirth and the postnatal period, but are instead intended to serve as the basis for teaching midwives and midwife trainees, or others requiring these specific midwifery skills, to respond appropriately to major causes of maternal mortality such as haemorrhage, abortion complications, obstructed labour, puerperal sepsis and eclampsia. The modules can also be used for updating the knowledge and skills of midwifery teachers.

The modules aim to help midwives and others develop into skilled practitioners who are able to think critically and make clinical decisions on the basis of sound knowledge and understanding of these complications. Nonetheless, it is assumed that midwives and midwife trainees who undertake training using the modules, will already have gained proficiency in most of the basic skills such as measuring blood pressure, performing a vaginal examination, conducting a normal delivery and prevention of infection. Therefore, when using the modules for basic midwifery programmes, these skills should be taught first.

A variety of other skills are included in the modules because they are considered essential to comprehensive midwifery practice. In some countries some of these skills may not be a part of midwifery practice and, indeed, may be seen as the responsibility of the medical practitioner rather than of the midwife. However, the modules have been developed based on the belief that, in addition to basic midwifery skills, midwives require a range of life saving skills to enable them to make a significant contribution to reducing maternal deaths and to promoting safe motherhood.

In the original series released in 1996, there were five modules. More recently, a further module on managing incomplete abortion was added. The modules were updated in 2001–2002, in line with recent evidence and the WHO guideline for *Managing complications in pregnancy and childbirth: a guide for midwives and doctors*. The foundation module deals with the midwife in the community, while the technical modules each cover specific problems which may lead to maternal death. It is estimated that the foundation module will

require a minimum of two weeks for effective teaching and learning, while each technical module will require from ten days to two weeks. These time frames may vary depending on factors such as the ability of students and the resources available to support the teaching–learning process and the schedule of the teaching–learning programme.

Each of the modules is self-contained and can, if necessary, be taught independently of the other modules. They are, however, intended to complement each other, since together they present a comprehensive approach to dealing with the major causes of maternal mortality and morbidity. It is therefore advisable to use the modules in a way that will enable midwives to work through all of them.

All of the skills covered in the modules are necessary if midwives are to be effective in giving prompt and appropriate care to women who experience complications of pregnancy and childbirth, and to comply with the international definition of skilled attendant¹ for pregnancy, childbirth and postnatal care. Nevertheless, it may be that in some countries midwives are not legally authorized to perform all of the required skills. In these countries the modules will need to be adapted to conform to local regulations relating to midwifery practice, while at the same time, efforts should be made to introduce legislative changes to ensure that midwives are allowed to perform these required skills.

STRUCTURE OF THE MODULES

All the modules have the same structure, with the exception of the foundation module which follows a slightly different pattern from the others. The foundation module does not deal with a specific clinical problem, but with the general issue of maternal mortality, the factors which contribute to it, and the importance of working with the community to help make motherhood safer. The sessions in this module are therefore structured around these topics.

The technical modules deal with specific clinical problems and follow a common framework; each begins with an introduction to the specific problem which is then followed by sessions on the related avoidable factors, identifying the problem, managing the problem, and learning the required clinical skills.

The sessions in all of the modules are presented in the following way:

Introduction and outline to the session which describes:

Aims – aim of the specific session

Objectives – what the student will be able to do upon completion of each session

Plan – outline plan for the session

Resources – student instructions and worksheet, puzzles and textbooks

¹ A skilled attendant is a health professional with midwifery skills, such as midwives, and those doctors and nurses who have been educated and trained to proficiency in the skills to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period and to identify, manage or refer complications in the woman and newborn. (*Making pregnancy safer: the critical role of the skilled attendant. A joint statement by WHO, ICM and FIGO.* Geneva, World Health Organization, 2004).

Instructions for the teacher (text in italics): explain step-by-step how to lead the session, and sometimes includes suggested methods for assessment of learning.

Supplementary material for the teacher (normal text): gives details of the teaching content for both theory and practice.

Instructions for students (labelled as “Instructions for Students”, or “Instructions for Group Work”): provide guidelines for individual or group activities.

CONTENT OF THE MODULES

The midwife in the community

The module begins with the Story of Mrs X which shows how certain social, economic and cultural factors, combined with delays in seeking and obtaining medical care put mothers at risk of complications which frequently lead to death. The theme from the story is then reinforced throughout the remainder of the module. Special emphasis is given to the role of midwives in promoting safe motherhood in the community by helping individuals, families and other community members understand and contribute to safe motherhood.

There are sessions covering specific topics such as the place and value of women in society; advancing safe motherhood through human rights; traditional beliefs, practices and taboos affecting the health of women during pregnancy and childbirth; the recognition and reduction of risk factors; the concept of delay as it relates to maternal death; and HIV/AIDS and safe motherhood. Additional sessions include the use of community profiling for planning community-based care and for evaluation of that care.

Managing postpartum haemorrhage

In order that students may fully understand how postpartum haemorrhage occurs, this module begins with a detailed explanation of the physiology and management of the third stage of labour. Students then learn what postpartum haemorrhage is, how it occurs, what factors contribute to it, how it can be identified, and the critical points for management.

The skills specific to preventing and managing postpartum haemorrhage include: identification of the factors which place women at risk for postpartum haemorrhage; management of the third stage of labour; massaging the uterus and expelling clots; applying bimanual compression to the uterus; applying manual compression to the aorta; suturing perineal tears; suturing an episiotomy; repair of cervical and high vaginal tears; and manual removal of the placenta. The general skills in this module include: urinary catheterization; taking and recording observations; taking blood samples for analysis; setting up and monitoring intravenous infusions; monitoring blood transfusion; universal precautions for prevention of infection, and maintaining records. Some of these general skills are also included in the other technical modules.

Managing prolonged and obstructed labour

This module begins with a review of the anatomy and physiology relevant to the management of prolonged and obstructed labour. On the basis of this, the module explains what makes obstructed labour more likely to occur, what

happens in obstructed labour, how signs of obstructed labour can be identified, and steps to be taken for effective management. Special emphasis is placed on the use of the partograph in monitoring labour.

The skills specific to preventing and managing prolonged and obstructed labour include: identification of risk factors; assessing pelvic outlet; diagnosing presentation and position of the baby; assessing descent of the fetal head; recognizing obstructed labour; and vacuum extraction. The general skills in this module include: urinary catheterization; taking blood samples for analysis; setting up and monitoring an intravenous infusion; administering necessary drugs; maintaining fluid balance; universal cautions for prevention of infection; and maintaining records.

Managing puerperal sepsis

This module begins with an explanation of the problem of puerperal sepsis. The content then covers the factors which contribute to the infection, how it can be identified and differentiated from other conditions, how it can be prevented and, if it does occur, how it can be managed. A session on HIV and AIDS, related to childbearing women, is also included.

The skills specific to preventing and managing puerperal sepsis include: identification of risk factors; identification of symptoms and signs; taking a midstream specimen of urine; taking a high vaginal swab; and maintaining vulval hygiene. The general skills in this module include: taking and recording observations; taking blood samples for analysis; setting up and monitoring an intravenous infusion; maintaining fluid balance; universal precautions for prevention of infection; administering necessary drugs; preventing thromboembolic disorder; and maintaining records.

Managing eclampsia

This module begins with an explanation of the conditions pre-eclampsia and eclampsia. The content then covers the factors which contribute to eclampsia, how it can be identified and differentiated from other conditions, how it can be prevented and, if it does occur, how it can be managed.

The skills specific to preventing and managing eclampsia include: identification of risk factors for pre-eclampsia and eclampsia; midwifery observations; and care and observation during a fit. The general skills in this module include: taking blood samples for analysis; setting up and monitoring an intravenous infusion; administering necessary drugs; urinary catheterization; preventing thromboembolic disorder; universal precautions for prevention of infection; and maintaining records.

Managing incomplete abortion

This module begins with an explanation of abortion, including the types of abortion, the effect of abortion on maternal mortality and morbidity, the prevention of unwanted pregnancy, laws and regulations related to abortion, sociocultural and religious perspectives, and the role of midwives in abortion care, with particular emphasis on emergency abortion care. The content then covers the factors which contribute to abortion, how it can be identified and differentiated from other conditions, how it can be prevented and, if it does occur, how it can be managed.

The skills specific to managing incomplete abortion include: manual vacuum aspiration, and post-abortion family planning counselling and methods. The following skills, which are also in the postpartum haemorrhage module, are included because they may be necessary when managing incomplete abortion: applying bimanual compression to the uterus; applying manual compression to the aorta; and repair of cervical and high vaginal tears. The general skills in this module include: taking and recording observations; taking blood samples for analysis; setting up and monitoring intravenous infusions; monitoring blood transfusions; administering drugs, urinary catheterization; preventing thromboembolic disorder; universal precautions for prevention of infection; and maintaining records.

TEACHING–LEARNING METHODS

The modules propose a range of teaching–learning methods designed to maximize student involvement in the teaching–learning process, based on principles of adult learning. There is an emphasis in the modules of applying theory to practice, thus adequate time in the clinical areas and visits to the community are an essential part of the teaching–learning process, and careful attention and advanced preparation is required for this component, as it is for the theory content.

Modified lectures

Modified lectures are used in the modules to introduce new information and to review content that students may already be familiar with. They include strategies such as brainstorming, buzz groups, question and answer sessions and discussion which involve students in their own learning. The modules include a variety of visual materials for the teacher to use in order to make their sessions as interesting as possible.

The teacher may wish to augment the lecture content included in the modules with information from other sources, or simply follow the outline provided. In either case it will be important to prepare in advance for each session by reading the relevant content and reference materials, and by ensuring that resources for students are available if required.

Discussions

It is important to allow time for discussion at appropriate points during, or at the conclusion of, teaching sessions. This will provide an opportunity for students to ask questions about information that is unclear to them, as well as to make contributions on the basis of their knowledge and experience, and for the teacher to assess the views and level of knowledge and understanding of the students.

Group work and feedback

Many of the sessions in the modules involve group work, which is usually followed by a feedback session from each group to the whole class. The groups should be kept as small as possible (preferably not more than six students per group), the aim being to provide an opportunity for students to examine a specific issue or problem. It is important to ensure that there is sufficient space for the groups to meet without disturbing each other. Each group will need a facilitator who will be responsible for keeping the discussion going and ensure

that the group completes its work. Where the facilitator is someone other than the teacher, this person should be supplied with briefing notes. In addition, it is essential the teacher rotates through each group without disrupting the discussion, to ensure the group are keeping to their brief, or to assist with any difficult questions or issues that may arise. In addition, each group will require a rapporteur who will take notes and provide feedback to the class as a whole. Specific instructions are provided in the sessions which involve group work.

Tutorials

A tutorial is an informal teaching–learning session between a teacher and a student or a small group of students. Tutorials are time-consuming but are essential for discussing students’ progress. Tutorials usually follow a specific learning activity and give students an opportunity to express their concerns to the teacher and, in turn, give the teacher an opportunity to get to know each student better, particularly in relation to the progress being made. Tutorials are included in each of the modules, but not in all sessions.

Practical exercises

Practical exercises provide an opportunity for students to demonstrate their knowledge and skill related to a particular topic. It is important in these situations to provide clear instructions to the students about the exercises to be undertaken and to monitor their progress and provide help when required. The foundation, postpartum haemorrhage, management of prolonged and obstructed labour, and management of incomplete abortion modules include practical exercises.



Community visits

Community visits are intended to be both instructive and enjoyable experiences for the students. The foundation module includes a series of community visits aimed at helping students understand how the concepts in this module apply in the community. Community visits must, however, be planned and organized well in advance, including the choice of an appropriate community, seeking authorization from the relevant authorities to visit the community, and contacting a key person who is able to facilitate and supervise the student activities in the community. Another important consideration is the availability of transport to take students to and from the community.

The teacher may choose to organize the community visits so that they are implemented on consecutive days, rather than at the intervals suggested. If this change is made, it will be important to ensure that it does not interfere with the achievement of the learning objectives for the module.

Clinical teaching

Clinical teaching is extremely important in the technical modules because the clinical skills students learn can mean the difference between life and death for the women in their care. The underlying theory for each of the skills in the modules should be taught in the classroom and, where possible, the skills themselves taught in a simulated clinical setting prior to taking the students to the real clinical area. Facilities where clinical practice is to take place should be chosen on the basis of the anticipated availability of women with conditions included in the modules. However, even with the best of planning, it will not always be possible to guarantee hands-on experience for every

student for the full range of skills. It will be important, therefore, to consider other opportunities for students to learn the necessary skills, for instance by simulation and local mechanism to gain appropriate clinical experience following completion of the course.

Arrangements with the staff at the health facilities where clinical teaching is to take place must be made in advance. Moreover, the students' visits to these facilities for the purpose of clinical practice should not disturb routine client care. When students are learning and practising hands-on skills, supportive supervision must be provided by the teacher or by other trained and experienced staff until competency in the relevant skills has been achieved.

Drama and role play

Drama and role play may be used to emphasize points made by the teacher. In both cases students are asked to act out a real or imaginary situation. In drama, students make up their own characters and to some extent their own story in order to illustrate a particular point. In role play, students take the part of specific individuals such as the midwife, the village leader, the distressed relative or the worried mother. This provides students with an opportunity to view and understand situations, issues and/or problems from the perspective of others. Drama and role play are included as optional activities in several of the modules.

Case studies

The technical modules provide students with the opportunity to present case studies as the basis for evaluating the effectiveness of care in specific situations. Students will be able to learn from their own experience as well as from that of others. The intention of case studies is not to criticize the practice of others; instead, students should be encouraged to look at past practice and see what lessons can be learned for the future. The case studies should be based on client records selected to demonstrate the management of particular conditions (e.g. eclampsia). It should be noted that client confidentiality must be maintained throughout the presentation of case studies.



Learning games and puzzles

Learning games and puzzles provide interactive and enjoyable means for students to gain new knowledge, and to review and consolidate existing knowledge. The learning games and puzzles in the modules will be new to the teachers who use them, and it is therefore important that they become familiar with them in advance. In particular, it is important that the teacher be able to provide a clear explanation to students as to the use of the games and puzzles to be used, and to monitor progress during the activity.

Workshops

A workshop is a period of planned activity on a specific topic, often with a presentation by one or more guest speakers. Where workshops are recommended the content and programme are suggested. Workshops require careful planning with regard to the content, timetable, and facilities. The puerperal sepsis and eclampsia modules include workshops in the session on care plans.

Reflection

Learning occurs as a result of reflecting on experience. Students should therefore be encouraged to reflect on their experience in clinical practice and record their reflections in a diary or notebook. These reflections can be used as a basis for discussion with tutorial staff and/or peers. A framework for reflection includes selecting an experience, identifying their own feelings and thoughts about that experience, feelings and thoughts of others, and then evaluating what was good and what was bad about the experience. Next, the student is encouraged to try to make sense of the experience by analysing why it was good and/or bad, and determine what else could have been done in the situation to improve the outcome. Finally, an action plan is made for future practice when a similar situation arises. Discussing the experiences recorded in their reflective diaries either in groups or with a teacher helps to give students different perspectives on their experience. A summary of such discussions should be added to the recordings in the diary to help with recall at a later date.

ASSESSMENT OF STUDENTS

Pre- and post-tests

Pre-tests provide a useful means of establishing a baseline for students' theoretical knowledge. The same questions used in the pre-test should be used again in the post-test to assess knowledge on completion of the module. The teacher may also wish to add additional questions to the post-test. It should be noted that during the teaching-learning process, other options for assessment (see below) should be used, in particular to determine the progress being made by each student as the course continues. Examples of pre- and post-test questions are included in each of the technical modules.

Assessing clinical competence

The assessment of clinical competence constitutes the major component of student assessment in the technical modules. Throughout the sessions which involve the teaching of clinical skills in the modules, there are sections entitled Assessing Competence. These sections provide guidelines for teachers to assess the clinical competence of students, following the teaching of a specific clinical skill. Where possible, the teacher should observe the performance of skills in a clinical setting. However, this may not always be possible, because clients with the particular conditions included in the modules may not always be available at the appropriate time. In these circumstances teachers should attempt to provide simulated situations which offer the opportunity for students to practice and be assessed in the relevant skills. Trained staff in the clinical areas may also be involved in the assessment of the students' clinical competence.

Other options for assessment

Other options for assessment will be available during group work, such as tutorials, student seminars, learning games and quizzes, and during community visits. These activities provide vital opportunities for the teacher to monitor the progress of students in terms of achieving the learning objectives of particular sessions in the modules.

PLANNING FOLLOW-UP ACTIVITIES

Comprehensive midwifery practice relies on experience, as well as knowledge and skills. Experience is what the students will gain as they put into practice what they have learned from these modules, when they return to their respective places of work.

It is precisely when they begin to put their knowledge and skills into practice that the midwives will come across situations that may raise questions for them. For example, there may be issues and problems which they would like to discuss with supervisors and more experienced practitioners, in order to seek solutions and improve practice. This may be particularly applicable for midwives and nurse-midwives who, at the end of the training course, still require additional hands-on clinical experience in some of the skills included in the modules.

Therefore, a follow-up meeting, perhaps six months after the end of the course, will be important to enable the students to share experiences, report on successes, review progress, and discuss problems related to practice. Other follow-up meetings may also be appropriate, perhaps after one year, and even again after two years.

SUMMARY OF MODULE

Session	Teaching–Learning methods	Time frame (approximate)
1. UNDERSTANDING ABORTION	Lecture Group work Feedback and discussion	Total: 2½ hours
2. AVOIDABLE FACTORS	Lecture Group work Feedback and discussion	Total: 2 hours
3. IDENTIFYING THE PROBLEM	Lecture Role play Group work Feedback and discussion	Total: 2½ hours
4. MANAGING INCOMPLETE ABORTION: POST-ABORTION CARE	Lecture Discussion	Total: 2½ hours
5. LEARNING CLINICAL SKILLS	Lecture Simulated practice Clinical practice	Total: 1 week
6. MANUAL VACUUM ASPIRATION	Lecture Simulated practice Clinical practice	Total: 1 week
7. POST-ABORTION FAMILY PLANNING	Lecture Role play Feedback and discussion	Total: 4 hours
8. CASE STUDIES	Optional tutorials Case studies Group work Feedback and discussion	Total: 4 hours

Note:

Teachers should use their teaching skills to apportion appropriate time to the various sub-topics in a session. This will ensure that they are adequately covered within the stipulated time.

GETTING STARTED

Before beginning Session 1, you may wish to recall how the sessions are presented.

Aims – aim of the specific session

Objectives – on completion of each session what the student will be able to do

Plan – outline plan for the session

Resources – student instructions and worksheet, puzzles and text books

Instructions for the teacher (text in italics): explain how to lead the session, step-by-step, and sometimes include suggested methods for assessment.

Supplementary material for the teacher (normal text): gives details of the teaching content for both theory and practice.

Instructions for students (labelled as “Instructions for Students” or “Instructions for Group Work”): provide guidelines for individual or group activities.

Other important points to consider before you begin:

- The time frame indicated in the plan at the beginning of each session in the module may be changed by the teacher, as required. Depending on the knowledge and abilities of students, and on their learning needs, the time required for an activity may be longer or shorter than the time specified in the plan. It is estimated that this module will require between 10 days and 2 weeks to teach.
- Ensure that any Notes for Students you wish to use are prepared in advance and are made available to your class at the beginning of the module/session.
- If you want to do pre- and post-tests, you could refer to the text provided in the appendix at the end of the module.
- Remember that this module, and the other technical modules, is not meant to replace midwifery textbooks. It may, therefore, be helpful to have at least one such textbook available for reference as you progress through this and the other sessions in the module.

1

UNDERSTANDING ABORTION

SESSION 1

UNDERSTANDING ABORTION

Aims

- The aim of this session is to enable students to understand the health, legal, sociocultural and religious implications of abortion, and the role of midwives in abortion care.

Objectives

On completion of Session 1, students will be able to:

- Define abortion.
- Explain the significance of abortion in relation to maternal mortality and morbidity.
- Explain why and how unwanted pregnancy should be prevented.
- Discuss laws and regulations related to abortion in the context of their own country.
- Describe the sociocultural and religious perspectives affecting abortion.
- Describe the role of midwives in the provision of abortion care.

Plan

Lecture.

Group work.

Feedback and discussion.

Total time: approximately 2½ hours.

Resources

Instructions for Group Work.

Worksheet.

Safe motherhood fact sheets: Address unsafe abortion, and Prevent unwanted pregnancy.
New York, Family Care International, 1998.

Revised 1990 estimates of maternal mortality: a new approach by WHO and UNICEF.
Geneva, World Health Organization, 1996 (WHO/FRH/MSM/96.11, and UNICEF/PLN/96.1).

Care of mother and baby at the health centre: a practical guide.
Geneva, World Health Organization, 1984 (WHO/FHE/MSM/94.2, rev.2).

The teacher should obtain a copy of the relevant section of the law for their country.

INTRODUCTION

Abortion is a sensitive issue from a sociocultural, religious and legal perspective. Therefore, as you teach this session, and the sessions which follow, it will be important to observe the reactions and/or responses of students to the information presented. As you progress through the module, there will be opportunities for you to help students examine their attitudes and beliefs relating to abortion, and to develop the skills necessary to provide safe and effective care to women suffering the consequences of abortion.

Before beginning this session, you should become familiar with the content of the Programme of Action adopted at the International Conference on Population and Development (ICPD), Cairo, 5–13 September, 1994. In particular, you should read Chapter VII on Reproductive Rights and Reproductive Responsibilities, and Chapter VIII on Health, Morbidity and Mortality. You may be able to obtain a copy of the Programme of Action through your Ministry of Health.

Begin the session by presenting the following terms. Write down each term on the blackboard or a flip chart and invite students to come forward and fill in the meaning for each one. This will provide you with an initial opportunity to assess the willingness of students to discuss abortion and abortion-related issues and to remind students that regardless of their own beliefs, and regardless of the laws related to abortion, women in their country will suffer and die from post-abortion complications unless they have access to quality emergency health care. Also, ethically (and frequently under their respective professional code of conduct), all health providers have a duty to care, and must therefore provide essential life-saving care in an emergency.

DEFINITION OF TERMS

Abortion:

is the death and expulsion of the fetus from the uterus either spontaneously or by induction before the 22nd week of pregnancy. The specific number of weeks may vary from one country to another, depending on local legislation.

Spontaneous abortion:

spontaneous onset of labour and evacuation of the fetus before it is considered viable, e.g. 22 weeks.

Threatened abortion:

is presumed to occur when vaginal bleeding takes place in a pregnant woman during the first 22 weeks of pregnancy. If a gentle speculum examination is done after bleeding stops, the cervical os is seen to be closed. There may be backache and slight abdominal pain, but the membranes remain intact.

Inevitable abortion:	means that it is impossible for the pregnancy to continue. There is often severe vaginal bleeding because a large area of the placenta has detached from the uterine wall. It is accompanied by acute abdominal pain which is similar to the pattern of uterine contractions in labour (it is intermittent). The cervix dilates and either the complete fetal sac is expelled, or part, usually placental tissue is retained.
Complete abortion:	means that all the products of conception - embryo/fetus, placenta and membranes - are expelled. This is more likely to occur in the first eight weeks of pregnancy.
Incomplete abortion:	means that although the fetus is expelled, part or all of the placenta is retained. There is severe bleeding, although the pain may stop. The cervix will be partly closed. This is more likely to occur in the second trimester of pregnancy.
Induced abortion:	occurs as a result of interference which may be medical, surgical or result from the use of herbal preparations or other traditional practices which cause the uterus to expel or partly expel its contents. Induced abortion may be legal or illegal according to the law in the country.
Legal abortion:	is carried out by a medical practitioner approved by the law of the country, who terminates a pregnancy for reasons permitted under the law. There may also be requirements that such a procedure is carried out in an approved manner, and in an approved place or institution. Midwives should be familiar with the law of their country with regard to abortion. In some countries abortion is illegal whatever the reason or situation.
Illegal abortion:	means any abortion which is performed by any person who is not permitted under the relevant law of the country to carry out such a procedure. There is a very high risk of sepsis and/or haemorrhage as well as other injuries.
Septic abortion:	may occur following any kind of abortion but is more common following illegal abortion and incomplete abortion. Infection will first occur in the uterus but will rapidly spread to the fallopian tubes, pelvic organs and peritoneum and will cause septicaemia if not promptly treated. There will be fever, rapid pulse, headache, lower abdominal pain, and profuse and offensive lochia leading to septic shock if not treated promptly and effectively.
	<i>Other types of abortion are:</i>
Habitual or recurrent abortion:	when a woman has had three or more consecutive pregnancies ending in spontaneous abortion. This may be associated with an incompetent cervix, or with general or pelvic disease. Previous trauma to the cervix may be the cause. Often the cause is unknown.

Missed abortion:

describes a pregnancy where the fetus has died but the fetal tissue and placenta are retained in the uterus. Abdominal pain and vaginal bleeding will stop and the signs of pregnancy will disappear. The woman may have a brown vaginal discharge. If the dead tissue is retained in the uterus for more than 6–8 weeks there is a risk of the woman developing coagulation disorders which will result in serious bleeding.

Sometimes a missed abortion proceeds to form a blood mole where the fetus and placenta are surrounded by clotted blood within the capsular decidua. It usually occurs in the first trimester. If a blood mole is retained in the uterus for some months, the fluid becomes absorbed and the fleshy hard mass which remains is called a carneous mole. On histological examination, the fetus may still be found in the centre of this mass.

SCOPE OF THE PROBLEM

As you present the following information, ask students to consider the situation in their country with respect to abortion and maternal mortality and morbidity, as well as in the particular communities in which they live and work.

Abortion and maternal mortality and morbidity

Globally, more than 500 000 women die every year from pregnancy related causes (estimates for 2000 suggest in the region of 529 000)¹, 99% of them in developing countries. In developing countries as a whole, maternal mortality ratios range from 160 per 100 000 live births in the Caribbean and Latin America, to 870 per 100 000 in Africa. In eastern and western Africa, however, ratios are frequently found to be more than 1000 per 100 000.

It is estimated that worldwide, one in eight maternal deaths, an estimated 13%, or 67 000 deaths, are due to unsafe abortion.² Despite dramatically increased use of contraception over the past three decades, an estimated 40–50 million abortions occur annually, almost half of them in circumstances that are unsafe. Although high priority must be given to preventing unwanted and unintended pregnancies, in many developing countries contraception is unavailable or inaccessible to many women. As a result many women will seek termination of unintended pregnancies, despite restrictive laws and inadequate services. It is estimated that worldwide almost 20 million unsafe abortions take place each year; this is nearly one in ten pregnancies, or a ratio of one unsafe abortion to fewer than seven births. Almost 95% of unsafe abortions take place in the developing world, and it is estimated that worldwide almost 80 000 women die each year from complications following abortion.² See Table 1.

Table 1: Global and regional annual estimates of incidence and mortality, unsafe abortions.
United Nations, around the year 2000.

	Number of unsafe abortions (000s)	Incidence rate (unsafe abortions per 1 000 women 15–44)	Incidence ratio (unsafe abortions per 100 live births)	Estimated number of deaths due to unsafe abortion	Mortality ratio (deaths due to unsafe abortion per 100 000 live births)	Proportion of maternal deaths (% of maternal deaths due to unsafe abortion)
World total	19 000	14	14	67 900	50	13
Developed countries*	500	2	4	300	3	14
Developing regions	18 400	16	15	67 500	60	13
Africa	4 200	24	14	29 800	100	12
Asia*	10 500	13	14	34 000	40	13
Europe	500	3	7	300	5	20
Latin America and Caribbean	3 700	29	32	3 700	30	17
Northern America	°	°	°	°	°	°
Oceania*	30	17	12	100	20	7

Source: *Unsafe abortion: global and regional estimates of the incidence of unsafe abortion associated mortality in 2000*, 4th ed. Geneva, World Health Organization, 2004.

* Australia, Japan, and New Zealand have been excluded from the regional estimates, but are included in the total for developed countries.

° For regions where the incidence is negligible, no estimates are shown.

The large number of women who risk death, injury, and social or criminal consequences associated with unsafe abortion, demonstrates clearly how desperate they are to delay or avoid a pregnancy.² These women may induce abortion themselves or seek the help of a non-medically trained person or a health worker who lacks the required skills. In these situations, the abortion procedure may be characterized by unhygienic surroundings and dangerous techniques, such as insertion of a solid object (e.g. a root, twig or catheter) into the uterus, ingestion of harmful substances, the use of external force, or incorrectly performed dilatation and curettage procedures.

It is estimated that between 10% and 50% of all women who experience unsafe abortion need medical care for complications. The most common complications are incomplete abortion, sepsis, haemorrhage and intra-abdominal injury (e.g. puncturing and tearing of the uterus). Common long-term health problems caused by unsafe abortion include chronic pain, pelvic inflammatory disease, tubal blockage and secondary infertility. Other potential consequences of unsafe abortion include ectopic pregnancy and an increased risk of spontaneous abortion or premature delivery in subsequent pregnancies.

Many women leave health facilities after treatment for complications of unsafe abortion without any counselling on how to prevent pregnancies, and without any method of contraception. Globally, between 120–150 million women who want to limit or space pregnancies are not using a contraceptive method. Although family planning services are increasingly more available and effective, it is estimated that 350 million couples worldwide do not have access to information about contraception and a full range of modern family planning services.³

Discussion point

Ensure that students have a copy of the following paragraph from the International Conference on Population and Development (ICPD) Programme of Action and discuss some of the statements included in the paragraph. For example, ask students to consider the following statements in the context of their present place of work; “Women who have unwanted pregnancies should have ready access to reliable information and compassionate counselling”. “In all cases, women should have access to quality services for the management of complications arising from abortion”. “Post-abortion counselling, education and family planning services should be offered promptly”. Ask students to discuss the information they give to women who experience unwanted pregnancies and the nature of the counselling they provide. Ask them why it is important to provide good quality services for the management of complications arising from abortion, and why it is important to provide prompt post-abortion counselling, education and family planning.

Paragraph 8.25 from the International Conference on Population and Development (ICPD) Programme of Action 1994⁴

In no case should abortion be promoted as a method of family planning. All governments and relevant intergovernmental and nongovernmental organizations are urged to strengthen their commitment to women's health, to deal with the health impact of unsafe abortion as a major public health concern, and to reduce the recourse to abortion through expanded and improved family planning services. Prevention of unwanted pregnancies must always be given the highest priority and all attempts should be made to eliminate the need for abortion. Women who have unwanted pregnancies should have ready access to reliable information and compassionate counselling. Any measures or changes related to abortion within the health system can only be determined at the national or local level according to the national legislative process. In circumstances in which abortion is not against the law, such abortion should be safe. In all cases women should have access to quality services for the management of complications arising from abortion. Post-abortion counselling, education and family planning services should be offered promptly, which will also help to avoid repeat abortions.

Preventing unwanted and unintended pregnancy

There are many reasons why a woman may not want to have a child at a particular point in her life. The woman may not be ready for marriage, or the relationship may have failed. An unintended pregnancy may lead to emotional distress or illness. It may also interfere with the woman's opportunities for education and employment. Adolescents are particularly susceptible to unintended and unwanted pregnancies and require health services designed to meet their special needs.

Many women around the world are limited in their ability to control their fertility. This is the case even in countries where family planning services are available; women may not use these services because they are not easily accessible, the quality of care is poor (e.g. negative attitudes of health workers and/or limited knowledge and skills), they cannot afford them, or because of sociocultural or religious beliefs about the use of family planning.

In many parts of the world women have very little control over when and with whom they have sex. Women's vulnerability to rape, violence and sexual abuse puts them at high risk of unintended pregnancy. Despite the fact that in many societies premarital sex is forbidden, many young and unmarried women become involved in sexual activity with older men as an economic necessity.

With respect to human sexuality and gender relations, the ICPD Programme of Action includes the following objectives: (a) to promote adequate development of responsible sexuality, permitting relations of equity and mutual respect between the genders and contributing to improving the quality of life of individuals, and (b) to ensure that women and men have access to the information, education and services needed to achieve good sexual health and exercise their reproductive rights and responsibilities.⁴

To help prevent unintended pregnancies, governments need to ensure that all couples and individuals (including adolescents and unmarried women) have access to good quality, client-centred and confidential family planning information and services which offer a wide range of modern contraceptive methods, including emergency contraception. In addition, providers of family planning services must have the necessary technical and interpersonal skills, information, and supplies and equipment to support service provision. In terms of male involvement in sexual and reproductive health, it is critical that strategies are devised to ensure that men share responsibility, particularly for family planning and for preventing and controlling sexually transmitted infections (STIs), including HIV/AIDS. Providing access to effective family planning services is one of the best ways to prevent maternal deaths due to unsafe abortion. Evidence shows that when positive steps were taken to make effective family planning services widely available and used abortion rates fell.⁵

Discussion point

Ask students to share their views on the quality of the family planning services offered at the facilities at which they work. For example:

- *Are the women and adolescent girls in their communities being provided with services that will help them prevent an unwanted pregnancy?*
- *Is emergency contraception available?*
- *What can they, as midwives, do about ensuring good quality services for women and adolescent girls with respect to preventing unintended pregnancies?*
- *What can they do about ensuring male involvement in sexual and reproductive health?*

To facilitate discussion, use the relevant sections in Chapter VII, and Chapter VIII of the ICPD Programme of Action.

Laws and regulations related to abortion

In developing countries, where the average desired family size is relatively large, of the 210 million pregnancies that occur each year, an estimated 75 million are unplanned and 40–50 million are estimated to end in abortion.⁶

Although in almost every country of the world there are some situations where abortion is permitted to save the woman's life, the grounds on which abortion is permitted vary enormously around the world (**Figure 1.1**).

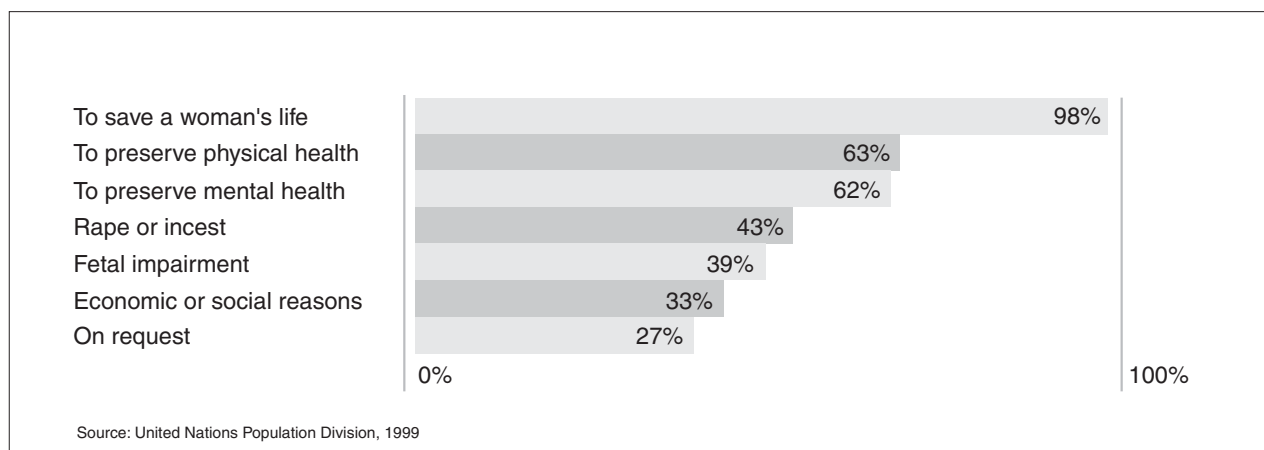


Figure 1.1: Grounds on which abortion is permitted - percentage of countries

Despite this, and because barriers such as lack of information, distance to a health care facility, economic constraints, and lack of confidentiality still exist in many countries, access to safe abortion is for many women often impossible. This means that in many developing countries, safe abortion services are not available to the full extent allowed by the law. In addition, safe and legal abortion services are not available to numerous women who qualify for these services because of the lack of trained providers and/or suitably equipped facilities, as well as the negative attitudes of providers towards abortion, in particular with respect to young and/or unmarried women.

Changing the legislation in a particular country to allow abortion does not necessarily lead to an increase in abortion rates. For example the Netherlands has a non-restrictive abortion law, free abortion services, and widely accessible contraceptives, but it has the lowest rate of abortion in the world (5.5 abortions per 1000 women of reproductive age). Other countries which have liberalized their abortion laws to allow better access to legal abortion without increasing abortion rates, include Barbados, Canada, Tunisia and Turkey.⁶ The United Nations General Assembly review of the implementation of ICPD in 1999 (ICPD+5) further agreed that, “in circumstances where abortion was not against the law, health systems should train and equip health service providers and should take other measures to ensure that such abortion is safe and accessible. Additional measures should be taken to safeguard women’s health”.⁷ Many countries in all regions of the world have begun to liberalize their abortion laws and to decriminalize abortion for medical reasons.

In countries where laws are modified to allow greater access to abortion-related services, it is important that appropriate changes take place in the health care delivery system. Examples of these changes include the development of service delivery standards, protocols, guidelines, and administrative procedures. Where abortion is legal, services should be safe and available. Health care providers should be skilled in the delivery of these services and be well-informed about the law pertaining to abortion and about service delivery standards, protocols, guidelines and administrative procedures. In addition, the services should be made known to the community to ensure that women and families are informed about where and when to seek services, if needed. WHO provides technical guidance for those countries wishing to review health policies and systems to make safe abortion services available to women in need.⁸

Discussion point

To determine what students know and understand with respect to the abortion law in their country, ask the following questions:

What is the source and nature of the abortion law in your country?

How does the law apply to the services provided?

What is the stand of professional associations and councils?

Be prepared to provide students with relevant information. For example, before you begin teaching this session, ensure that you know the answers to these questions, and have obtained copies of the law in your country pertaining to abortion, if available.

Sociocultural and religious perspectives

When a woman experiences an unwanted unintended pregnancy, the decisions she makes about abortion are affected by her social, cultural and religious beliefs. The providers of abortion-related care may also affect her decisions.⁹ Examples of the factors affecting the woman's decision are as follows:

The ability and willingness of a woman to seek care promptly for complications of abortion. Some women may need the permission of their husband or guardian to make use of available health services. For many women, an unplanned pregnancy or the use of abortion services can lead to rejection by family members. These women often delay seeking care, even for the most serious complications of abortion.

Cultural factors. There are many cultural factors which may lead women to an unsafe abortion. These include a need for secrecy, trust in traditional providers of care, and the belief that abortions performed by non-medical personnel are not actually abortions.

The importance of fertility. For many women, fertility is critical to their acceptance by the society in which they live. The use of modern methods of contraception may be seen as harmful to fertility, thus increasing the chance of unwanted pregnancy and the subsequent risk of unsafe abortion.

The attitudes of providers toward the provision of abortion care. Many women are unwilling to seek care from clinic and hospital staff who are judgemental or who make them feel uncomfortable.

In addition to the sociocultural factors mentioned above, religious beliefs will also affect the way women feel about an abortion decision and the way in which health workers and the community at large respond to them. In situations where the religious beliefs of a health worker interfere with their provision of legally authorized elective abortion services, they should not be required to provide these services. However, these health workers have an obligation to make a prompt referral to other legally authorized providers of these services.

Discussion point

Encourage students to share their perceptions of the common sociocultural and religious beliefs affecting women who seek abortion care in the communities in which they work. Also ask them to consider their own sociocultural and religious beliefs and how these may affect the care they provide. There will be opportunities in some of the following sessions for them to more fully explore their beliefs.

THE ROLE OF MIDWIVES IN ABORTION-RELATED CARE

Abortion care (where legally permitted) and post-abortion care (in all countries), should be made available as close to women's homes as possible. Such care should be provided by personnel who are adequately trained and supported to provide that care. The prevention of abortion-related maternal mortality is dependent on the provision of quality emergency abortion and post-abortion care at all levels of the health care system, from the basic rural health post to the tertiary level facility. At least some components of post-abortion care (e.g. stabilization and referral, uterine evacuation, family planning information and services) should be available at all service delivery points offering reproductive health services, where feasible 24 hours a day.

In most of the health care delivery systems, the midwife is already providing a wide range of reproductive health services, e.g. maternal and child health (antenatal care, family planning, assisting women with birth, postnatal care). Integrating post-abortion care services among the services they are already offering would lead to improved maternal health for millions of women. Training midwives in any additional skills required for post-abortion care would be easily achieved given the appropriate trainers.

Historically, wherever there has been improvement in maternal mortality and morbidity, the midwife has played a key role. Emerging evidence shows that the midwife or nurse with midwifery skills, whether in the public or private sector, can effectively, safely, and competently provide post-abortion care services.¹⁰ The nurse or midwife is often the most available, accessible, affordable and acceptable (trusted) person for offering reproductive health services among the health care providers, in most situations.

Although abortion-related care includes both emergency abortion care and elective abortion care, and although in some countries midwives are permitted by law to provide elective abortion services, the intention in this module is to enable midwives to learn the skills required to manage the life-threatening complications associated with the management of incomplete abortion, including giving post-abortion care. Table 2, contains information about the staff and elements of emergency abortion care that should be available at each level of care.

How can midwives be involved in abortion-related care

- Provide appropriate and timely referral by recognizing the signs and symptoms of incomplete abortion and stabilizing the patient
- Perform manual vacuum aspiration (MVA) to manage incomplete abortion
- Provide family planning information and services, with particular attention to the needs of adolescents and women who have experienced abortion

- Provide information and education for women and other members of the community about safe abortion care
- Provide services in underserved areas
- Provide services in institutional and in private practice settings
- Advocate for laws, policies and protocols that support the provision of safe abortion care and their involvement in that care.¹¹

Although many countries have been slow to train and support midwives or nurses with midwifery skills to provide life-saving emergency care, some countries have successfully trained, and are now supporting, midwives or nurses with midwifery skills to provide post-abortion care. These include Bangladesh, Ghana, and Nigeria.

In Ghana, where hospital-based studies report that approximately 22% of all maternal deaths result from unsafe abortion, midwives from the public and private sectors have been trained during a one-week course which included: identification and treatment of abortion complications with MVA, stabilization and referral, pain management and infection prevention protocols, patient counselling and post-abortion family planning service provision, record-keeping, and patient follow-up. Several physicians were trained together with the midwives. Following completion of training, participating midwives from public and private sector facilities worked together to treat their first patient presenting with incomplete abortion. Physicians at participating district hospitals have expressed confidence in the midwives' skills, and at one district hospital, half the cases of incomplete abortion in a four-month period were treated by a midwife. Training midwives and physicians together is thought to have established the trust and respect they now demonstrate for each other.

Midwives are the logical providers of post-abortion care and other emergency reproductive health services. Ministries of health in these countries and professional associations recognize this.

The International Confederation of Midwives (ICM) also supports the provision of post-abortion care services by midwives. ICM has passed a resolution on Care of Women Post Abortion.

Write down the ICM Resolution on the blackboard or a flip chart in order to demonstrate how it supports the role of midwives in the care of women who have experienced abortion.

Table 2: Suggested emergency abortion care activities by level of health care facility and staff

Level of care	Possible staff	Care activities
Community	- Health workers (e.g. health assistants and equivalent) - Nurses - Trained midwives - General practitioners	- Education about the dangers of unsafe abortion - Promotion and provision of family planning information and services - Recognition of signs and symptoms of abortion and complications - Timely referral to the formal health care system - Performing emergency care
Primary	- Health workers (e.g. health assistants and equivalent) - Nurses - Trained midwives - General practitioners	All of the above, plus: - Simple physical and pelvic examination - Diagnosis of the stages of abortion - Resuscitation and preparation for treatment or transfer - Haemoglobin/haematocrit testing - Referral, if needed <i>If trained staff and appropriate equipment are available, the following additional activities can be performed at this level.</i> - Initiation of essential treatment, including antibiotic therapy, intravenous fluid replacement and administration of oxytocics - Uterine evacuation during the first trimester (MVA) - Basic pain control (paracervical block, simple analgesia and sedation)
First referral	- Nurses - Trained midwives - General practitioners - Specialists with training in obstetrics and gynaecology	All of the above plus: - Emergency uterine evacuation in the second trimester - Treatment of most complications of abortion - Blood cross-matching and transfusion - Local and general anaesthesia - Laparotomy and indicated surgery (including for ectopic pregnancy if skilled staff are available) - Diagnosis and referral for severe complications such as septicaemia, peritonitis or renal failure
Secondary and tertiary	- Nurses - Trained midwives - General practitioners - Obstetrics and gynaecology specialists	All of the above plus: - Uterine evacuation as indicated - Treatment of bowel injury, tetanus, renal failure, gas gangrene, severe sepsis - Treatment of coagulopathy

Source: This table is primarily based on *Complications of abortion: technical and managerial guidelines for prevention and treatment*. Geneva, World Health Organization, 1995. However, it has been adapted, and also contains information from *Care of mother and baby at the health centre: a practical guide*. Geneva, World Health Organization, 1994 (WHO/FHE/MSM/94.2).

GROUP WORK

The Purpose of this group activity is to provide students with an opportunity to share attitudes and beliefs about abortion and the role of midwives in abortion-related care. Throughout the group activity, be mindful of the sensitive nature of abortion from sociocultural, religious and legal perspectives, and be prepared to help students address negative ideas and beliefs about abortion.

ICM Resolution: Care of women Post-Abortion

The International Confederation of Midwives believes that a woman who has had an abortion, whether spontaneous or induced, has the same need for care as a woman who has given birth. In keeping with this belief, the midwife should:

- a. consider such care to be within her role.
- b. provide any immediate care necessary following abortion.
- c. appropriately refer for any further treatment that may be required and which is beyond the limits of her practice.
- d. provide education concerning the woman's future health, this education to include family planning.
- e. recognize the emotional, psychological and social support which may be needed by the woman and respond appropriately.

Adopted by the International Confederation of Midwives' Council, Oslo, Norway, May 1996 (Care of women post abortion 96/23/PP).

1. *Review the Instructions for Group Work with the class and make sure that students understand what is expected of them.*
2. *Divide the class into groups of approximately five students per group, and provide each group with a copy of the Worksheet.*
3. *Allow 30 minutes for each group to complete the activity.*
4. *Supervise the activity by spending some time with each group. This will provide you with an opportunity to make further observations about the perceptions students have of abortion and abortion-related care.*
5. *Allow 5 minutes for each group to provide feedback on the outcome of the group activity.*

Feedback and discussion

As the groups report back, use the following questions to facilitate discussion:

Are attitudes/beliefs within and between groups the same or are there significant differences?

Which belief statements caused the widest range of disagreement?

INSTRUCTIONS FOR GROUP WORK

This activity is designed to provide you with an opportunity to share ideas and beliefs about abortion and the role of midwives in abortion-related care.

1. **Appoint** a group member as a chairperson to facilitate group discussion.
2. **Appoint** a group member to report back to the class on the outcome of the group work.
3. **Discuss** the statements included on the Worksheet and decide on a group response to each statement - i.e. as a group, agree to a response for each statement. Note areas where there is disagreement.
4. **Use** the Worksheet provided to record the group's response to each statement.
5. **Complete** the group activity within 30 minutes.

What are the possible reasons for disagreements?

How can the disagreements be resolved?

MANAGEMENT OF INCOMPLETE ABORTION AND POST-ABORTION CARE					
Belief statements	SD	D	N	A	SA
1. Contraceptives should not be made available to adolescents.					
2. Opposition from her partner or other family members can make it difficult for a woman to use a family planning method to delay or space pregnancies.					
3. Abortion should be available, within the provisions of the law, to any women in order to preserve the woman's life.					
4. Adolescents should not be sexually active.					
5. Midwives should be trained to provide emergency post-abortion care, including family planning information and counselling.					
6. Until safe abortion services are made available, women will continue to risk the consequences of unsafe abortion					
7. Encouraging male involvement could lead to responsible and fair behaviour in sexual relations and the use of contraception.					
8. Women who experience an unintended pregnancy should be provided with reliable information and compassionate counselling.					
9. A young unmarried schoolgirl who becomes pregnant should not attend school.					
10. Doctors are the only health workers who should provide emergency post-abortion care.					
11. Women who resort to unsafe abortion to terminate an unintended pregnancy, should be made to wait for care when they report to a health facility.					
12. The increasing number of sexually active adolescents points to the need for comprehensive sexual and reproductive health education, including contraception.					

Key: **SD** = Strongly disagree
D = Disagree
N = Neutral
A = Agree
SA = Strongly agree

References

- ¹ *Maternal mortality in 2000: estimates developed by WHO, UNICEF, UNFPA*. Geneva, World Health Organization, 2003.
- ² *Unsafe abortion: Global and regional estimates of the incidence of unsafe abortion and associated mortality in 2000*, 4th ed. Geneva, World Health Organization, 2004.
- ³ *The state of world population 1997*. New York, United Nations Population Fund, 1997.
- ⁴ *Programme of Action of the International Conference on Population and Development, Cairo, 5–13 September 1994*. New York, United Nations Population Fund, 1996.
- ⁵ Bongaats J, Westoff CF. The potential role of contraception in reducing abortion. *Studies in family planning* 2000, 31:193–202.
- ⁶ *Sharing responsibility: women, society and abortion worldwide*. New York, The Allan Guttmacher Institute, 1999.
- ⁷ Report of the Ad Hoc Committee of the Whole of the Twenty-first Special Session of the General Assembly. *Key actions for the further implementation of the Programme of Action of the International Conference on Population and Development, Cairo, 5–13 September, 1994*, para. 63 (iii). New York, United Nations, 1999 (A/S-21/5/Add.1).
- ⁸ *Safe abortion: technical and policy guidance for health systems*. Geneva, World Health Organization, 2003.
- ⁹ *Complications of abortion: technical and managerial guidelines for prevention and management*. Geneva, World Health Organization, 1995.
- ¹⁰ Otsea et al. Midwives deliver postabortion care services in Ghana. *Ipas Dialogue*, June 1997, 1:1.
- ¹¹ Hord CE, Delano GE. Reducing maternal mortality from abortion: the midwife's role in abortion care. In: Murray SF, ed. *International perspectives on midwifery*. London, Mosby, 1996.

2

AVOIDABLE FACTORS

SESSION 2

AVOIDABLE FACTORS

Aims

- The aim of this session is to enable students to recognize the factors which increase the likelihood of abortion, and the high mortality and morbidity associated with it.

Objectives

On completion of Session 2, students will be able to:

- Define avoidable factors, risk factors, direct obstetric death, and indirect obstetric death.
- List the risk factors for abortion, and identify those factors which are avoidable.
- Describe the steps to be taken to prevent death from the avoidable factors identified.

Plan

Lecture.

Group work.

Feedback and discussion.

Total time: approximately 2 hours.

Resources

Instructions for Group Work.

Worksheet.

Bennett VR, Brown LK (eds.). *Myles textbook for midwives*. 12th ed. London, Churchill Livingstone, 1993.

Caring for post-abortion complications: saving women's lives. Population Reports: XXV:1, September 1997.

Safe motherhood fact sheets: address unsafe abortion, and prevent unwanted pregnancy. New York, Family Care International, 1998.

Complications of abortion: technical and managerial guidelines for prevention and treatment. Geneva, World Health Organization, 1995.

INTRODUCTION

If you have already introduced students to the following definitions in one of the other technical modules (e.g. postpartum haemorrhage, obstructed labour, puerperal sepsis, eclampsia), you should review the definitions with them and then proceed with the remainder of the session.

DEFINITION OF TERMS

Avoidable factors	The term refers to factors causing or contributing to maternal death where there is departure from generally accepted standards of care.
Contributing factors	The term refers to factors which make a condition more likely to happen.
Direct obstetric death	A direct obstetric death is one resulting from obstetric complications of the pregnant state (pregnancy, labour and the puerperium), from interventions, omissions, incorrect management, or from a chain of events resulting from any of the above.
Indirect obstetric death	An indirect obstetric death is one resulting from a previous existing disease or a disease which developed during pregnancy and which was not due to direct obstetric causes, but which was aggravated or made worse by the physiological effects of pregnancy.
Discussion point	<i>To help students understand the risk factors associated with abortion, discuss the frequency and origin of spontaneous abortion and unsafe abortion, using the following information as a basis for your discussion.</i>
Factors contributing to spontaneous abortion	In the developed world, spontaneous abortion occurs in 10% to 15% of clinically recognized pregnancies, although many spontaneous abortions occur before the woman recognizes she is pregnant. Rates of spontaneous abortion may, however, be much higher in the developing world due to the prevalence of malnutrition and other health problems. The majority of spontaneous abortions occur early in pregnancy with approximately 80% occurring in the first trimester. The causes of spontaneous abortion are not always clear. More than half of first trimester spontaneous abortions are due to abnormal embryological development. Other possible factors include: febrile illnesses, systemic and genital infections such as syphilis, systemic tuberculosis, Chagas disease, rubella virus, cytomegalovirus, herpes simplex virus, chlamydia, mycoplasma, toxoplasma gondii, listeria, brucella, maternal chronic disease, hormonal causes, environmental toxins, dietary causes, anatomic abnormalities, and pregnancy

occurring while an IUD is in place. In many cases, there is no specific factor that causes a spontaneous abortion.

It is essential that women who experience spontaneous abortion are provided appropriate and timely medical care. It is also essential that they are provided appropriate follow-up care such as family planning and assessment of repeat abortion.

Factors contributing to unsafe abortion

It is clear from the information included in Session 1 that deaths from complications of unsafe abortion are a major cause of maternal death. In addition, many women suffer long-term health problems as a result of abortion complications.

Unsafe abortion is a public health concern for women of all ages, but especially for young women who often have poor access to family planning information and services. These women, in particular, are less likely than older women to have the money to pay for a safe abortion or know where and how to obtain one. Also, young women are more likely to delay seeking help and therefore look for termination at more advanced stages of pregnancy, when the risks of death and injury are higher.

Women who suffer the complications of unsafe abortion face the likelihood of future unwanted pregnancies and subsequent risk of injury or death from repeated unsafe procedures. Women who have suffered unsafe abortion should be offered family planning counselling to address conditions or situations which may have led to their unwillingness to use a family planning method, contraceptive failure or inability to use a method effectively.

GROUP WORK

This group activity is designed to help students identify contributing factors to abortion and the actions or interventions to reduce them.

- 1. Review the Instructions for Group Work with the class and make sure that students understand what is expected of them.*
- 2. Divide the class into groups of approximately five students per group and provide each group with several copies of the Worksheet.*
- 3. Allow 60 minutes for each group to complete the activity.*
- 4. Supervise the activity by spending some time with each group. This will provide you with an opportunity to ensure that the activity is proceeding as planned, and to observe the input of each student.*

INSTRUCTIONS FOR GROUP WORK

(Please read **all** the instructions carefully before you begin)

1. Identify **three** individual, **three** community and **three** health services factors that contribute to abortion-related mortality and morbidity.
2. Explain why the factors you have identified may lead to abortion.
3. Indicate whether the factors you have identified are avoidable.
4. Describe the steps to be taken to avoid the factors you have identified.
5. Use the Worksheet(s) provided to record your group work.

You are given an example. Work through it in the same way, using the worksheet provided.

You have **one** hour in your group.

Appoint a group leader and a person to report back.

Example:

Factors contributing to abortion/ abortion seeking	Why may the factors lead to abortion-related complication?	Avoidable?	What steps should be taken to avoid the contributing factors?
Sexual activity at a young age, e.g. during adolescence (individual contributing factor).	Sexual activity may lead to an unwanted pregnancy and may then lead to the young person seeking an abortion from an unsafe practitioner for fear of recriminations if they use safe abortion services.	Yes	All adolescents and young people should be provided with comprehensive sexual and reproductive health education that offers information on sexuality, reproduction, contraception and gender relations. Health education messages for the community should provide information on the incidence and impact of unsafe abortion within communities; the legal status of abortion; preventing unwanted pregnancy; avoiding unsafe abortion; and recognizing and seeking appropriate care for abortion complications. High-quality adolescent-friendly safe abortion services should be made available to the fullest extent allowed by the law, and be affordable and accessible. All adolescents should have access to high-quality, client-oriented and confidential family planning information and services offering a wide range of modern contraceptives, including emergency contraception.



PREVENTING ABORTION			
Factors contributing to abortion/abortion seeking	Why may the factors lead to abortion related complication?	Avoidable?	What steps should be taken to avoid the contributing factors?

5. Allow 10 minutes for each group to provide feedback about the outcome of the group activity.

Feedback and discussion

Use the following factors as a guide during feedback and to encourage discussion. Bring to the attention of the class any factors not identified during group work (each group will have identified only three individual, three community and three health services contributing factors, so it is possible that not all of the contributing factors listed below will have been covered).

CONTRIBUTING FACTORS LEADING TO ABORTION-SEEKING AND/OR ABORTION-RELATED COMPLICATION

Contributing factors at individual level

- sexual activity at a young age
- lack of knowledge about family planning
- lack of knowledge about where to obtain family planning services
- unwillingness to use family planning methods for cultural, religious, social, economic or emotional reasons (services not perceived as user-friendly)
- inability to use a contraceptive method effectively
- contraceptive failure
- lack of awareness about the harmful effects of unsafe abortion
- lack of awareness about the seriousness of excessive vaginal bleeding
- low educational status (related to lack of knowledge)
- low economic status (leads to lack of access if services are fee paying)
- poor health status (more likely to get complications after an abortion)
- previous history of unwanted pregnancy and abortion.

Contributing factors at community level

- lack of awareness about the harmful effects of unsafe abortion
- lack of awareness about the seriousness of excessive vaginal bleeding (more than normal menstrual loss)
- great distance from a woman/young girl's home to a health facility where the required care is available, so if bleeding, delay in seeking care as well as delay in receiving care
- lack of transportation between home and a health facility
- lack of family planning and abortion care services
- low socioeconomic status
- prevailing sociocultural and religious beliefs that prohibit abortion services being provided, or if provided being used or publicized, leads to high incidence of using unsafe "back-street" practitioners
- restrictive laws related to abortion (as above)
- lack of involvement of men in reproductive health matters, men not willing to comply with contraceptives

- women's low status, e.g. may not be able to seek care without permission of partner or older member of family.

Contributing factors in the health service

- delays in starting resuscitative measures for post-abortion complications
- underestimation of blood loss
- absence of blood and plasma supply
- faulty techniques for dealing with post-abortion complications
- delay in calling for help or in referring the woman/young girl to a facility where the required help is available
- negative attitudes of health workers toward women particularly those who are unmarried and especially adolescents who present with post-abortion complications
- staff who are not trained in the management of incomplete abortion and post-abortion complications
- staff who are not trained in dealing with post-abortion complications and/or post-abortion counselling and family planning.

REDUCING CONTRIBUTING FACTORS TO ABORTION

The following actions or interventions need to take place to reduce contributing factors to abortion:

- all couples and individuals (including adolescents and unmarried women) should have access to high-quality, client-oriented and confidential family planning information and services offering a wide choice of modern contraceptive methods, including emergency contraception where appropriate
- family planning counselling should be confidential, supportive, respond to the particular needs of the client, and facilitate continuity of care
- all providers of care should have the supplies, equipment, information, and technical and interpersonal skills necessary to support the provision of high quality care
- women and their families should, through a variety of communication channels, be informed about family planning, including emergency contraception
- health education messages should be based on the incidence and impact of unsafe abortion within communities, and be sensitive to people's beliefs, attitudes and practices
- health education messages should offer information on the legal status of abortion, preventing unwanted pregnancy, avoiding unsafe abortion, and recognizing and seeking appropriate care for abortion complications
- all adolescents and young people should be provided with comprehensive sexual and reproductive health education that offers information on sexuality, reproduction, contraception and gender relations

- women who experience an unwanted pregnancy should be provided with reliable information and compassionate counselling
- high-quality, safe abortion services should be made available, to the fullest extent allowed by law, and be accessible and affordable
- all women should have access to high quality services for the management of abortion complications, including post-abortion family planning counselling and methods
- the key elements of post-abortion care should include emergency treatment of abortion complications, family planning counselling and services and links to comprehensive reproductive health services
- to prevent abortion-related mortality, emergency post-abortion care should be available 24 hours a day
- health facilities should have trained and authorized staff, specific protocols for treatment, good coordination between relevant units/departments within facilities and functional links between facilities for the purpose of referral.

In addition to the above, policy-makers need to encourage changes within communities and at the national level to:

- address legal, social, economic and cultural factors which limit the control women have over their sexuality and reproductive health, including their access to services for safe abortion and contraception
- take the steps required to eliminate all forms of sexual violence, reduce inequalities between men and women, and encourage gender-sensitive policy-making
- address unwanted pregnancies among young people and change punitive attitudes toward young girls who become pregnant
- encourage male involvement that leads to responsible and fair behaviour in sexual relations, contraception, pregnancy and child care.

3

IDENTIFYING THE PROBLEM

SESSION 3

IDENTIFYING THE PROBLEM

Aims

- The aim of this session is to enable students to assess and identify abortion complications.

Objectives

On completion of Session 3, students will be able to:

- Describe the steps involved in the initial assessment of a patient who presents with possible abortion.
- Describe the steps involved in the complete clinical assessment of a patient who presents with possible abortion.
- Demonstrate the ability to take history.
- Demonstrate the ability to perform a physical examination.
- Describe how a diagnosis is made on the basis of the assessment data.

Plan

Lecture.

Role play/simulation games and exercises.

Feedback and discussion.

Demonstration and return demonstrations.

Group work.

Feedback and discussion.

Total time: approximately 2½ hours.

Resources

Instructions for Group Work - role play/simulation game.

Symptom descriptions for role play/simulation.

Instructions for Group Work.

Complications worksheet for group work.

Key to complications worksheet.

Bennett RV, Brown LK (eds.) *Myles textbook for midwives*. 12th ed. London, Churchill Livingstone, 1993.

Clinical management of abortion complications: a practical guide. Geneva, World Health Organization, 1994 (WHO/FHE/MSM/94.1).

Complications of abortion: technical and managerial guidelines for prevention and treatment. Geneva, World Health Organization, 1995.

Managing complications in pregnancy and childbirth: a guide for midwives and doctors. Geneva, World Health Organization, 2003 (WHO/RHR/00.7).

INTRODUCTION

This session involves identifying the problem so that an accurate diagnosis can be made. This in turn often involves making a differential diagnosis (i.e. deciding which of two or more conditions may be the cause of the signs and symptoms noted on assessment of the patient).

In relation to abortion, students need to know:

- *what clues to look for*
- *what observations to make*
- *what questions to ask*
- *how to use the information collected to make a diagnosis.*

In identifying abortion complications it is important to have good verbal and nonverbal communication and interpersonal skills. The ability to assess, examine and interpret the findings will be important not only in identifying the problem, but also in arriving at the right diagnosis.

The process of identifying the problem includes doing a quick assessment for any emergency situation, and handling it appropriately. After stabilizing the patient, a proper history, physical examination and interpretation of the findings is done.

INITIAL ASSESSMENT

A woman who presents with a possible abortion may be suffering from life-threatening conditions such as shock, severe bleeding, intra-abdominal injury, and/or sepsis. For this reason it is essential to commence with an accurate Rapid Initial Assessment, to ensure the necessary actions are initiated to stabilize the patient and begin treatment.

Identification of abortion patients

Any woman of reproductive age who presents with two out of three of the following signs and symptoms should be considered as a possible abortion patient:

- vaginal bleeding, blood soaked clothes may indicate severe bleeding
- cramping and/or lower abdominal pain
- a possible history of amenorrhoea (no menses for more than one month).

If none of the above is present, another diagnosis should be considered and clinical protocols for referring or management followed.

If suspect abortion - assess for shock

The patient should be assessed immediately for the following

- fast, weak pulse - rate 110/minute or greater
- fast breathing - rate 30/minute or greater
- low blood pressure - systolic pressure less than 90 mmHg
- pallor - inner eyelid, the tongue and around the mouth, or palms
- sweaty
- anxious, confused, or unconscious.

If shock is suspected, Management of shock must be started immediately.

Even if none of these signs is present on initial assessment, the possibility of shock developing later should always be kept in mind.

COMPLETE CLINICAL ASSESSMENT

Several life-threatening conditions may be present at the same time. A complete clinical assessment is necessary to determine all conditions that are present in order to decide the order in which to treat the conditions. Table 3 shows a summary of complete clinical assessment.

It is important to note and reassure the woman that any communication will be treated confidentially, and that this confidentiality will be maintained during physical examination and treatment.

History

Creating a good interpersonal relationship with open, two-way communication between the woman and health care workers is important for the collection of all information relevant to the woman's condition. The woman may be reluctant to reveal a history of an unwanted pregnancy and attempts to terminate it. It is essential that health care workers do not express negative judgemental attitudes, either verbally or nonverbally.

It is important during history taking to present the information in the following manner:

- use short sentences and language the woman understands
- put the information in a logical sequence
- repeat important points
- speak at a pace that is comfortable for the woman.

It is also important during history taking to employ listening and questioning skills:

- listen carefully to the woman (rather than thinking what you are going to say next)

- acknowledge the woman's feelings and concerns
- keep silent from time to time to give the woman a chance to ask questions, and respect her silences
- do not rush the woman, move at her speed
- repeat what you have heard every now and then, so that you will both know if you have understood correctly
- encourage the woman's questions and give clear answers
- ask the same question in different ways if you think she has not understood
- avoid asking questions that begin with the word "why," which may sound judgemental
- reassure the woman that her feelings are shared by others in similar situations.
- employ nonverbal techniques such as:
 - sit comfortably and lean towards the patient
 - maintain eye contact, look directly at the patient but do not stare
 - make encouraging gestures, such as nodding and leaning forward
 - use a tone of voice that shows concern and interest
 - pay attention to the nonverbal communication of the patient, e.g. fidgeting, creasing the face
 - avoid distracting movements, looking at your watch, at papers, or around the room
 - avoid frowning or expressions of boredom (yawning) or judgement.

In addition to the information on the present problem, it may also be helpful to ask about:

- tetanus vaccination status
- history of bleeding disorder (e.g. platelet disorder)
- current medications
- current use of contraceptives (i.e. the method currently being used, such as an IUD)
- HIV status.

Physical examination

During physical examination do a comprehensive examination which includes a general examination. Take and record vital signs. Note the general physical status and health of the patient. Look for and note any physical injuries. Methodically examine all the systems.

During examination of the abdomen, note whether bowel sounds are present or absent and whether there is tenderness or rigidity. If the woman is in pain, note the location and severity. Note the presence of any masses, and check for signs of peritoneal inflammation, including guarding and rebound tenderness. If the uterus is palpable above the symphysis pubis, it suggests that the gestational age is 12 weeks or greater.

Pelvic examination

Pelvic examination is essential to the diagnosis and management of abortion patients. If this is the woman's first pelvic examination (as may be the case with an adolescent patient), it is especially important to explain the purpose of the examination and what is involved. Gently persuade the woman to give her consent before carrying out the examination.

Speculum examination

The purpose of speculum examination is to determine the stage of abortion, detect signs of infection, and note any cervical or vaginal injury. The cervix and vaginal walls should be inspected as follows:

Bleeding: determine the amount and site of bleeding. Blood may be coming from the uterus through the cervical os, from vaginal or cervical lacerations, or from both.

Products of conception: if any products of conception are visible in the vagina or cervical os, gently remove the tissue with a ring (or sponge) forceps and save the tissue for examination. Removing the tissue immediately from the os often reduces bleeding and provides symptomatic relief for the woman.

Cervical dilation: note whether the cervix is closed or the extent to which it is open.

Cervical discharge: check the amount, colour and smell of discharge. The presence of pus or foul-smelling discharge may indicate infected products of conception associated with septic abortion or the presence of a reproductive tract infection (RTI).

Lacerations and foreign matter: note any cervical or vaginal lacerations and the amount of bleeding from these injuries. If bleeding is severe, the lacerations may need suturing immediately. The presence of pus or foreign matter (e.g. pieces of root or twigs) indicates infection. If there is vaginal or cervical injury, it is most likely the result of an unsafe abortion attempt.

Bimanual examination

The purpose of bimanual examination is to confirm that there is or has been a pregnancy, to assess the size and position of the uterus, to determine the degree of cervical dilation, and to note any tenderness, masses or anomalies.

Uterine size: it is essential to accurately assess the uterine size in weeks, before beginning a uterine evacuation procedure. Findings from the abdominal examination will also help to make an accurate judgement of uterine size, particularly when gestation is advanced. The uterine size measured by bimanual examination should also be compared with the expected size based on the woman's last menstruation period (LMP). If, after bimanual examination there are questions about uterine size, an ultrasound scan should be carried out, if possible. If this is not possible, a second experienced health worker should verify the estimated uterine size. The risk to the woman of uterine evacuation increases with uterine size.

Uterine position: the position of the uterus and direction of the cervical canal should be identified, noting uterine retroversion, anteversion, retroflexion, or lateral deviation. A retroflexed or retroverted uterus may best be palpated by gentle rectovaginal examination. Knowledge of the position of the uterus, and direction of the cervical canal will enable the health worker to consider these factors so as to avoid perforating the uterus or injuring the cervix when inserting instruments.

Tenderness: any tenderness should be noted on palpation of the uterus, fallopian tubes and ovaries or when the uterus is moved. Pelvic and abdominal tenderness may indicate infection or injury, while tenderness around the fallopian tubes and ovaries may be associated with ectopic pregnancy and/or infection.

Table 3: Summary of complete clinical assessment

History	Obtain the following information, either from the woman or from a relative: ▪ amenorrhoea - when was the last menstrual period ▪ bleeding - duration, amount and presence of clots or pieces of tissue ▪ cramping - duration, severity and location ▪ abdominal or shoulder pain ▪ fever, chills, general malaise or fainting ▪ interference with pregnancy - if and how an attempt was made to stop the pregnancy ▪ past obstetrical and gynaecological problems - nature of problems and how they were managed ▪ drug allergies - including reactions to local anaesthetic
General physical examination	▪ take and record vital signs - temperature, pulse, respiration and blood pressure ▪ note general health of woman - e.g. malnourished, anaemic, poor general health, check for physical injuries ▪ cramping - duration, severity and location ▪ auscultate heart and lungs ▪ examine abdomen - listen for bowel sounds, look for distention and rigidity, gently palpate for abdominal masses, check for rebound tenderness¹
Pelvic examination	▪ perform a speculum examination ▪ remove any visible products of conception from vaginal canal or cervical os ▪ note the amount of bleeding and whether the cervix is open or closed ▪ check for vaginal and cervical lacerations ▪ note if there is a foul smelling discharge ▪ perform bimanual examination to estimate size of uterus, check for pelvic masses, pelvic pain (note severity, location and cause of pain)

Adapted from *Clinical management of abortion complications: a practical guide*. Geneva, World Health Organization, 1994 (WHO/FHE/MSM/94.1).

¹ To check for rebound tenderness, palpate the abdomen then remove your hand suddenly. If removing your hand causes or worsens pain, there is rebound tenderness. Rebound tenderness is a sign of peritoneal inflammation.

Masses/anomalies: unusual pelvic masses or anomalies should be noted because these may indicate the presence of an ectopic pregnancy, an ovarian tumour, or uterine fibroids.

Laboratory tests, x-ray and ultrasound

Following complete clinical examination, where possible particular laboratory tests, x-rays, and the use of ultrasound, can be useful in assessing and managing abortion complications, as shown below in Table 4.

Table 4: Laboratory tests, x-ray, ultrasound

Test	Potential use
Haemoglobin and haematocrit	In cases of shock, severe vaginal bleeding, suspected intra-abdominal injury or anaemia - to assess the Hb level to determine whether or not to transfuse
Blood typing and crossmatching	In cases of shock, severe vaginal bleeding, or suspected intra-abdominal injury - is done to determine suitability of blood for transfusion
Complete blood count	In cases of shock, infection, suspected intra-abdominal injury, or coagulopathy - to determine the levels of platelets, white blood cell count in order to decide on an intervention
Rh testing	It should be done to determine the Rh state of the woman so that prophylaxis treatment against Rh iso-immunization can be done if the woman's Rh is negative
Ultrasound	In cases of suspected ectopic pregnancy or uncertain uterine size - to confirm diagnosis
Abdominal x-ray	Only in cases of severe infection or suspected intra-abdominal injury - to determine and confirm the extent of injury
STI screening and voluntary counselling and testing (VCT) for HIV, unless HIV status already known	Important to offer both tests to all women, but especially important where pregnancy is associated with violence, in very young girls and in cases of unsafe abortion

DIAGNOSIS

To make a diagnosis and determine the woman's needs for immediate treatment, the observations made and the information collected during assessment should be compared with the signs and symptoms for each of the following conditions.

Moderate to light vaginal bleeding

Many women who present with an incomplete abortion have moderate to light vaginal bleeding which is not life-threatening. However, treatment should not be delayed because the condition may become worse. The following signs indicate moderate to light bleeding:

- clean pad, not blood-soaked after five minutes
- fresh blood without clots
- blood mixed with mucous.

Severe vaginal bleeding

If the woman has any of the following signs, she has severe vaginal bleeding, requiring immediate treatment to replace fluid loss and control bleeding:

- heavy, bright red vaginal bleeding with or without clots
- pads, towels, or clothing blood-soaked within five minutes
- pallor.

Intra-abdominal injury

If the woman has any of the signs in the box below, with any of the symptoms listed, she may have an intra-abdominal injury. Differential diagnoses should also include ectopic pregnancy and appendicitis.

Signs	Symptoms
▪ Distended abdomen ▪ Decreased bowel sounds ▪ Tense, hard abdomen ▪ Rebound tenderness	▪ Nausea/vomiting ▪ Shoulder pain ▪ Fever ▪ Abdominal pain, cramping

Sepsis

Any woman with vaginal bleeding who also has any of the signs in

Signs	Symptoms
▪ Chills or sweats (rigors) ▪ Foul-smelling vaginal discharge ▪ Distended abdomen ▪ Rebound tenderness ▪ Slightly low blood pressure (mild hypotension)	▪ History of interference with pregnancy ▪ Abdominal pain ▪ IUD in place ▪ Prolonged bleeding ▪ General discomfort; flu-like symptoms

the box below, with any of the symptoms listed, may have local or generalized infection (septicaemia).

While life-threatening conditions must be treated without delay, definitive management will depend on the stage of abortion. Table 5 includes information with which the findings on pelvic examination can be compared in order to determine the stage of abortion, and to decide on appropriate management.

Table 5: Diagnosis of abortion

Diagnosis	Bleeding	Cervix	Uterine size	Other signs
Threatened abortion	Slight to moderate	Not dilated	Equal to dates	Positive pregnancy test Cramping Uterus soft
Inevitable abortion	Moderate to heavy	Dilated	Less than or equal to dates	Cramping Uterus tender/firm
Incomplete abortion	Slight to heavy	Dilated	Less than or equal to dates	Partial expulsion of products of conception Uterus tender/firm
Complete abortion	Slight to moderate	Dilated or closed	Less than dates	Complete expulsion of products of conception
Missed abortion	Little or none	Closed	Less than or equal to dates	Fetus dead; delayed expulsion Decrease in pregnancy signs

Source: *Clinical management of abortion complications: a practical guide*. Geneva, World Health Organization, 1994 (WHO/FHE/MSM/94.1).

GUIDE FOR THE TEACHER

At this stage, history taking, physical examination and diagnosis have been covered in theory. The teacher should now simulate and demonstrate history taking and physical examination. The students should then do a return simulation and demonstration, using a checklist.

INSTRUCTIONS FOR SIMULATION/ROLE PLAY AND DEMONSTRATION

The aim in this activity is to provide students with an opportunity to role play/observe the process of obtaining a history, and performing a physical examination on a woman who presents with a possible abortion.

- *Teacher to request for a volunteer to act as a “patient”*
- *Teacher to act as a service provider*
- *Teacher to simulate history taking, communication, interpersonal skills and physical examination*
- *After the simulation and demonstration, provide time for discussion*
- *Divide the participants into groups of three*
 - *one to act as a service provider*
 - *one as a patient*
 - *one as an observer*
 - *give the participants the cases provided to role play.*
- *Make sure that all the participants have a chance to role play each position*
- *Arrange for additional space/rooms which can be used to simulate a space/room appropriate for history taking*
- *Review the Instructions for Students - simulation role play with the class to make sure that students understand what is expected of them*
- *Remind group members of the need for the “midwife” to be nonjudgemental in her/his approach and to have clear, open, two-way communication with the “patient”*
- *Allow 20 minutes for each group to complete the activity*
- *Supervise the activity by spending some time with each group. This will provide you with an opportunity to make sure that the activity is proceeding as planned and to observe the input of each student.*

Feedback and discussion

During feedback, ask the “patient” from each group if there was any

INSTRUCTIONS FOR STUDENTS: Simulation role play

1. **Appoint** a group member to role play a “patient”, using the case studies provided to your group. The “patient” may make up information if the “midwife” asks questions that do not cover the symptoms in the case study.
2. **Appoint** a group member to role play a “midwife” who will take a history from the patient.
3. The remaining group members are to observe the role play, paying particular attention to the “midwife’s” interviewing skills.
4. You have 20 minutes to complete the activity.

Case studies for simulation/role play

Patient 1

You are a 30 year old woman who lives a long way from the nearest health care facility. Your symptoms are not severe, but your aunt has persuaded you to go to the health centre for treatment. Your symptoms are as follows:

- Moderate bleeding for 3 days
- Last period ended about 7 weeks ago
- Some abdominal cramping but it is not severe
- 2 previous births
- 1 previous miscarriage
- Using injections for birth control and the last injection was 7 months ago

Patient 2

You are a 16 year old girl who has come to the health centre alone. You are very anxious that your family would know about your condition. You are in considerable pain. Your symptoms are as follows:

- Moderate bleeding for 7 days
- Last period began about 11 weeks ago
- Severe cramping for 4 days
- Chills and sweating
- Brown, foul-smelling vaginal discharge
- No previous pregnancies
- Not using any method of contraception

Patient 3

You are a 34 year old mother of 7 children. You go to the health centre because you are in severe pain, and you are very frightened. Your symptoms are as follows:

- Last period was about 8 weeks ago
- Moderate cramping for the last 12 hours
- Heavy bleeding
- Severe abdominal pain
- Right shoulder pain
- Using withdrawal as a method of contraception

information that the “midwife” did not obtain.

Draw two columns on a blackboard or flip chart and write down the headings “helpful interviewing skills” and “ways to improve interviewing skills”.

Ask the observers in the groups to identify the “helpful interviewing skills” noted by them during the role play. Then ask them to identify “ways to improve interviewing skills.” Do the same for physical examination.

CLASSROOM QUIZ

The following quiz can be conducted as a classroom question–answer exercise. Simply read each question to the class and allow a show of hands for the response. If an incorrect response is given, provide the correct one. Avoid accepting answers from the same student(s). As the quiz provides you with an opportunity to assess the level of knowledge attained so far, encourage all students to participate.



Quiz on abortion

1. *What is the estimated number of abortions that take place worldwide on a daily basis?*

55 000.

2. *What percentage of abortions take place in the developing world?*

95 per cent.

3. *What are three signs or symptoms of incomplete abortion?*

Vaginal bleeding, abdominal cramping, lower abdominal pain.

4. *What are three presenting complications frequently seen with incomplete abortion?*

Any three of the following: shock, intra-abdominal injury, uterine perforation, infection, sepsis, haemorrhage.

5. *Which three of the following stages of abortion require removal of retained products of conception: threatened abortion, incomplete abortion, inevitable abortion, missed abortion, complete abortion?*

Inevitable abortion, incomplete abortion, missed abortion.

6. *What are five individual risk factors for abortion?*

Any five of the following: sexual activity at a young age; lack of knowledge about family planning; lack of knowledge about where to obtain family planning services; unwillingness to use family planning methods; inability to use a contraceptive method effectively; contraceptive failure; lack of awareness about the harmful effects of unsafe abortion; lack of awareness about the seriousness of excessive vaginal bleeding; low educational status; low economic status; poor health status; sociocultural and religious beliefs that prohibit abortion; previous history of unwanted pregnancy and abortion.

7. *What are five community risk factors for abortion?*

Any five of the following: lack of awareness about the harmful effects of unsafe abortion; lack of awareness about the seriousness of excessive vaginal bleeding; long distance from a woman's home to a health facility where the required care is available; lack of transportation between home and a health facility; lack of family planning and abortion care services; low socioeconomic status; low educational status; prevailing sociocultural and religious beliefs that prohibit abortion; restrictive laws related to abortion.

8. *What are five health services risk factors in relation to abortion?*

Any five of the following: delays in starting resuscitative measures for post-abortion complications; underestimation of blood loss; absence of blood and plasma supply; faulty techniques for dealing with post-abortion complications; delay in calling for help or in referring the woman to a facility where the required help is available; negative attitudes of health workers toward women who present with post-abortion complications; staff who are not trained in the management of incomplete abortion and post-abortion complications; staff who are not trained in post-abortion counselling and family planning.

9. *When taking a history from a possible abortion patient, what specific information must you ask for?*

- amenorrhoea - when was the last menstrual period
- bleeding - duration, amount and presence of clots or pieces of tissue
- cramping - duration, severity and location
- abdominal or shoulder pain
- fever, chills, general malaise or fainting
- interference with pregnancy
- past obstetrical and gynaecological problems
- drug allergies.

4

MANAGING INCOMPLETE ABORTION: POST-ABORTION CARE

SESSION 4

MANAGING INCOMPLETE ABORTION: POST-ABORTION CARE

Aims

- The aim in this session is to enable students to understand the management of abortion complications.

Objectives

On completion of Session 4, students will be able to:

- Describe the management of shock following abortion.
- Describe the management of haemorrhage following abortion.
- Describe the management of intra-abdominal injury following abortion.
- Describe the management of sepsis following abortion.
- Explain the importance of using good communication skills when providing information and counselling to post-abortion patients.
- Demonstrate ability to counsel clients for family planning services.

Plan

Lecture.

Classroom quiz.

Feedback and discussion.

Total time: approximately 2½ hours.

Resources

Illustrations.

Models, e.g. pelvic.

Pictures.

Clinical management of abortion complications: a practical guide. Geneva, World Health Organization, 1994 (WHO/MSM/94.1).

Complications of abortion: technical and managerial guidelines for prevention and treatment. Geneva, World Health Organization, 1995.

Preventing HIV transmission in health facilities. Geneva, World Health Organization, 1995 (GPA/TCO/HCS/95.16).

Yordy L, Hogan LA, Winkler J. *Manual vacuum aspiration: guide for clinicians.* Carrboro, IPAS, 1993.

Managing complications in pregnancy and childbirth: a guide for midwives and doctors. Geneva, World Health Organization (WHO/RHR/00.7).

INTRODUCTION

This session provides information about the immediate management of incomplete abortion, and builds on the previous session. How to undertake a Manual Vacuum Aspiration (MVA) procedure however is dealt with in Session 6.

Remind students that shock, severe bleeding, intra-abdominal injury and sepsis are the most common life-threatening complications associated with abortion (therefore some of the points made in the last session will be repeated in this session). Emphasize the point that even if these complications are absent when a woman presents at a health care facility, incomplete abortion can become life threatening if treatment is delayed. Therefore, following assessment of the woman's condition, students must apply the principles of:

- *speed (responding to the woman's needs quickly, without unnecessary delay)*
- *skills (applying the life-saving skills required to deal with the complications identified)*
- *prioritize actions (providing life-saving care before routine care).*

Finally, remind students that as with all cases where bleeding occurs, great care is required to comply with infection control policy and procedures to avoid cross infection to patients and self, especially blood-borne infections and particularly Hepatitis B and HIV/AIDS.

RATIONALE FOR REPRODUCTIVE HEALTH PRACTITIONERS BEING ABLE TO PROVIDE POST-ABORTION CARE

Several studies have shown that one of the most effective ways to curb abortion-related mortality and morbidity, regardless of prevailing abortion laws, is to provide high-quality post-abortion care. Trained in the proper techniques, providers can not only treat most incomplete abortion complications, they can also counsel women in how to use family planning to prevent future unwanted pregnancies and unsafe abortion.

DEFINING POST-ABORTION CARE

Post-abortion care is the care given to a woman who has had an unsafe, spontaneous or legally induced abortion. It consists of the following components:

- emergency treatment of complications from a spontaneous or unsafe induced abortion
- family planning counselling and services
- access to comprehensive reproductive health care, including screening and treatment for STI, RTIs and HIV/AIDS

- community education to improve reproductive health and reduce the need for abortion.

MANAGING POST-ABORTION CARE

In the process of providing post-abortion care services, it is important to remember that these patients require empathy, understanding, compassion and counselling throughout their care. In providing post-abortion care, it is important first to manage the immediate situation, i.e. deal with bleeding and shock. Once this woman's condition is stable it is then equally important to provide the essential follow-up care, including pain relief, psychological support, post-abortion counselling and any further tests that may be required.

MANAGEMENT OF SHOCK

The main aim when managing shock is to stabilize the patient, as follows:

1. *Universal measures:* make sure that the airway is open; check vital signs; do not give fluids by mouth as the woman may vomit and inhale or aspirate the vomitus; keep the woman warm but do not over heat; maintain circulation to vital organs by elevating the legs (either by placing pillows under feet, elevating foot of the bed or placing the patient in a trendelenburg position). *Remember if you elevate the foot of the bed too much, the blood may collect in the uterus rather than be expelled.*
2. *Oxygen:* if oxygen is available, give by mask or nasal cannulae at 6–8 litres per minute.
3. *Fluids:* start intravenous fluids immediately; use a large bore needle (i.e. 16–18 gauge) and, if possible, collect blood samples for haemoglobin and haematocrit and crossmatch; give sodium lactate or normal saline at a rate of 1 litre in 15–20 minutes (normally it takes approximately 1–3 litres, infused at this rate to stabilize a patient in shock). Blood transfusion is required if haemoglobin is 5 g/100 ml or less or haematocrit is 15% or less.¹ No fluids should be given by mouth.
4. *Medication:* broad spectrum antibiotics should be started either intravenously or intramuscularly; tetanus toxoid and antitoxin should be given if there is any uncertainty about the woman's vaccination history.

¹ Selective use of blood transfusions is important to reduce the risk of transmitting infectious agents such as hepatitis and HIV. Acute blood loss should usually be managed by using normal saline and plasma expanders, rather than packed red cells or whole blood. Only women who have both a low haemoglobin level, and symptoms of acute blood loss or severe anaemia, should be given a blood transfusion.

5. *Identify cause of shock and manage accordingly:* in cases of incomplete abortion the cause of the shock will be loss of blood, therefore immediate steps must be taken to manage haemorrhage.

MANAGEMENT OF HAEMORRHAGE

Ask students to list the signs of severe vaginal bleeding. Write down their answers on the blackboard or a flipchart, which should include the following:

- *heavy, bright red vaginal bleeding with or without clots*
- *blood-soaked pads, towels, or clothing*
- *pallor (inner eyelid, tongue and around the mouth, or palms).*

Emphasize the need to begin treatment without delay.

Timely management of severe vaginal bleeding is critical in abortion care, as delays in replacing fluid or blood volume can mean death for the woman. Management should involve the following steps:

1. *Management of shock:* (see previous Management of shock).
2. *Identification of bleeding site:* Definitive management of severe vaginal bleeding requires assessment of all possible sources of bleeding and therefore it is essential to identify correctly the actual source of bleeding by visualization or diagnostic tests. Possible sites of vaginal bleeding include placental site due to retained products of conception, cervical or genital tract lacerations, and intra-abdominal injury. (To be dealt with in greater detail later in this session).
3. *Uterine evacuation:* If retained products of conception are the cause of bleeding, the uterus must be evacuated in order to stop bleeding. The method of choice for evacuating the uterus will depend on the uterine size measured in completed weeks from LMP. The techniques for uterine evacuation used in emergency abortion care in the first trimester (any time up to 12 weeks LMP, i.e. 12 weeks from the first day of the last normal menstrual period) are as follows:
 - *manual vacuum aspiration or MVA* requires a hand-held vacuum syringe and plastic cannulae of various diameters. MVA has been shown to be highly effective in removing retained products of conception from the uterus and is associated with a low complication rate. It does not require general anaesthesia and does not need to be performed in an operating room (see Session 6). Electric or foot operated mechanical pumps can also be used for vacuum aspiration
 - *dilatation and curettage if manual vacuum extraction is not available.* This requires dilation of the cervix with

instrumental dilators, followed by insertion of a curette and systematic scraping of the walls of the uterus to remove the products of conception. In many parts of the world, the procedure has been replaced by vacuum aspiration which is safer and less traumatic if equipment is available and well maintained.

Uterine evacuation using a variety of vacuum sources may make vacuum aspiration useful when the uterus is larger, up to and around 14 weeks from LMP.

4. *Examination of the products of conception:* The tissue removed from the uterus must be examined immediately following the evacuation procedure, before the woman leaves the treatment/procedure room. Gloves should be worn and infection prevention protocols with respect to protection of staff and disposal of waste should be followed. Tissue should not be placed in a fixative before examination. Excess blood and small clots should be removed by placing the tissue in a fine strainer and gently pouring water over it. The tissue should then be placed in a clear container of water or saline. By adding a weak acetic acid solution (vinegar) to the water any remaining blood will be removed and the villi will be bleached, making them easier to recognize. To inspect the tissue, hold the container in front of a window or light. A magnifying glass or microscope (if available) may be helpful although not absolutely necessary.

Normal findings on tissue examination:

- villi (white branching projections of placental tissue)
- gestational sac (transparent membrane attached to the villi)
- decidua (maternal endometrial tissue that is firm, with coarse shaggy borders)
- fetal fragments may occasionally be seen at gestations greater than 10 weeks; however, more often these are passed before the woman presents at the health care facility.

Abnormal findings on tissue examination:

- the presence of decidua without villi may indicate incomplete evacuation of the uterus, ectopic pregnancy, completed abortion prior to procedure, or blighted ovum
 - old blood clots, pus, or foul-smelling material indicate infection/sepsis
 - grape-like clusters indicate the possibility of a molar pregnancy or hydatidiform mole.
5. *Repair of cervical or genital tract lacerations:* Any lacerations to the cervix or genital tract which are the source of severe bleeding, should be sutured (*see Clinical skills in Session 5*).
 6. *Management of uterine perforation:* If at any time uterine perforation is suspected as the source of severe bleeding (including during the procedure for manual vacuum

aspiration), aspiration must not be undertaken or must be stopped immediately and appropriate steps taken, such as commencing IV fluids (if not already done so) and observation of bleeding and the woman's general condition (vital signs; degree of pallor, pulse, BP, consciousness and urine output) until a careful investigation by laparoscopy or laparotomy has been performed.

7. *Referral and transfer.* In situations where skilled staff or the required supplies and equipment are not available (e.g. for the repair of genital tract lacerations and uterine perforation), the woman should be transferred without delay to a facility where appropriate treatment is available. She should be accompanied by a health worker capable of monitoring her condition during transfer, maintaining fluid replacement, ensuring warmth and comfort, and providing a detailed account of the woman's condition on arrival at the referral facility.

MANAGEMENT OF INTRA-ABDOMINAL INJURY

Remind students that attempts to terminate a pregnancy by inserting objects, instruments, or chemicals into the vagina and uterus may result in uterine perforation or damage to the bowel, bladder, or other organs. These injuries often occur if an abortion has been attempted by an unskilled person in an unhygienic environment, or has been self-induced, and can often lead to intra-abdominal bleeding and peritoneal infection.

Women who experience intra-abdominal injury should be managed as follows:

1. **Management of shock** (see Management of shock on page 60).
2. **Surgical procedures.** A laparotomy may be required to assess and repair the damage.
3. **Referral and transfer.** In situations where staff with the necessary surgical skills or the required supplies and equipment are not available, the woman should be transferred without delay to a facility where appropriate treatment is available. She should be accompanied by a health worker capable of monitoring her condition during transfer, maintaining fluid replacement, ensuring warmth and comfort, and providing a detailed account of the woman's condition on arrival at the referral facility.

MANAGEMENT OF SEPSIS

Ask students to list the signs and symptoms of infection following abortion. Write down their answers on the blackboard or on a flipchart, which should include the following:

- *chills or sweats*
- *fever*
- *foul-smelling vaginal discharge*
- *distended abdomen*
- *rebound tenderness*
- *slightly low blood pressure*
- *history of interference with the pregnancy*
- *abdominal pain*
- *IUD in place*
- *prolonged bleeding*
- *general discomfort or flu-like symptoms.*

When infection occurs following abortion it is usually associated with retained products of conception. If severe infection has spread beyond the uterus or if septicaemia is suspected, management should be as follows:

1. **Management of shock** (see Management of shock on page 60).
2. **Identification of source of infection.** Definitive treatment of the source of infection can save the woman's life. The most common source of infection is retained products of conception. However, there may be more than one source of infection. Other possible sources of infection that must be considered include intra-abdominal injury, pelvic abscess, peritonitis, gas gangrene, or tetanus. All sources of infection must be treated. In addition, if the woman has an IUD in place, it must be removed.
3. **Choice of antibiotics.** Often more than one type of bacteria is involved. Therefore, a combination of antibiotics should be given to provide the broadest coverage possible. Useful regimens include:

If severe infection involving deep tissue, give:

- ampicillin 2 g IV stat every 6 hours, **and**
- gentamicin 5 mg/kg body weight IV every 24 hours, **and**
- metronidazole 500 IV every 8 hours.

If infection does not involve deep tissue, give:

- amoxicillin 500 mg orally 3 times a day for 5 days, **and**
- metronidazole 400 mg orally 3 times a day for 5 days.
- gentamicine 5mg/kg body weight IV every 24hours for 5 days.

If the woman does not improve within 48 hours of starting antibiotics, or the laboratory report indicates that the bacteria are resistant to the antibiotics given, they must be changed.

4. **Tetanus immunoprophylaxis.** Any trauma to the genital tract which involves contamination with dirt or faeces, requires careful attention to the possibility of tetanus. A first step in preventing the onset of tetanus involves the careful cleansing of the wound, drainage of pus, and meticulous removal of foreign material and dead or damaged tissue.

If the woman has been fully immunized for tetanus within the last 10 years and has a clean, minor wound, no immunoprophylaxis is required. If the wound is contaminated with dirt or faeces, is a puncture wound or involves a burn, a tetanus vaccine booster should be given.

If the woman has not been fully immunized* for tetanus within the last 10 years or is unsure of her vaccination status, tetanus vaccine and tetanus antitoxin should be given. When vaccine and antitoxin are given at the same time, it is important to use separate needles and syringes and separate sites of administration (see Table 6 for TT immunization schedule).

5. **Uterine evacuation.** If retained products of conception are the cause of infection, the uterus should be evacuated, preferably using MVA.
6. **Examination of the products of conception.** (step 4 under Management of haemorrhage).
7. **Referral and transfer.** In situations where skilled staff or the required supplies and equipment are not available (e.g. if the required antibiotics or the skills and equipment for MVA are not available), the woman should be transferred, without delay, to a facility where appropriate treatment is available. She should be accompanied by a health worker capable of monitoring her condition during transfer, maintaining fluid replacement, ensuring warmth and comfort, and providing a detailed account of the woman's condition on arrival at the referral facility.

Table 6: WHO Tetanus toxoid immunization schedule

Dose	When to give	Protection %	Duration of protection
TT-1	At first contact or as early as possible in pregnancy	Nil	None
TT-2	At least 4 weeks after TT-1	80	3 years
TT-3	At least 6 months after TT-2 or during subsequent pregnancy	95	5 years
TT-4	At least 1 year after TT-3 or during subsequent pregnancy	99	10 years
TT-5	At least 1 year after TT-4 or during subsequent pregnancy	99	Throughout childbearing years

* A woman is considered to be fully immunized (i.e. protected against tetanus throughout her childbearing years) if she has received five doses of tetanus toxoid at appropriate intervals either through childhood school immunization programmes, or in previous pregnancies.

INFORMATION, COUNSELLING AND COMMUNICATION

Remind students that women who are treated for abortion complications need information about their condition and care, as well as family planning counselling which acknowledges their particular situation and meets their individual needs.

Informing and counselling

It is important to understand the difference between giving a patient information or advice, and counselling a woman about family planning. Both types of communication are necessary when treating patients for abortion complications.

Informing is the process of giving factual information or medical advice and making sure that it is understood.

Counselling is the process of helping a woman to make her own free and informed choice based on accurate information and helping her act on her decision.

Both informing and counselling are based on communication skills such as:

- using simple language
- getting feedback about whether the information provided has been understood
- asking open-ended questions
- actively listening
- restating the responses the woman gives.

Information about condition and treatment

Except in the most extreme medical emergencies, patients should be informed about their condition and the proposed treatment, before the treatment begins. It is important to let the woman know:

- that all information provided by her during the medical history and all information about treatment will be confidential
- the plan for treatment, including examinations (e.g. pelvic examination) and laboratory tests to be done, the proposed treatment, including medications, the risks involved, and when treatment will begin
- when she can expect to go home.

Post-operative information

Before the woman is discharged she should be informed about the normal progress of recovery and be given recommendations about return to normal activity. In addition, she needs to be informed about the signs of possible complications and where to seek help should these become apparent, and the early return to fertility. She should also receive post-abortion family planning counselling and advice, as well as appropriate advice and counselling for screening for STIs, RTIs and HIV, unless HIV status is already known. The issue of STIs and HIV screening needs to be handled sensitively, especially if the circumstances around the pregnancy were related to forced or unwanted sexual intercourse. For further guidance on voluntary counselling and testing for HIV (VCT), follow national protocol and guidelines.

Family planning counselling

Ovulation can occur as early as two to four weeks after an abortion. Approximately 75% of women who have had an abortion will ovulate within six weeks of the abortion. After a first trimester abortion, ovulation often occurs within two weeks, and after a second trimester abortion, within four weeks. Therefore, there is an immediate need for contraception for women who do not want to become pregnant, or for health reasons should delay becoming pregnant.

As with any family planning client, appropriate screening for contraindications and the provision of information and counselling to ensure informed choice are essential.

Additional information about post-abortion family planning counselling and services is included in Session 7.

Communication

All health workers who have contact with abortion patients should treat them professionally, respectfully and with understanding of the difficulties associated with an unwanted pregnancy and abortion complications. Women who experience spontaneous abortion will have a different set of circumstances and feelings, and these should also be acknowledged with respect and compassion. Women should be made to feel welcome at the health care facility and should feel confident about coming back if they need to. Communicating respect to the woman and making her feel welcome does not require additional time on the part of health care workers, nor additional resources.

GROUP WORK 1: ROLE PLAY

The main aim of this activity is to provide students with an opportunity to role play and observe the process of managing a woman in an emergency situation.

INSTRUCTIONS FOR ROLE PLAY

1. *Appoint one participant to be the “patient” in the following case study.*
2. *Appoint one participant to be a “midwife”.*
3. *Appoint two participants to be the “patient’s” relatives.*
4. *The remaining group members are to observe the role play, paying particular attention to the midwife’s actions, and answering the following questions:*
 - *Was the case managed adequately?*
 - *What was the time lag between her arrival and treatment?*
 - *Was there any history of what could have caused the abortion?*
 - *Did the history and physical examination reveal how much blood the patient could have lost?*
 - *Was the patient placed in head down position to maximize venous return to the vital organs?*
 - *Did the patient receive adequate IV fluids?*
 - *Was there any possibility of referral to a better equipped health facility?*
 - *What additional steps could the midwife have taken to manage the case?*
5. *Allow 20 minutes for role play.*
6. *Allow 10 minutes discussion in a plenary session.*



Case study

A woman arrived at the health facility having aborted at home after four months of pregnancy. She reported having lost a lot of blood. When she arrived at the facility she was having difficulty in breathing. She was dizzy, febrile and very anaemic. Her blood pressure was low and she had a fast and thready (weak) pulse.

GROUP WORK 2

This group activity is designed to help students recognize complications of abortion.

1. *Write down the following complications on a blackboard or flip chart:*
 - shock
 - severe vaginal bleeding
 - uterine perforation
 - intra-abdominal injury
 - infection or sepsis.
2. *Review the Instructions for Group Work with the class and make sure that students understand what is expected of them.*
3. *Divide the class into four groups (the assignment is the same for all of the groups).*
4. *Provide each group with a copy of the Complications worksheet.*
5. *Allow 25 minutes for the groups to complete the activity.*
6. *Supervise the activity by spending some time with each group. This will provide you with an opportunity to make sure that the activity is proceeding as planned, and to observe the input of each student.*
7. *Allow 5 minutes for each group to provide feedback about the outcome of the group activity.*

INSTRUCTIONS FOR GROUP WORK

1. **Appoint** a group member as chairperson to facilitate group discussion.
2. **Appoint** a group member to report the outcome of group work to the class as a whole.
3. **Discuss** the signs and symptoms for each of the five cases on the Complications worksheet you have been given and identify the most likely complications.
4. You have 25 minutes to complete the activity.

Complications worksheet

Case 1

Signs and symptoms:

- Chills, fever, sweats
- Foul-smelling vaginal discharge
- Abdominal pains
- Rebound tenderness
- Distended abdomen
- Low blood pressure
- Prolonged bleeding

What complications do you suspect?

Case 2

Signs and symptoms:

- Fast, weak pulse
- Low blood pressure
- Pallor
- Rapid breathing
- Anxious, confused, or unconscious mental state

What complications do you suspect?

Case 3

Signs and symptoms:

- Fast, falling blood pressure
- Excessive bleeding
- History of insertion of an instrument in attempting to terminate the pregnancy

What complications do you suspect?

Case 4

Signs and symptoms:

- Heavy, bright red bleeding
- Blood-soaked pads or cloths
- Pallor

What complications do you suspect?

Case 5

Signs and symptoms:

- Abdominal pain, cramping
- Distended abdomen
- Decreased bowel sounds
- Abdomen tense and hard
- Rebound tenderness
- Nausea and vomiting
- Shoulder pain
- Fever

What complications do you suspect?

Key to complications worksheet (for teacher's use only)

Case 1

Signs and symptoms:

- Chills, fever, sweats
- Foul-smelling vaginal discharge
- Abdominal pains
- Rebound tenderness
- Distended abdomen
- Low blood pressure
- Prolonged bleeding

What complications do you suspect?

Infection or sepsis.

Case 2

Signs and symptoms:

- Fast, weak pulse
- Low blood pressure
- Pallor
- Rapid breathing
- Anxious, confused, or unconscious mental state

What complications do you suspect?

Shock.

Case 3

Signs and symptoms:

- Fast, falling blood pressure
- Excessive bleeding
- History of insertion of an instrument in attempting to terminate the pregnancy

What complications do you suspect?

Uterine perforation.

Case 4

Signs and symptoms:

- Heavy, bright red bleeding
- Blood-soaked pads or cloths
- Pallor

What complications do you suspect?

Severe vaginal bleeding.

Case 5

Signs and symptoms:

- Abdominal pain, cramping
- Distended abdomen
- Decreased bowel sounds
- Abdomen tense and hard
- Rebound tenderness
- Nausea and vomiting
- Shoulder pain
- Fever

What complications do you suspect?

Intra-abdominal injury.

5

LEARNING CLINICAL SKILLS

SESSION 5

LEARNING CLINICAL SKILLS

Aims

- The aim in this session is to assess whether students have become competent in the clinical skills essential to providing post-abortion care.

Objectives

On completion of Session 5, students will be able to:

- Demonstrate how to accurately take and record the observations necessary to monitor the condition of women suffering post-abortion complications.
- Demonstrate venepuncture to obtain blood specimens for laboratory analysis.
- Demonstrate how to set up an intravenous infusion, and explain the reasons for doing so, the precautions to be taken and the patient records to be completed.
- Demonstrate the care required during blood transfusion.
- Demonstrate the technique of bimanual compression of the uterus in managing severe vaginal bleeding.
- Demonstrate the technique of manual compression of the aorta in managing severe vaginal bleeding.
- Demonstrate understanding of the prescription, ordering, storage, and administration of drugs.
- Demonstrate the procedure of cervical and vaginal inspection.
- Demonstrate the procedure of repairing cervical and vaginal tears.
- Demonstrate the procedure of manual vacuum aspiration.

Plan

Lecture.

Simulated practice.

Clinical practice.

Total time: It is advisable to allow at least one week to teach the skills in Sessions 5, 6 and 7.

However, the actual time required will depend on the needs and abilities of each student, and the availability of relevant clinical cases. Other factors to be considered will include the availability of teachers and clinicians willing and able to participate in the teaching of these skills.

Resources

Guidelines and checklists for assessing competence, models, dummy.

Bennett VR, Brown LK, eds. Myles textbook for midwives. Churchill Livingstone, London, 1993.

Yordy L, Hogan LA, Winkler J. Manual vacuum aspiration: guide for clinicians.

Carrboro, IPAS, 1993.

Clinical management of abortion complications: a practical guide. Geneva, World Health Organization, 1994 (WHO/FHE/MSM/94.1).

Managing complications in pregnancy and childbirth: a guide for midwives and doctors.

Geneva, World Health Organization 2000 (WHO/RHR/00.7).

INTRODUCTION

The clinical skills in this session constitute a critical component of the module. The skills build on the theoretical components and practice in previous sessions. When teaching the more complex of these skills (e.g. repair of cervical and vaginal tears), midwifery teachers may wish to collaborate with teachers and/or clinicians who are competent in the skills (e.g. practicing midwives, obstetricians).

The skills should first be demonstrated by the teacher or by a competent clinician. Where appropriate, simulated practice should then take place to provide students with the opportunity to prepare and handle equipment and become familiar with the sequence of steps in a procedure. Finally, clinical practice should take place under direct supervision and feedback to enable students to develop competence in each of the skills. It should be noted, however, that there may not be opportunities during the training course for students to practice all of the skills in a clinical setting. For example, it may not be possible for all students to practise repair of cervical and vaginal tears. Arrangements should therefore be made for supervised practice following completion of the training course.

Students who have been exposed recently to the other technical modules (i.e. postpartum haemorrhage, obstructed labour, puerperal sepsis, eclampsia) and who can provide evidence of competence in these skills, need only repeat the skills they are not competent in.

*The basic skills in this session are organized under three headings: **Teaching method; Teaching content; and Assessing competence.** While it is important for the teacher to use the information included under each of these headings, it is especially important to carefully follow the guidelines for assessing competence in each of the skills. For this reason, it may be helpful to extract these guidelines and develop checklists for each of the skills. Copies of the checklists could then be used for each student in the class.*

The segment on repair of cervical and vaginal tears follows a different format from the basic skills; it begins with introductory information and is followed by sections on cervical and vaginal inspection and repair of cervical and vaginal lacerations. Skills checklists are included for each of these procedures and should be used when assessing student competence.

SKILL 1: TAKING AND RECORDING VITAL OBSERVATIONS

Teaching method

1. *Demonstrate to the class the observations listed on the next page under teaching content.*

2. *Divide the class into groups of two and have the students practise the observations on each other.*
3. *Check the observations to determine accuracy.*
4. *Take students to a clinical setting (e.g. an antenatal, postnatal or gynaecology ward, or a casualty or emergency department) to practise these skills under supervision.*
5. *Students should record their observations on the woman's chart and ensure they are as accurate and as detailed as possible.*

Note: *Experienced midwives and nurse-midwives should be able to take these observations competently. However, this session should provide the teacher with an opportunity to validate this. In addition, it will provide an opportunity to help students relate these observations to the management of women suffering post-abortion complications.*

Teaching content

Temperature: *a rise above normal may indicate the presence of infection.*

Pulse: *a rising pulse rate is a sign of shock (110/minute or greater); in patients suffering abortion complications shock may be due to blood loss or infection.*

Respirations: *in patients suffering with shock they are at first shallow and fast (30/minute or greater) and later deep and irregular.*

Blood pressure: *in patients suffering early shock the systolic pressure is below 90 mmHg. In very severe shock it may not be possible to obtain a reading.*

General condition:

- *the woman's colour may be pale or grey in the case of shock; check inner eyelid, around the mouth, and palms*
- *the woman may be sweaty or experiencing chills*
- *the woman may be anxious, confused or unconscious.*

Assessing competence

In order to confirm that a student is competent, the answer to the following questions must be "yes".

1. *Can the student accurately **take** the observations?*
2. *Can the student accurately **record** the observations?*
3. *Can the student explain the significance of the observations taken with respect to post-abortion complications?*

SKILL 2: TAKING BLOOD SAMPLES FOR ANALYSIS

Teaching method

To learn the skill of taking blood samples for analysis, students need to be familiar with the anatomical location of the veins of the arm; they need to be able to identify the veins of the cubital fossa (i.e. the median cubital vein or cephalic vein) as these are most easily accessible for venepuncture (Figure 5.1).

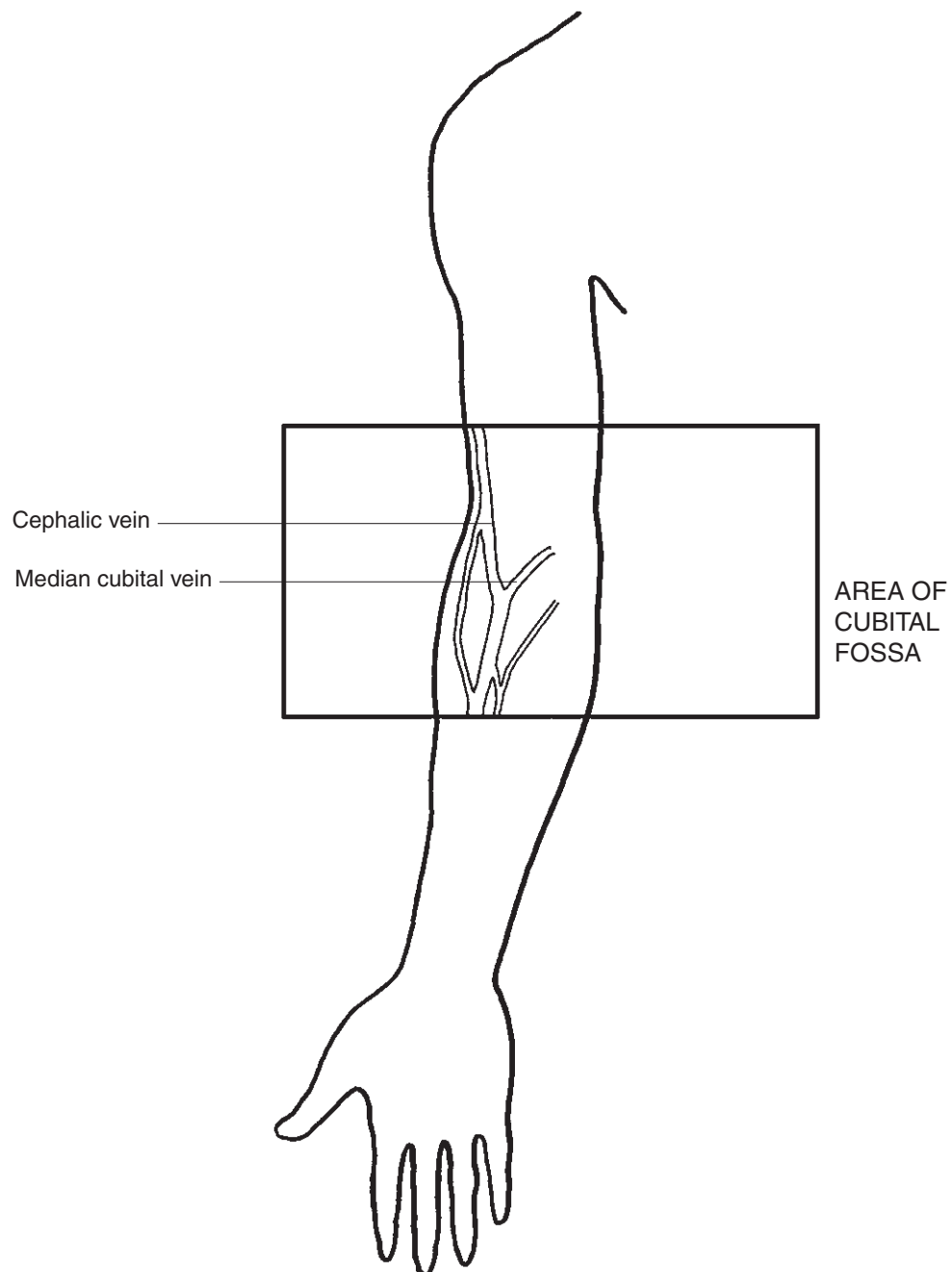


Figure 5.1: Important veins of the cubital fossa (right arm)

Steps

1. *Divide the class into groups of two and have students identify these veins on each others arms. This will be made easier by having them apply a tourniquet to the upper arm (Figure 5.2).*
2. *Provide students with other equipment needed for taking blood samples to enable them to become familiar with it.*
3. *Take the students to a clinical setting and allow them to observe a laboratory technician (or another experienced health worker) taking blood samples.*
4. *Allow students to practise taking blood samples, preferably on healthy women attending an antenatal clinic, before they attempt the procedure in an emergency situation.*

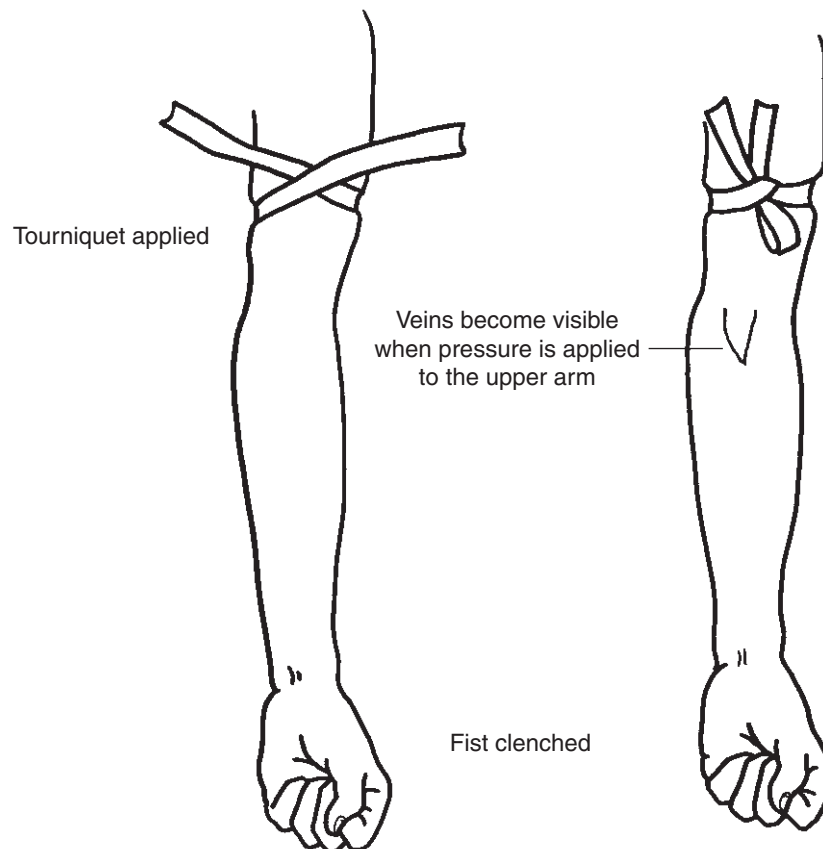


Figure 5.2: Applying a tourniquet in preparation for taking blood samples

Teaching content

The following points should be covered:

1. The reasons for taking specific blood tests; haemoglobin, haematocrit, complete blood count, grouping and cross-matching, Rh testing.
2. The importance of taking blood samples for grouping and cross-matching before running plasma expanders.
3. Preparation of equipment before beginning the procedure, including:
 - syringes, needles and test tubes for transport of blood specimens
 - antiseptic solution, cotton swabs
 - laboratory request forms
 - tourniquet.
4. The importance of explaining the procedure to the woman and placing her arm in a comfortable position.
5. Correct site for venepuncture (as in **Figure 5.1**).
6. Correct application of the tourniquet (as in **Figure 5.2**).
7. The importance of cleaning the site with an antiseptic solution, and use of a sterile needle.
8. The importance of infection prevention; hand washing, glove use and precautions against needle stick injuries; this is particularly important if the woman is suspected of being infected with HIV or hepatitis B.

Assessing competence

In order to confirm that a student is competent, the answer to the following questions should be “yes.”

1. *Does the student understand the reasons for taking specific blood tests?*
2. *Does the student prepare all equipment needed before beginning the procedure?*
3. *Does the student explain the procedure to the woman?*
4. *Does the student select the correct site for venepuncture?*
5. *Does the student apply the tourniquet correctly?*
6. *Does the student clean the site with an antiseptic solution?*

7. Does the student use a sterile needle?
8. Does the student use infection prevention techniques?

SKILL 3: SETTING UP AND MONITORING AN INTRAVENOUS INFUSION

Teaching method

*To learn the skill of setting up an intravenous infusion (IVI), students need to be familiar with the anatomical location of the veins of the forearm. Veins near a joint should be avoided; veins in the forearm or back of the hand are the easiest to see (**Figure 5.1** and **Figure 5.3**).*

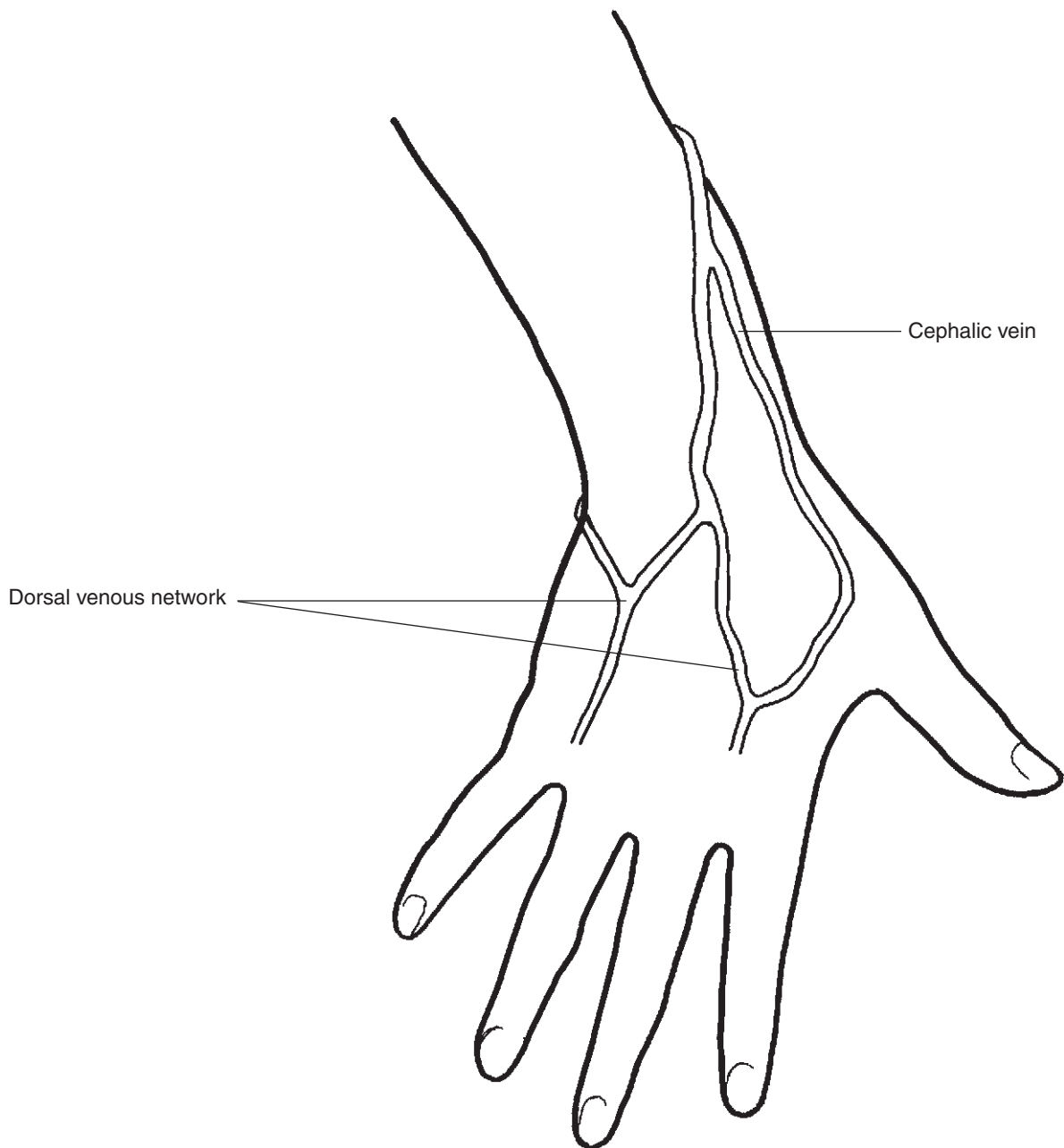


Figure 5.3: Important veins of the forearm and back of hand

Steps

1. *Divide the class into groups of two and have students trace the course of the veins on each other's forearms. This will be made easier by having them apply a tourniquet to the upper arm.*
2. *Provide students with the other equipment needed for setting up an IVI to enable them to become familiar with it.*
3. *Take the students to a clinical setting and demonstrate the procedure to them.*
4. *Allow students to practise setting up an IVI, preferably on patients who do not require urgent treatment, before they attempt the procedure in an emergency situation.*

Teaching content

The following points should be covered:

1. Identifying the need for IVI when body fluid is lost as a result of shock, bleeding, infection, or dehydration.
2. Selecting the appropriate fluid for infusion; normal saline or sodium lactate should be given prior to plasma expanders or blood transfusion because they can be given quickly. Plasma expanders or blood are sticky and cannot be given quickly. In addition, they interfere with grouping and cross-matching tests. However, plasma expanders or blood are given when shock from blood loss is severe. The advantages of plasma expanders over other fluids are:
 - they stay in the blood vessels (other fluids escape into tissues)
 - they attract fluid from tissues.
3. Preparation of equipment before beginning the procedure, including:
 - sterile intravenous tubing
 - large (No 18) needle or cannula
 - appropriate fluid
 - sticky tape, cut into strips
 - drip stand or nail in wall
 - tourniquet
 - splint with bandage
 - antiseptic solution, cotton swabs
 - gloves.
4. The importance of explaining the procedure to the woman and placing her arm in a comfortable position.
5. Correct site for infusion: veins in the forearm or back of the hand are the easiest to see; veins near a joint should be avoided.

6. Correct application of the tourniquet (as in **Figure 5.2**).
7. The importance of cleaning the site with an antiseptic solution, and use of a sterile needle.
8. The importance of infection prevention; hand washing, glove use and precautions against needle stick injuries; this is particularly important if the woman is suspected of being infected with HIV or hepatitis B.
9. The need to fix the needle in place; use of an armboard to keep the joint nearest the IV site from moving.
10. The importance of taking blood samples for grouping and cross-matching before infusing plasma expanders.
11. The need to record fluid intake on the patient's chart.
12. The need to be aware of the following possible complications:
 - thrombophlebitis (needle should be removed if this occurs)
 - swelling of the tissue around the infusion site (needle should be removed if this occurs)
 - circulatory overload; giving too much intravenous fluid too quickly can cause heart failure – when giving fluid quickly to correct shock, the patient must be monitored closely.
13. The importance of calculating an appropriate rate for the fluid to be infused. Table 7 shows how to calculate the rate of infusion, depending on the type of tubing being used.
14. The importance of recognizing personal limitations: if a midwife is unable to set up an IVI within 10 minutes, she should call a more experienced colleague.

Assessing competence

In order to confirm that a student is competent, the answer to the following questions should be “yes”.

1. *Does the student prepare all equipment needed before beginning the procedure?*
2. *Does the student select the correct fluid for infusion?*
3. *Does the student explain the procedure to the woman?*
4. *Does the student select the correct site for the infusion?*
5. *Does the student apply the tourniquet correctly?*
6. *Does the student clean the site with an antiseptic solution?*

7. *Does the student use a sterile needle?*
8. *Does the student use infection prevention techniques?*
9. *Does the student fix the needle in place and immobilize the joint nearest the infusion site?*
10. *Does the student calculate the correct rate for the infusion to run?*

Table 7: IV Fluid Rates

Amount of fluid	Time period	Drops per cc (type of tubing)	Drops per minute
1 litre	20 minutes	10	Too fast to count
1 litre	20 minutes	20	Too fast to count
1 litre	4 hours	10	40
1 litre	4 hours	20	80
1 litre	6	10	28
1 litre	6 hours	20	56
1 litre	8 hours	10	20
1 litre	8 hours	20	40

In general, the formula to figure out any IV infusion rate is as follows:

$$\frac{\text{Amount of fluid given (cc)}}{\text{Time for infusion to occur (minutes)}} \times \text{No. of drops per cc} = \text{No. of drops per minute}$$

In order to convert the time period from hours to minutes, multiply the number of hours by 60. This will give the number of minutes over which the IV fluids are to be given.

SKILL 4: MONITORING A BLOOD TRANSFUSION

Teaching method

Review the theory related to blood transfusion in the classroom. Students should then be taken to a clinical setting where, if possible, they can take care of a patient who is receiving a blood transfusion.

Teaching content

Review the following:

1. The indications for blood transfusion should be based on national guidelines; usually criteria include severe shock from blood loss, severe anaemia (haemoglobin <5 g/100 ml, or heamatocrit <15%).

2. The risks associated with blood transfusion however need to be taken into consideration; the possibility of transmission of infectious agents such as HIV and hepatitis B, Chagas disease and malaria in low-prevalence malaria area, where the donors may have had the opportunity to travel to high-prevalence malaria areas, as well as incompatibility, and circulatory overload. It should be emphasized that blood transfusion should be used selectively to reduce the risk of transmitting infectious agents. Acute blood loss should usually be managed by using normal saline and plasma expanders, rather than packed red cells or whole blood. Only women who have both a low haemoglobin level and symptoms of acute blood loss or severe anaemia, should be given a blood transfusion.
3. The importance of screening for HIV in all areas cannot be over stated.
4. Blood groups and rhesus factor are also important factors to consider.
5. Incompatibility of blood can lead to serious reactions and death.
6. The recommended speed at which a transfusion should be given is 20–60 drops per minute, or according to the advice of a doctor.
7. The observations to be recorded immediately prior to each transfusion, immediately transfusion commenced, then at 15 minutes and each hour until transfusion complete, include:
 - temperature
 - pulse, blood pressure
 - urinary output
 - adverse signs and symptoms (anaphylactic shock, restlessness, fast pulse, fever, chills, pain in chest and back, anuria, jaundice after a few hours of starting transfusion).
8. It is important to stop the transfusion immediately in the event of any adverse reaction and keep IV site open using Ringers solution or normal saline while an assessment is being made and medical advice is being sought.
9. It is important to record all the vital observations, all records of the transfusion including stock numbers etc., as well as all related information on the patient's chart.

Assessing competence

In order to confirm that a student is competent, the answer to the following questions should be “yes”.

1. *Does the student know the indications for blood transfusion?*

2. *Does the student know the risks associated with blood transfusion?*
3. *Does the student run the transfusion at the appropriate rate?*
4. *Does the student monitor the patient's condition throughout the transfusion?*
5. *Can the student describe the potential adverse reactions to a transfusion?*
6. *Can the student describe what should be done if an adverse reaction occurs?*
7. *Does the student record the required information on the patient's chart?*

SKILL 5: EMERGENCY CONTROL OF UTERINE BLEEDING (prior to MVA or surgical procedure)

1. BIMANUAL COMPRESSION OF THE UTERUS

Teaching method

With respect to post-abortion care, the procedure of bimanual compression of the uterus may be a useful emergency measure if the uterus does not contract after it has been evacuated. The procedure can be taught and practised in the classroom.

1. *Demonstrate the procedure in the classroom using a pelvic model and a small cloth bag filled with beans to represent the uterus.*
2. *Each student should practise the procedure using the pelvic model and bean bag.*
3. *Take the students to a clinical setting where it may be possible for them to observe the procedure on a woman who is suffering postpartum haemorrhage or who has severe bleeding due to abortion complications.*
4. *It may also be useful to demonstrate the position of the hands for the procedure on a newly delivered woman, preferably a multiparous woman with lax abdominal muscles.*

Teaching content

External bimanual compression

Demonstrate the procedure:

1. Place the left hand on the fundus and make it go down as far as possible behind the uterus.

2. Place the right hand flat on the abdomen between the umbilicus and the symphysis pubis.
3. Press the hands towards each other in order to compress the blood vessels at the placental site (**Figure 5.4**).

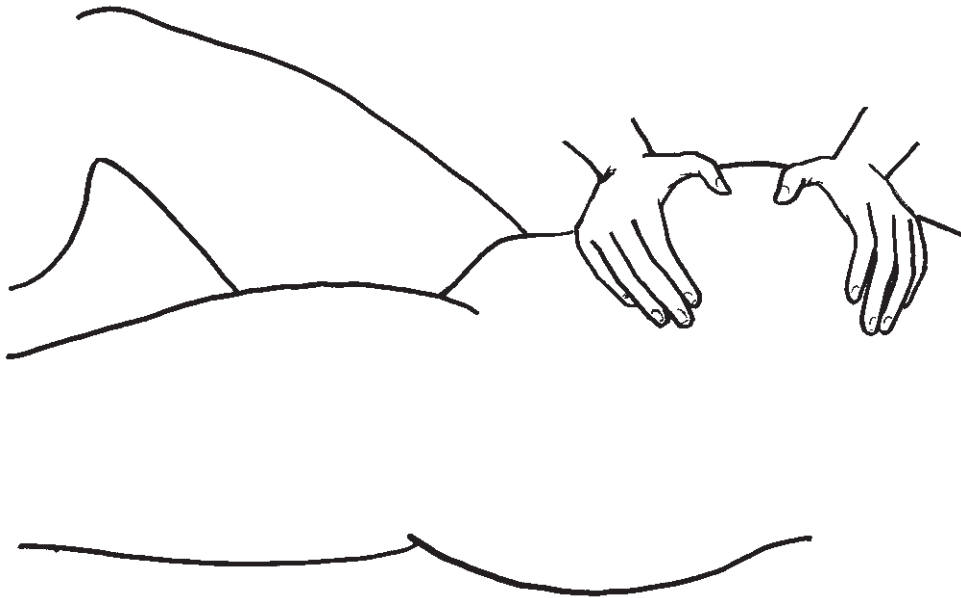


Figure 5.4: Hand positions for external compression of the uterus

Internal bimanual compression

Demonstrate the procedure:

1. Scrub hands thoroughly.
2. Put on sterile gloves.
3. Place the left hand on the fundus as in external bimanual compression. The fingers of the right hand are gently placed in the anterior vaginal fornix. If good pressure is not obtained and the vagina is lax, the whole fist may be inserted into the vagina (**Figure 5.5**)

Remind students that internal bimanual compression is advisable:

- *in severe bleeding, if external compression is not effective*
- *when the woman is anaesthetized.*

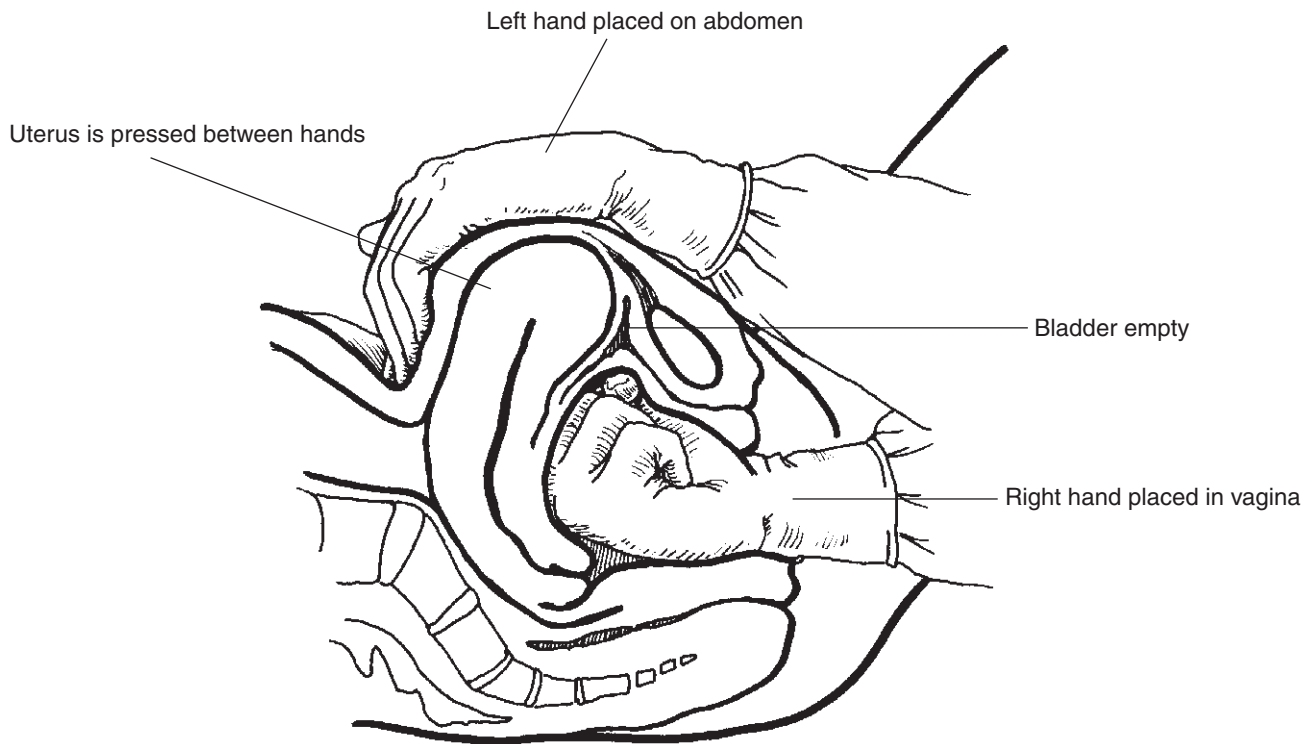


Figure 5.5: Internal bimanual compression of the uterus

Assessing competence

In order to confirm that a student is competent, the answer to the following questions must be “yes”.

Note: *These procedures can be assessed using a pelvic model and bean bag.*

External bimanual compression

1. *Does the student understand when to use external bimanual compression, and why it can be effective?*
2. *Does the student place the left hand on the fundus and make it go down as far as possible behind the uterus?*
3. *Does the student place the right hand flat on the abdomen between the umbilicus and the symphysis pubis?*
4. *Does the student press the hands towards each other in order to compress the blood vessels at the placental site?*
5. *Does the student take adequate precaution in relation to infection prevention and control?*

Internal bimanual compression

1. *Does the student understand when to use internal bimanual compression, and why it can be effective?*

2. *Does the student scrub hands thoroughly?*
3. *Does the student put on sterile gloves?*
4. *Does the student place the left hand on the fundus as in external bimanual compression, and the fingers of the right hand in the anterior vaginal fornix, or insert the whole fist into the vagina if good pressure is not obtained and the vagina is lax?*
5. *Does the student take adequate precaution in relation to infection prevention and control?*

2. APPLYING MANUAL COMPRESSION TO THE AORTA

Teaching method

The procedure of manual compression of the aorta may be useful in a situation where bimanual compression of the uterus has failed. The procedure can be taught and practised in the classroom using an adult-size dummy.

1. *Demonstrate the procedure in the classroom using a dummy.*
2. *Allow each student to practise the procedure using the dummy.*

Take the students to a clinical setting where it may be possible to demonstrate the position of the hands for the procedure on a newly delivered woman.

Manual compression of the aorta should only be used in cases of severe bleeding if external and internal bimanual compression of the uterus fail. Compression of the aorta should only be used in an emergency while the cause of bleeding is being determined.

Teaching content

Review with the students that manual compression of the aorta should only be used in cases of severe bleeding if external and internal bimanual compression of the uterus fail. Compression of the aorta should only be used in an emergency while the cause of bleeding is being determined.

Using a dummy, demonstrate the following steps:

1. Using both hands, one is held in the groin to check the femoral pulse, while the fist of the other hand is held over the umbilicus and slowly lowered towards the anterior side of the vertebral column (**Figure 5.6**).
2. When the femoral arterial pulsations have vanished, the aortic compression is sufficient and vaginal bleeding will stop.

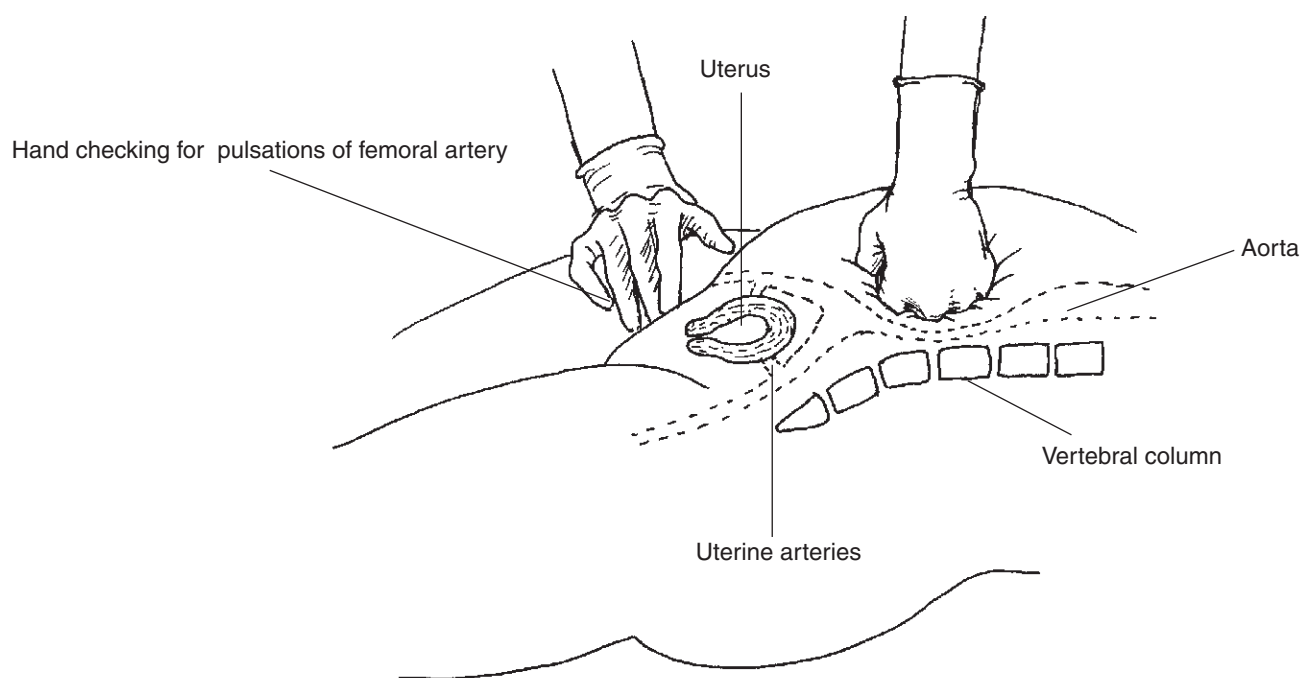


Figure 5.6: Manual compression of the aorta

Assessing competence

In order to confirm that a student is competent in the procedure, the answer to the following questions should be “yes”.

Note: This procedure can be assessed using an adult-size dummy or it may be possible to use willing volunteers from the student group.

1. *Does the student understand when to use aortic compression and why it can be effective?*
2. *Does the student place one hand in the groin to check the femoral pulse, while holding the fist of the other hand over the umbilicus, slowly lowering it towards the anterior side of the vertebral column?*

SKILL 6: ADMINISTERING DRUGS

Teaching method

Introduce the topic in the classroom before taking students to a clinical setting where they can observe and practise prescribing and giving the drugs commonly used in the treatment of abortion complications. Remind students of the drug doses included in Session 4.

Teaching content

The following points should be covered:

Prescribing drugs. Midwives must be aware of the following factors with respect to prescribing drugs.

- If midwives are practicing without the constant supervision of a doctor, specific drugs and doses should be agreed with the responsible medical officer
- If there are legal/medical/midwifery/nursing regulations which prevent midwives from giving drugs in the absence of a doctor, these need to be revised
- Midwives should make sure that there is an adequate supply of drugs available at all times
- Midwives should make sure that drug expiry dates have not passed and that the drugs are stored safely and at the appropriate temperature
- Midwives must record the following information on the prescription sheet:
 - Name of drug:
 - Dose:
 - Route of administration:
 - Date and time each dose is given
 - Signatures: practitioner prescribing and practitioner administering dose.
- Midwives must know:
 - the correct dose
 - of the correct drug
 - at the correct time
 - by the correct route
 - to the correct patient.
- Whenever possible, it is a good practice to ask a colleague to check the drug and dosage before administration.

Giving antibiotics. The following general rules should be observed with respect to giving antibiotics.

- Use broad spectrum antibiotics as these are effective against a wide range of bacteria
- For severe infections, give large doses, preferably by the intravenous route
- When it is not possible to give antibiotics by the intravenous route, use the intramuscular route
- Oral administration of antibiotics should not be used for severe infections, unless it is not possible to use the intravenous or intramuscular routes. Oral administration is, however, acceptable for minor infections or to prevent infection developing.

Intravenous drugs. When administering intravenous antibiotics, midwives must be aware of the following factors.

- It is important to ensure that:
 - syringes and needles/cannulae are sterile
 - there is no air in the syringe
 - the cannula is patent (i.e. is not blocked)
 - the cannula is properly inserted in the vein.
- The patient must be observed very carefully for adverse reactions to the antibiotics. If an adverse reaction occurs, the antibiotic should be stopped and a doctor consulted.

Assessing competence

In order to confirm that a student is competent, the answer to the following questions should be “yes”.

1. *Does the student understand the importance of noting the drug expiry date and not using the drug beyond this date?*
2. *Does the student understand the importance of storing drugs properly and of keeping adequate stocks of drugs?*
3. *Does the student make accurate and complete recordings of drugs prescribed and administered?*
4. *Does the student administer the drug carefully, accurately and safely, taking note to check as follows:*
 - *the correct dose*
 - *of the correct drug*
 - *at the correct time*
 - *by the correct route*
 - *to the correct patient.*
5. *Is the student able to select appropriate broad spectrum antibiotics for use with post-abortion patients?*
6. *Does the student know the correct dose of the drugs they need to use, whether IV, or IM, or oral?*
7. *When administering intravenous drugs, does the student ensure that:*
 - *syringes and needles/cannulae are sterile*
 - *there is no air in the syringe*
 - *the cannula is patent (i.e. is not blocked)*
 - *the cannula is properly inserted in the vein.*

SKILL 7. REPAIR OF CERVICAL AND VAGINAL TEARS

Teaching method

Demonstrate to the students how to inspect the vagina and cervix for tears and how to repair them. Inform the students that careful examination under good light is required to diagnose cervical and vaginal tears or lacerations.

Teaching content

Remind students that cervical and vaginal tears or lacerations can result in severe vaginal bleeding. With respect to abortion, these injuries can be sustained at the time of an unsafe abortion or an induced abortion, or during a procedure to evacuate the uterus while managing an incomplete abortion. Other situations in which cervical and vaginal tears occur are:

- *prolonged/obstructed labour: when the cervix is caught between the head of the baby and the symphysis pubis, the anterior lip may become swollen, may not stretch well, and is likely to tear*
- *delivery by forceps, vacuum extraction or breech extraction before the cervix is fully dilated*
- *precipitate labour (spontaneous or oxytocic stimulated)*
- *failure of the cervix to dilate because of congenital abnormality or scarring due to previous injury.*

Remind the students that:

- *it is necessary to repair the tear if it is large and bleeds persistently. It is not necessary to repair a small laceration that does not bleed*
- *with respect to post-abortion care, cervical lacerations may occur, or be discovered, during or after a uterine evacuation procedure. Minor superficial tears due to the tenaculum pulling away from the cervical lip may occur with uterine evacuation procedures*
- *more serious lacerations can occur due to excessively forceful dilation of the cervix. Most superficial cervical tears will have stopped bleeding by the end of the procedure and require no further treatment. All lacerations and any superficial tears that continue to bleed should be sutured*
- *careful examination, under good light, is required to diagnose cervical and vaginal tears or lacerations. The procedure for repairing vaginal and cervical laceration is detailed below.*
- *strict attention is required for basic hygiene and infection prevention and control procedures.*

Cervical and vaginal inspection

Show the students preparation of instruments and supplies:

- *a good light source*
- *specula (anterior and posterior)*
- *antiseptic solution*
- *sterile gloves*
- *sterile gauze*
- *equipment for decontamination of instruments.*

Demonstrate how to prepare the patient, as follows:

- check that the uterus is firm and well contracted
- ask the woman to empty her bladder
- explain the procedure to the woman
- provide reassurance to the woman
- clean the perineum, vulva and vagina with an antiseptic solution.

Demonstrate the steps in the procedure for repair of cervical tear by using a dummy or real patient, as follows:

1. Scrub hands and put on sterile gloves.
2. Separate the woman's labia with one hand.
3. Have an assistant shine a light into the vagina.
4. Look carefully for any tears or haematomas.
5. Press firmly on the back wall of the vagina with the fingers of the other hand and look deeply into the vagina. Bleeding from a vaginal or cervical laceration may be detected by slow but continuous bleeding, or by spurts from a pumping artery.
6. Slowly pressing against the vaginal wall, move your fingers all the way up the side of the wall of the vagina to the cervix checking for bleeding points or haematomas. Repeat on the other side of the vagina.
7. Next, ask an assistant to press firmly down on the women's uterus. This will move the cervix lower in the vagina so you can examine it more closely.
8. Insert two specula, one posteriorly and the other anteriorly and have your assistant hold them (if you are alone, a posterior weighted speculum as in **Figure 5.7** could be used to push the back wall of the vagina down). If no specula are available, press firmly on the back wall of the vagina with one hand to expose the cervix better. With the other hand take a sponge forceps and clamp it on the anterior lip (top lip) at 12 o'clock.
9. Clamp another sponge forceps on the cervix at 3 o'clock and examine the portion of the cervix between the forceps (**Figure 5.8**). Check for slow continuous bleeding or spurts of blood.
10. Unclamp the 12 o'clock forceps and reclamp it at 6 o'clock.
11. Now examine the portion of cervix lying between 3 o'clock and 6 o'clock (**Figure 5.9**).

12. Unclamp the 3 o'clock forceps and reclamp it at 9 o'clock.
13. Continue this procedure clockwise, until you have examined the whole cervix. If there is blood in the way and it is difficult to see where the bleeding is coming from, take a sterile gauze or cloth and wipe the blood away.
14. Repair any tears, clean the vulva and perineum, and cover with sterile pad. Make the woman comfortable.

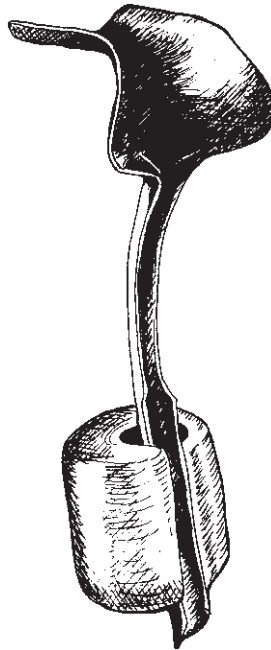


Figure 5.7: Posterior weighted speculum

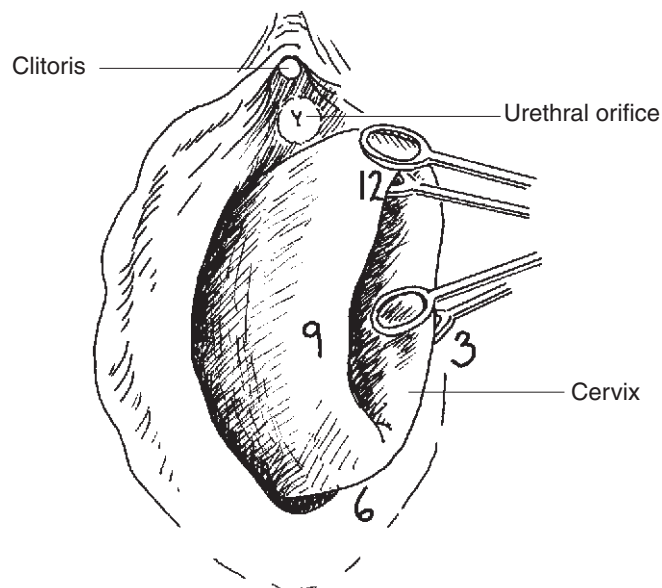


Figure 5.8: Inspecting the cervix for tears between 12 o'clock and 3 o'clock

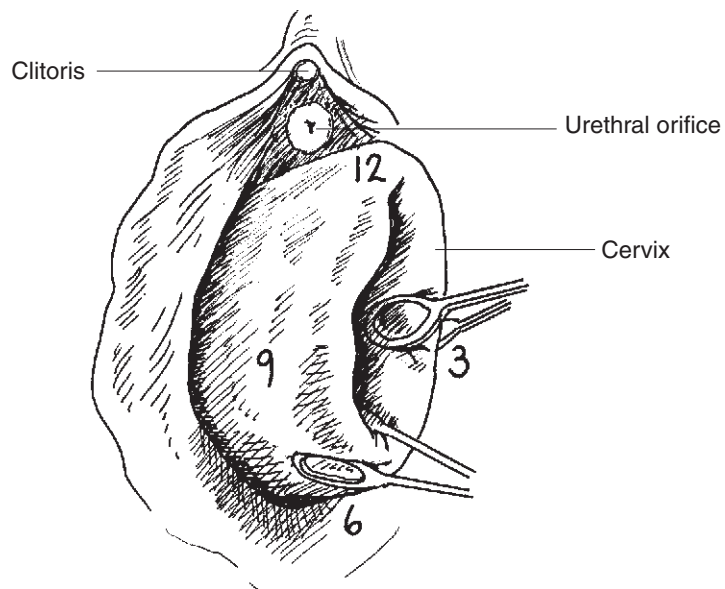


Figure 5.9: Inspecting the cervix for tears between 3 o'clock and 6 o'clock

Repair of cervical and high vaginal tears

It is necessary to repair the tear if it is a large one and it bleeds persistently. It is not necessary to repair a small laceration that does not bleed. Slight tears of the cervix occur in most labours but these heal quickly on their own. In healing, they change the appearance of the cervix from a smooth circular opening into a transverse slit (Figure 5.10).



Figure 5.10: Appearance of cervix in a nullipara (A) and a multipara (B)

All lacerations and any superficial tears that continue to bleed should be sutured as below.

Demonstrate collection of instruments and supplies such as:

- a good light source
- antiseptic solution
- sterile gloves
- IV Fluids, plasma expanders or if indicated blood transfusion
- pethidine and diazepam for IV use
- 2/0 or 3/0 chromic catgut sutures and needle
- needle holder
- two sponge forceps
- local anaesthetic if required (such as 1% lidocaine or 0.5% lignocaine solution), syringe and needle
- sterile gauze
- specula (anterior and posterior)
- equipment for decontamination of instruments.

Demonstrate how to prepare patient:

- assess the general condition of the patient, check her vital signs and estimate blood loss
- check that the uterus is firm and well contracted
- ask the woman to empty her bladder
- take blood for typing, cross matching and haemoglobin level if this has not been done
- start an IV drip of either sodium lactate or normal saline and run it fast if there is a need to correct hypovolaemia. Give blood or plasma expanders if shock is severe
- explain the procedure to the woman and reassure her
- give pethidine and diazepam slowly IV (**do not** use same syringe as a precipitate will form)
- help the woman to lie on her back with knees bent
- clean the perineum, vulva and vagina with an antiseptic solution.

Demonstrate the steps in the procedure by using a dummy or real patient, as follows,

1. Scrub hands and put on sterile gloves.
2. Catheterize the bladder if it is full and the woman is unable to void.
3. Place a sponge forceps on one side of the laceration, and a second sponge forceps on the other side of the laceration.
4. Place the handles from both forceps in one hand and pull toward you. The forceps will hold the cervix steady while you

repair it. (**Warning: If you use toothed forceps or clamp this can cut the cervix and cause more bleeding or you might accidentally pull off a piece of cervix**).

5. Start suturing from the apex (top) of the tear. If you have difficulty in reaching the apex, apply a suture below it and pull on that suture. The apex of the tear will now come under your reach. Omission of this step may result in continuation of bleeding above the point of suture.
6. Apply interrupted or uninterrupted sutures the length of the wound about one centimetre apart, taking the whole thickness of each lip of the cervix (**Figure 5.11** and **Figure 5.12**).
7. Apply a sterile pad to the perineum.
8. Make the woman comfortable.
9. Decontaminate and clean all instruments and equipment.
10. Complete all records.

Repair of high vaginal tears

Demonstrate to the students steps in the procedure for repair of high vagina tears using a model or a real patient, as follows:

1. Scrub hands and put on sterile gloves.

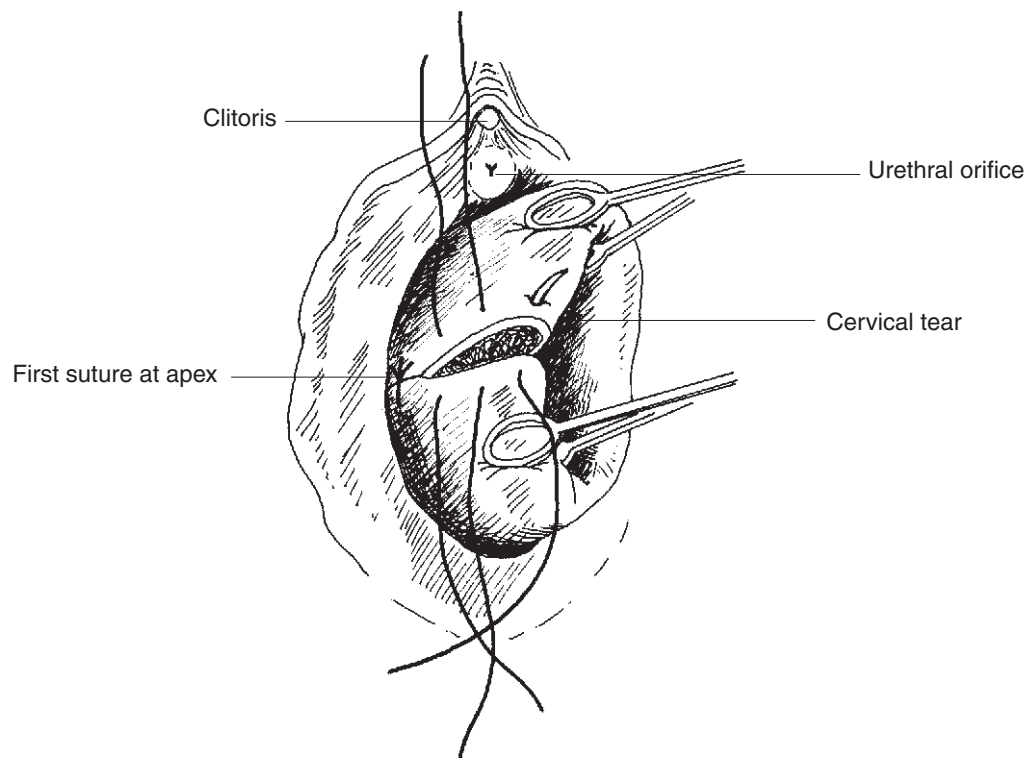


Figure 5.11: Holding the cervix steady with forceps for laceration repair

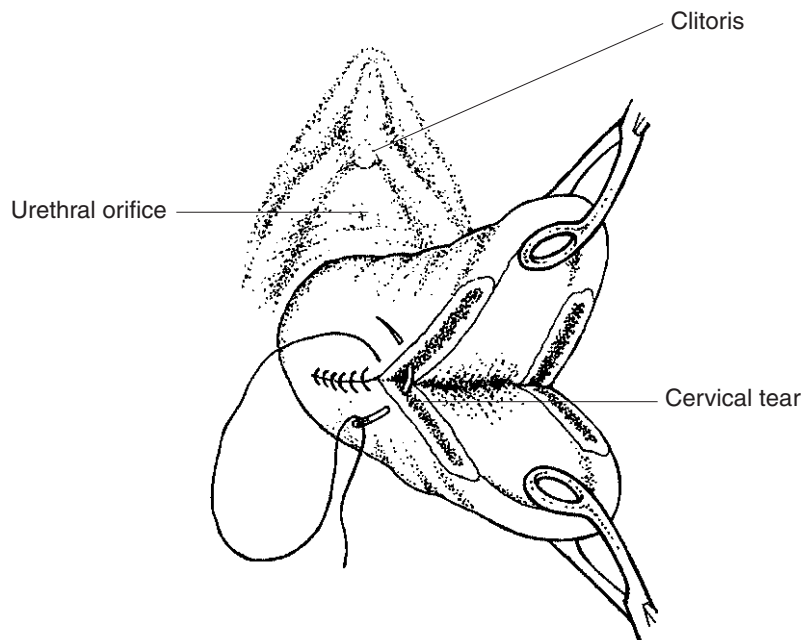


Figure 5.12: Uninterrupted sutures on the cervix

2. Expose the tear in the vagina.
3. After infiltrating a local anaesthetic, suture the tear with continuous or interrupted sutures. Begin to suture from the apex.
4. Suture the torn deep tissue, not just the vaginal lining, as tears of the vagina are often accompanied by injury to the underlying tissue. If the tear is in the upper third of the vagina, be aware that the ureter lies 1.5 cm above the lateral vaginal fornix (**Figure 5.13**). Avoid a deep bite with the needle at this site.
5. **If deep tissue is involved**, check the rectum to ensure there is no suture.
6. Apply a sterile pad to the perineum.
7. Make the woman comfortable.
8. Decontaminate and clean all instruments and equipment.
9. Complete all records.

Immediate post-procedural care after repair of vaginal or cervical lacerations

Demonstrate to the students how to:

- check and record the woman's vital signs immediately after the procedure and then 2–4 hourly

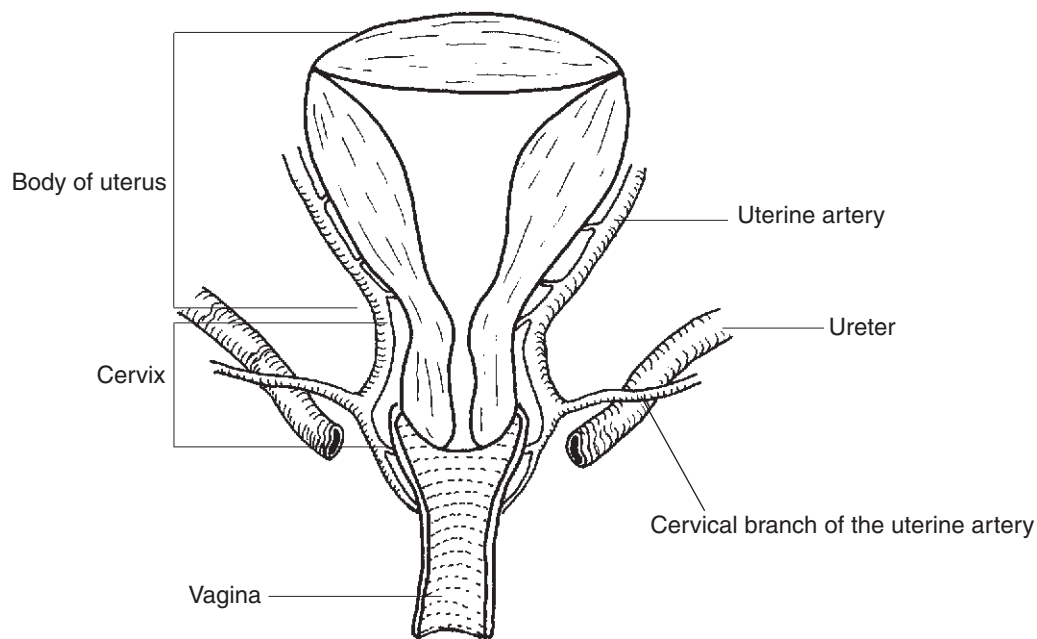


Figure 5.13: Relation of blood vessels and ureter to cervix and vagina

- watch for bleeding and/or haematoma formation
- give and record IV fluid and/or blood according to the patient's condition
- give one single dose prophylactic antibiotic, e.g. ampicillin 500 mg orally, **and** metronidazole 400 mg orally.

Teaching content

Remind the student of possible post-procedural complications.

Early complications

Bleeding: may occur if the blood vessels have not been ligated properly. Prevent it by carefully ligating the bleeding points while suturing. Make sure that the bleeding is not coming from an atonic uterus.

Haematoma: a collection of blood in the vaginal wall often occurs following vaginal injury. It may be present with vaginal or vulval swelling or intense pain and retention of urine. Prevent it by carefully ligating the bleeding points while suturing. If the haematoma is large and painful, it should be incised and drained under general anaesthesia. The bleeding points should be ligated and deep interrupted sutures applied to close the cavity.

Retention of urine: The woman should be encouraged to void frequently. If she is unable to void on her own, an indwelling catheter may have to be inserted to avoid straining.

Infection: This is a common complication and may be avoided

by giving the woman prophylactic antibiotics and using aseptic technique to repair the tear. If an infection sets in, the sutures may have to be removed and secondary sutures applied, if needed, only after the infection has cleared.

Late complications

Scarring and vaginal stenosis (narrowing) may occur in neglected tears of the vagina and may cause pain during intercourse and obstruct labour in subsequent deliveries.

Cervical scarring due to an unrepaired cervical tear may lead to prolonged labour in subsequent pregnancies because the cervix cannot dilate properly.

Vesico-vaginal, vesico-cervical or recto-vaginal fistulas can occur if vaginal or cervical tears extend into the bladder or rectum.

Assessing competence

Repair of vaginal or cervical lacerations, including post-procedural care

Checklists to be completed following direct observation of a student to determine whether she/he achieves competency in the skills of vaginal and cervical inspection, repair of vaginal tears, and repair of cervical tears. Checklists are provided at the end of the session.

The teacher should observe whether the student completes each of the steps included in the checklist. Tick (✓) “yes” for each step completed correctly; tick “no” (✓) if the step was missed, or it was not completed correctly. In the “remarks” column, positive observations as well as any problem areas should be identified.

In order for a student to be assessed as competent, every step in the procedure must be completed correctly.

For students who do not complete every step in the procedure correctly, arrangements must be made for additional instruction and supervised practise. The teacher must then use the relevant checklist again to observe and assess the student’s competence.

SKILL 8: RECORD KEEPING

Teaching method

The aim is to enable students to understand what records are used and the issues and value of record keeping in management of incomplete abortion.

It is important to recognize the fact that getting accurate information from the woman and or her family related to incomplete abortion may not be an easy task and the health practitioner should try and develop communication skills that will be useful in extracting accurate information.

Abortion is recognized to be a very personal and emotional experience that is not always easy to talk about. In some countries socio-cultural taboos also act as barriers to speaking about this subject. Also it should be remembered that in some situations the woman may not even be aware or willing to acknowledge that she is, or may be pregnant. Due to this, data on abortion is rarely accurate. Therefore, as one teaches or discusses record keeping it is important to draw from the participants the challenges they have had on information gathering on record keeping.

To be able to keep good records it is important that the students understand not only what records are kept, but why record keeping and record management is important.

Definition of records

Records are a constellation of facts and evidence regarding or relating to a person, situation or activity.

The purpose of keeping records

- Records are important public health surveillance tools
- Records provide visible evidence of what a provider, and health institutions are doing
- When records are accurate and complete, they furnish a base for evaluating both provider and hospital activities; if they are inaccurate and incomplete proper evaluation is difficult.

Record collection and keeping

Records can be collected at various levels and points within an institution:

- At the outpatient department
- At the pay-in point
- At the admission in ward
- At any procedure room
- At the surgical theatre.

The records at all the points and units vary according to the design of the tools being used for collection, and they also vary depending on the information being collected.

Many recording and data collection problems can be solved by having well-designed and accurately-maintained registers.

There is need for all staff involved in patient care at any institutional level to appreciate the need to collect and keep accurate records.

GROUP WORK

This group work activity is designed to help students identify:

- *record collection tools available*

INSTRUCTIONS FOR GROUP WORK

1. **Divide** students into small groups.
2. **Appoint** a group member to facilitate group discussion.
3. **Appoint** a group member to report the outcome of group work to the rest of the class.
4. **Discuss** the following:
 - what data is usually kept in relation to abortion/cases of incomplete abortion?
 - who collects, keeps, and uses records?
 - why records are collected and kept?
 - when records are collected?
 - how records are collected and used?

- *departments where records are collected*
- *people responsible for record collection and record keeping*
- *why records are kept - people who use the records*
- *the various types of records.*

FEEDBACK FROM GROUP WORK

During feedback, discussion of the following issues should be addressed:

- Each person who handles a patient should understand the reasons for, and the value of, keeping records
- Records are important public health surveillance tools
- Records can and should be kept at every department where a patient is seen or admitted or operated
- For easy collection of data pre-designed registers, patient cards can be used with emphasis on accuracy of information collected
- Records and data generated can be used by everyone for:
 - reference
 - planning
 - medico-legal
 - research
 - advocacy
 - information sharing.

As abortion is a sensitive issue, all medical records should be confidential and only handled by authorized personnel.

How are the records generated used in national and global statistics?

Discuss with the students the broad areas of records for a complete health information system:

- *Records on promotive health care activities*
- *Records on curative care activities*
- *Records on vital statistics.*

At the end of the discussion share with the students the example of a record collection tool.

Record collection tool

Date	In-patient number	Name	Age	Parity	Marital status	Diagnosis	Previous procedure done	Amount Products of conception	Septic or complication	Counselling done

Clinical skills checklist for cervical and vaginal inspection ✓			
Step	Yes	No	Remarks
Instruments and supplies: - prepares instruments, room and supplies - correct decontamination and cleaning of all instruments after the procedure			
Patient preparation: - provides reassurance to the woman and explains reason for inspection - checks that uterus is firm and well contracted - asks the woman to empty her bladder - explains the procedure to the woman - cleans around the perineum, vulva and vagina with an antiseptic solution			
Steps in the procedure: - scrubs hands and puts on sterile gloves - separates the woman's labia with one hand - has an assistant shine a light in the vagina - looks carefully for any tears or haematomas - presses firmly on the back wall of the vagina with the fingers of the other hand and looks deeply into the vagina - presses gently against the vaginal wall, moving fingers up one side of the wall to the cervix, checking for bleeding points or haematomas - repeats the procedure on the other side of the vagina - next, asks assistant to press firmly down on the woman's uterus - inserts two speculae, one posteriorly and the other anteriorly, and asks assistant to hold them - if no specula are available, presses firmly on the back wall of the vagina with one hand to expose the cervix better - with the other hand, takes a sponge forceps and clamps it on the anterior lip (top lip) at 12 o'clock - clamps another sponge forceps on the cervix at 3 o'clock and examines the portion of the cervix between the forceps - checks for slow continuous bleeding or spurts of blood - unclamps the 12 o'clock forceps and reclaims it at 6 o'clock - examines the portion of the cervix lying between 3 o'clock and 6 o'clock - unclamps the 3 o'clock forceps and reclaims at 9 o'clock - continues this process clockwise, until the entire cervix has been examined - repairs tears if found (see checklists for repair of cervical tears and vaginal tears) - provides emotional support throughout using appropriate interpersonal communication - makes the woman comfortable - completes all records			

Teacher's comments:

Student's comments:

Clinical skills checklist for repair of cervical tears ✓			
Step	Yes	No	Remarks
Instruments and supplies: - prepares instruments, room and supplies - correct decontamination and cleaning of all instruments after the procedure			
Patient preparation: - provides reassurance to the woman and explains cause of bleeding - takes blood for Hb, typing and cross-matching - starts IV drip of either sodium lactate or normal saline - if shock is severe, gives plasma expanders or blood (when safe blood is available) - checks that uterus is firm and well contracted - asks the woman to empty her bladder - explains the procedure to the woman - cleans around the vagina and perineal area with an antiseptic solution			
Steps in the procedure: - scrubs hands and puts on sterile gloves - catheterizes the woman, if she is unable to void urine - visualizes the cervix - places a sponge forceps on each side of the laceration - places the handles of both forceps in one hand and gently pulls toward self - starts suturing from the top of the tear - applies interrupted or uninterrupted sutures the length of the wound, approximately 1 cm apart, taking the whole thickness of each lip of the cervix - applies a sterile pad to the perineum - provides emotional support throughout using good interpersonal communication skills - makes the woman comfortable			
Immediate post-procedural care: - monitors the woman's vital signs immediately following the procedure, then 2 to 4 hourly - checks for vaginal bleeding/haematoma formation - replaces fluids intravenously and starts blood transfusion, if necessary - starts the woman on a broad spectrum antibiotic (e.g. ampicillin 1 g stat and 500 mg every 6 hours for 5 days) - gives an analgaesic (e.g. paracetamol) for pain, if necessary - ensures the woman is comfortable and under constant supervision, or has ready means to call for assistance if she feels extreme pain or thinks she is bleeding - makes a referral to higher-level care if required - completes all records			

Teacher's comments:

Student's comments:

Clinical skills checklist for repair of high vaginal tears ✓			
Step	Yes	No	Remarks
Instruments and supplies: - prepares instruments, room and supplies - correct decontamination and cleaning of all instruments after the procedure			
Patient preparation: - provides reassurance and emotional support to the woman - takes blood for Hb, typing and cross-matching - starts IV drip of either sodium lactate or normal saline - if shock is severe, gives plasma expanders or blood (when safe blood is available) - checks that uterus is firm and well contracted - asks the woman to empty her bladder - explains the procedure to the woman - cleans around the vagina and perineal area with an antiseptic solution			
Steps in the procedure: - scrubs hands and puts on sterile gloves - exposes the tear in the vagina - infiltrates local anaesthetic in the area of the tear - sutures the tear with continuous or interrupted sutures - applies a sterile pad to the perineum - provides emotional support to the woman throughout, using good interpersonal communication skills - makes the woman comfortable			
Immediate post-procedural care: - monitors the woman's vital signs immediately following the procedure, then 2 to 4 hourly - checks for vaginal bleeding/haematoma formation - replaces fluids intravenously and starts blood transfusion, if necessary - starts the woman on a broad spectrum antibiotic (e.g. ampicillin 1 g stat and 500 mg every 6 hours for 5 days) - gives an analgaesic (e.g. paracetamol) for pain, if requested - ensures the woman is comfortable and under constant supervision, or has ready means to call for assistance if she feels she is bleeding - makes a referral to higher-level care if required - completes all records			

Teacher's comments:

Student's comments:

6

MANUAL VACUUM ASPIRATION (MVA)

SESSION 6

MANUAL VACUUM ASPIRATION (MVA)

Aims

- The aim in this session is to enable students to become competent in performing manual vacuum aspiration (MVA) for the management of incomplete abortion.

Objectives

On completion of Session 6, students will be able to:

- Describe the procedure of MVA as it applies to management of incomplete abortion.
- List the instruments and supplies required for MVA.
- Describe the preparation of the patient for MVA, including pain control.
- Demonstrate the procedure of paracervical block prior to performing MVA.
- Demonstrate the steps in the procedure for MVA.
- Demonstrate post-procedural care following MVA.
- List the post-operative instructions for the patient, including those for possible complications.
- List possible procedural complications related to the management of incomplete abortion.
- Explain the infection prevention procedures applicable to managing incomplete abortion.

Plan

Lecture.

Simulated practice.

Clinical practice.

Total time: It is advisable to allow at least one week to teach the skills in Sessions 5, 6 and 7. However, the actual time required will depend on the needs and abilities of each student, and the availability of relevant clinical cases. Other factors to be considered will include the availability of teachers and clinicians willing and able to participate in the teaching of these skills.

Resources

Skills checklists.

Yordy L, Hogan LA, Winkler J. Manual vacuum aspiration: guide for clinicians. Carrboro, IPAS, 1993.

Managing complications in pregnancy and childbirth: a guide for midwives and doctors.

Geneva, World Health Organization, 2000 (WHO/RHR/00.7).

INTRODUCTION

When teaching the skills in this session, midwifery teachers may wish to collaborate with other teachers and/or clinicians who are competent in this procedure (e.g. practicing midwives, obstetricians).

The skills for this procedure should first be demonstrated by the teacher or by competent clinicians. Simulated practice should then take place to provide students with an opportunity to prepare and handle equipment and become familiar with the sequence of steps in the procedure. This could be done in the classroom using a pelvic model and the instruments for MVA. Finally, clinical practice should take place under direct supervision and provide feedback to enable students to develop competence in the skills. It may be necessary to arrange for clinical practice in several clinical facilities where post-abortion care is provided, to ensure that students have sufficient hands-on practice.

This session will provide students with the opportunity to learn how to perform MVA for the management of incomplete abortion

MVA FOR INCOMPLETE ABORTION

The management of incomplete abortion almost always includes evacuation of retained products of conception from the uterus. MVA is a simple, cost-effective procedure involving the use of suction to remove tissue and blood through a cannula and into a syringe. The procedure is highly effective in removing retained products of conception from the uterus and is associated with a low complication rate. It is an effective method of treatment for uterine sizes up to 12 weeks LMP (i.e. 12 weeks from the first day of the last menstrual period). MVA does not require a general anaesthetic and can be performed in an examination or procedure room, rather than in an operating room.

MVA relies on a suction source, or aspirator, which applies suction via a cannula. There are various types of aspirators. These include large syringes with different types of valves to control the suction, foot pumps, and electric pumps. Collectively these devices are called aspirators. The word aspirator in this manual therefore refers to any type of the above.

Contraindications

Certain serious complications resulting from unsafe abortion, such as shock, uterine perforation or sepsis, must be identified and treated before uterine evacuation is attempted. It is also contraindicated in large fibroids. MVA should be used with caution in the following cases and only in health facilities with full emergency backup:

- history of bleeding disorder
- haemodynamic instability due to cardiac disease
- severe anaemia.

Doubtful signs procedure is complete

If the tissue obtained on vacuum aspiration is inadequate in quantity or does not contain products of conception, it is possible that the evacuation is incomplete, that all tissue has already passed (a completed abortion), or that the woman has an ectopic pregnancy.

Incomplete evacuation

Using a cannula which is too small or stopping the aspiration too soon can result in retained tissue, haemorrhage, infection, and continued pain and cramping. Careful observation for the signs of complete evacuation of the uterus and careful examination of the tissue removed is the best way to avoid an incomplete evacuation.

Ectopic pregnancy

Absence of villi, membranes, or fetal parts upon inspection after incomplete abortion may indicate an ectopic pregnancy. If ectopic pregnancy is suspected, the woman should be referred, without delay, to a facility where the necessary emergency care is available.

Instruments and supplies

Basic supplies:

- intravenous infusion set and fluids (sodium lactate, glucose, saline)
- syringes (5 ml, 10 ml, and 20 ml)
- needles (22 gauge spinal for paracervical block; 21 gauge for drug administration)
- sterile gloves (small, medium, large)
- cotton swabs or gauze sponges
- water-based antiseptic solution (not alcohol-based)
- detergent or soap
- clean water
- antiseptic solution e.g. iodophors, chlorhexidine
- high-level disinfection or sterilization agent.

Instruments and equipment:

- vaginal speculum
- tenaculum
- sponge (ring) forceps or uterine packing forceps
- Pratt and Denniston dilators: sizes 13 to 27 French gauge.
- container for antiseptic solution
- strainer (metal, glass, or gauze).

Medications:

- analgesia medication (e.g. paracetamol, acetaminophen, ibuprofen, or pethidine)
- anti-anxiety medication (e.g. diazepam)
- anaesthetic (1 ml lignocaine 0.5% or lidocaine or chloroprocaine without epinephrine)
- oxytocin 10 units or ergometrine 0.2 mg.

MVA instruments:

- vacuum aspirator (**Figure 6.1**), silicone for lubricating syringes, if needed
- flexible cannulae of different sizes
- adapters, if needed.

Points to remember

The cannula used for MVA must fit snugly through the cervix so that the vacuum from the syringe is transferred to the uterus. In addition, the cannula must be large enough to allow passage of the tissue from the uterus. The following points should be considered when selecting a cannula:

- size of the uterus determined on bimanual examination
- the amount of cervical dilation present.

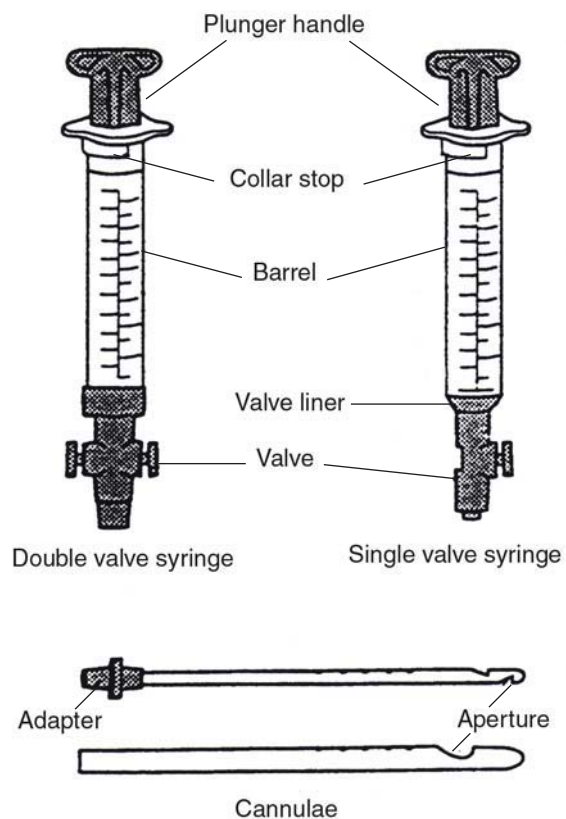


Figure 6.1: MVA syringe and cannulae

Before starting the procedure check MVA instruments are in full working order. Ensure that the syringe will hold a vacuum:

- check that the valve closes, if using a push valve, push the button down and forward; you should hear and feel the valve lock closed (**Figure 6.2**)
- if using a syringe, pull the plunger back until the arms snap outward at the end of the syringe and check that both plunger arms are fully extended and resting on the wide edge of the barrel; in this position the syringe should hold a vacuum (**Figure 6.3**)
 - leave the valve locked and the plunger back for several minutes, then
 - release the button to open the valve; the sound of air rushing into the syringe indicates that there was a vacuum in the syringe.

Patient preparation

It is important for health care workers to remember that a woman who seeks treatment for an incomplete abortion is often under severe emotional distress, as well as any physical discomfort she may be suffering. Remind students that health care workers must respect the woman's needs and provide care in a nonjudgemental manner.

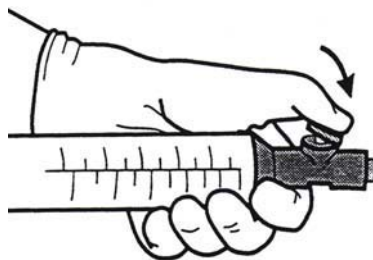


Figure 6.2: Closing the valve



Figure 6.3: Pulling back the plunger

Service protocols should ensure that women treated for post-abortion complications are not denied care, made to wait for care, or treated rudely by staff.

Preparation of the patient before an MVA procedure is as follows:

- explain the procedure to the woman, keeping in mind her need for respectful, supportive care
- preoperative medication should be given far enough in advance of the procedure to ensure effectiveness (see pain control below). Regardless of the medication selected, gentle, supportive treatment throughout the procedure is essential
- ask the woman to empty her bladder
- give oxytocin 10 units IM or ergometrine 0.2mg IM. (To make the myometrium firmer and reduce the risk of perforation of the uterine walls)
- position her in the lithotomy position on an examination table equipped with stirrups (leg supports)
- swab the cervical and vaginal areas with a water-based (not alcohol-based) antiseptic solution, using sponge forceps and cotton swabs, and wait for solution to dry
- use drapes or clothing to ensure the woman's privacy
- if possible, a midwife, nurse or other health care worker should stand by the woman's head to reassure her during the procedure
- if the health care worker who will do the MVA did not perform the pelvic examination as part of the clinical assessment, they should do so before beginning the procedure to verify uterine size and position (see bimanual examination on page 124).

Pain control

The purpose of pain control is to ensure that the woman suffers the least possible discomfort and anxiety.

Women who undergo MVA may experience two types of pain; there may be deep, intense pain which accompanies cervical dilation and stimulation of the internal cervical os, and lower abdominal pain and cramping which occurs with movement of the uterus, scraping of the uterine wall and muscle spasm related to emptying the uterine cavity.

These women will benefit a great deal from verbal reassurance and careful and sensitive explanations of what to expect. However they should be offered analgesics to help relieve pain (Table 6). If tense and anxious, anxiolytics will induce relaxation, reduce fear, and decrease memory of the procedure (Table 7).

Administration of analgesics and anxiolytics

Analgesics may be administered orally or by the intramuscularly or intravenous routes. The choice of drug and route of administration will depend on the severity of pain anticipated and the facilities available. If mild to moderate pain is anticipated, oral analgesics such as acetaminophen or ibuprofen with or without codeine

Table 6: Analgesic drugs for MVA

Type of analgesia	Drug name (generic)	Usual dose and timing	Duration of effects	Common side effects	Comments
Narcotic	Demerol Pethidine* (meperidine)	25–50 mg IV** 50–100 mg IM, 30 minutes before procedure 100–150 mg orally give 30–60 minutes before procedure	2 hours	Drowsiness Lightheadedness Weakness Euphoria Dry mouth	Reverse with naloxone* 0.4 mg IV Oral dose of meperidine much less effective than IM or IV
Narcotic	Sublimaze (fentanyl)	0.05–0.06 mg IV** 0.05–0.1 mg IM give 30 minutes before procedure	30–60 minutes	Drowsiness Lightheadedness Weakness Euphoria Dry mouth	Reverse with naloxone*, as above
Narcotic combination	Paracetamol (acetaminophen) with codeine	300 mg paracetamol with 30 mg codeine orally one hour before procedure	3–6 hours	Drowsiness Lightheadedness Weakness Dry mouth	
Non-narcotic (nonsteroidal anti-inflammatory)	(Ibuprofen)*	400–800 mg orally 1 hour before procedure	Up to 5 hours	Possible gastro-intestinal upset	
Non-narcotic	Paracetamol (acetaminophen)*	500–1000 mg orally give 30–60 minutes before procedure	Up to 4 hours		
Dissociative drug/ analgesic	Ketamine* (ketalar)	10–25 mg IV** immediately prior to procedure	10–15 minutes		Brief analgesia only at this dose

* *These items appear on the list of essential drugs in: The use of essential drugs: fourth report of the WHO Expert Committee. Geneva, World Health Organization, 1990.*

** All analgesic and anxiolytic drugs given intravenously should be administered slowly and intermittently. Their effects, while rapid in onset, are not instantaneous, and in combination they are more likely to produce side effects. Repeated titration of small doses is a safe way to administer these potent drugs to obtain their important effects without encouraging problematic side effects.

Table 7: Anxiolytics for use with analgaesics and/or anaesthetic in MVA

Type of anxiolytic	Drug name (generic)	Usual dose and timing	Duration of effects	Common side effects	Comments
Central nervous system depressant - benzodiazepine	Valium (diazepam)*	5–10 mg IV** 10 mg orally give 1 hour before procedure	2 hours	Blurred vision Dizziness Headache Nausea Redness/pain at injection site Numbness/tingling/pain of hands or feet	Diazepam has a slight amnesic effect
As above	Versed (midazolam)	0.5–1.0 mg IV**	30–60 minutes	Blurred vision Dizziness Headache Nausea Redness/pain at injection site Numbness/tingling/pain of hands or feet	Same as above. Midazolam has a moderate amnaesic effect

* *These items appear on the list of essential drugs in: The use of essential drugs: fourth report of the WHO Expert Committee. Geneva, World Health Organization, 1990.*

** All analgaesic and anxiolytic drugs given intravenously should be administered slowly and intermittently. Their effects, while rapid in onset, are not instantaneous, and in combination they are more likely to produce side effects. Repeated titration of small doses is a safe way to administer these potent drugs to obtain their important effects without encouraging problematic side effects.

may be appropriate. Narcotics such as meperidine or codeine are helpful for moderate to severe pain.

The routes of administration for anxiolytics are the same as for analgesics. With respect to the use of anxiolytics, it is essential to remember that they are not a substitute for respectful, supportive treatment and clear communication with the patient.

It is important at this point to make sure that students understand the contents of Table 6 and Table 7.

In MVA, local anaesthetic takes the form of paracervical block. This form of local infiltration affects nerve fibres that are distributed around the cervix and the cervical canal and therefore minimizes cervical pain caused by stretching, dilation, or movement of the cannula in the cervix. The technique of administering paracervical block is outlined on the next page.

Local anaesthetic in the form of paracervical block provides excellent relief from the pain of cervical dilation, although it will not relieve abdominal pain. Analgesia intensifies the effect of paracervical block and also relieves abdominal pain. Anxiolytics, given in conjunction with analgesics, may be useful in relieving anxiety. Regardless of which drugs are selected, gentle and supportive care of the patient cannot be overemphasized.

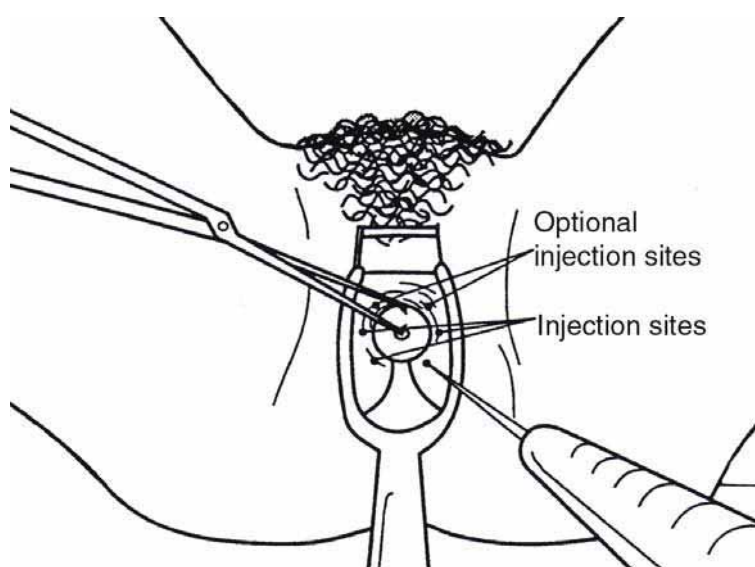
Bimanual examination

Determining the shape and position of the uterus is critical to the safety and success of MVA. Uterine perforation during the procedure may be more likely if the health care worker who will do the MVA is not aware of a retroverted, anteverted, or laterally

How to administer paracervical block

At each injection site insert the needle, then aspirate by drawing the plunger back slightly to make certain the needle is not penetrating a blood vessel. If any blood is visible in the syringe, do not inject; instead, remove the syringe and move to a different injection site.

1. Use a 22 gauge spinal needle (or a needle extender) and a finger control syringe to inject 2 ml of local anaesthetic into the anterior lip of the cervix which has been exposed by a speculum. A 1½ inch needle, if bent at the hub, may replace the 3 inch spinal needle if it is unavailable; the bent needle allows better vision of the injection site than a straight 1½ inch needle.
2. Place a tenaculum at this site immediately. Use slight traction and movement of the cervix to help define the change from smooth cervical epithelium to vaginal tissue. Vaginal tissue is more elastic and appears folded. This change marks the area for further injections around the cervix.
3. Place 2–3 ml of local anaesthetic just under the epithelium, not deeper than 2–3 mm, at 3 o'clock, 5 o'clock, 7 o'clock, and 9 o'clock. When correctly placed, a swelling and blanching of the tissue can be noted. In addition, the cervical anaesthesia may be made more effective by injecting 2 ml at 11 o'clock and 1 o'clock.
4. At the conclusion of the set of injections, allow a minimum of 2–4 minutes for the anaesthetic to work and for the block to have its maximum effect.



displaced uterus. Bimanual examination should be performed as follows:

- with two fingers of one hand inserted in the vagina and the other hand palpating the abdomen, assess the size of the uterus (**Figure 6.4**); compare the actual size of the uterus with the history of the LMP – with an incomplete abortion, the uterus is likely to be smaller than the history of the LMP
- assess the shape and the position of the uterus to determine whether it is retroverted or, anteverted (**Figure 6.5**), or laterally displaced.

Steps in the procedure of MVA Any instruments or parts of instruments that enter the uterus must be sterile. If sterility is not possible, high-level disinfection is the only acceptable alternative. **No-touch technique** must be observed

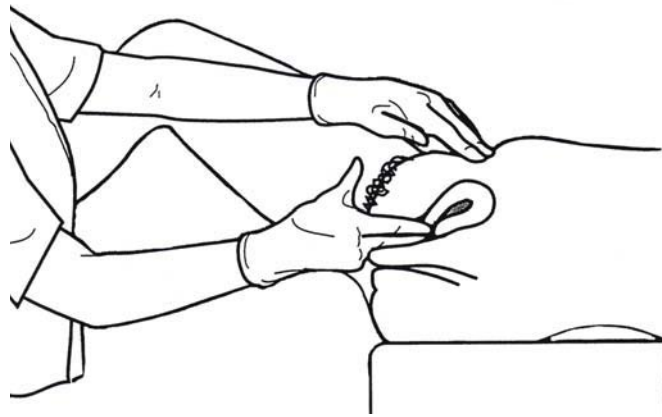


Figure 6.4: Palpating the uterus

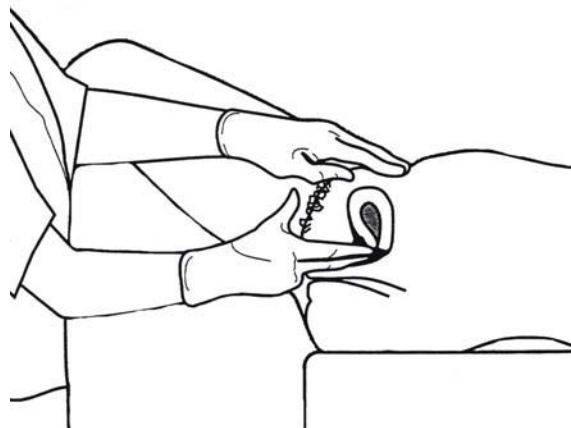


Figure 6.5: Palpating anteverted uterus

throughout the procedure; the tip of the cannula must not touch objects or surfaces before being inserted through the cervical canal.

1. With the speculum inserted, hold the cervix steady with a tenaculum and gently apply traction to straighten the cervical canal.

Administer paracervical block, if needed.

2. *Dilate the cervix (as required).* Cervical dilation is necessary when the cervical canal will not allow passage of a cannula appropriate to the uterine size. When required, dilation should be done gently with mechanical dilators or with cannulae of progressively increasing size, being careful not to cause trauma to the cervix or to create a false passage.
3. *Insert the cannula gently through the cervix into the uterine cavity, just past the os, while holding the cervix steady. Rotating the cannula using gentle pressure often helps ease insertion (Figure 6.6).*
4. *Push the cannula slowly into the uterine cavity until it touches the fundus but not more than 10 cm. Note the uterine depth*

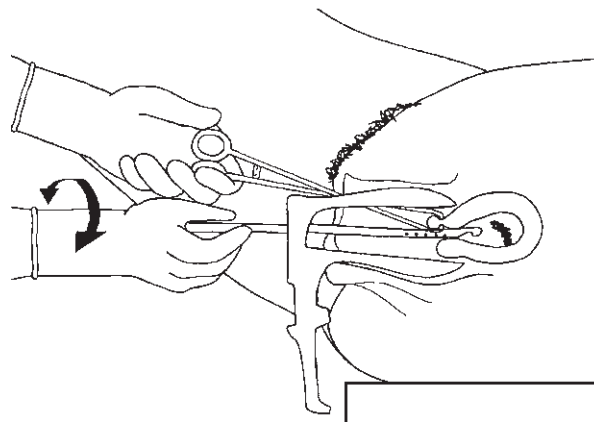


Figure 6.6: Inserting the cannula

by the dots visible on the cannula. The dot nearest the tip of the cannula is 6 cm from the tip, and the other dots are at 1 cm intervals (**Figure 6.7**). After measuring the uterine size, withdraw the cannula slightly (it is important to measure the uterine size as this will assist with confirming the weeks of pregnancy, also it ensures there is a point to refer to at the end of the procedure, to ensure uterus evacuated fully).

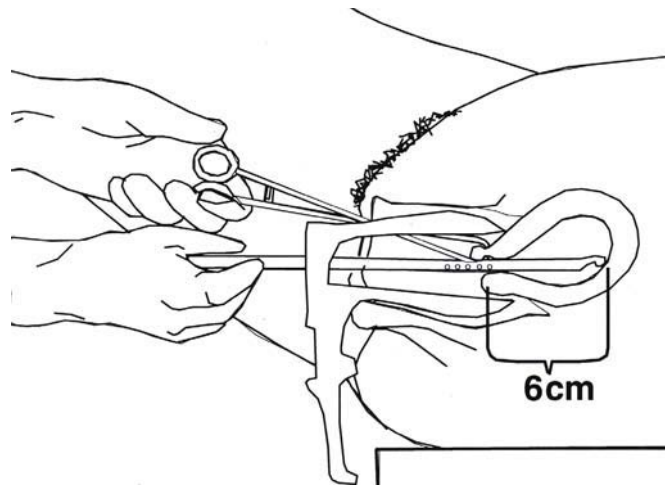


Figure 6.7: Measuring uterine depth with cannula

5. *Attach the prepared aspirator (vacuum already established) to the cannula, holding the end of the cannula in one hand and the syringe in the other (Figure 6.8). Make sure the cannula does not move forward into the uterus as you attach the syringe.*

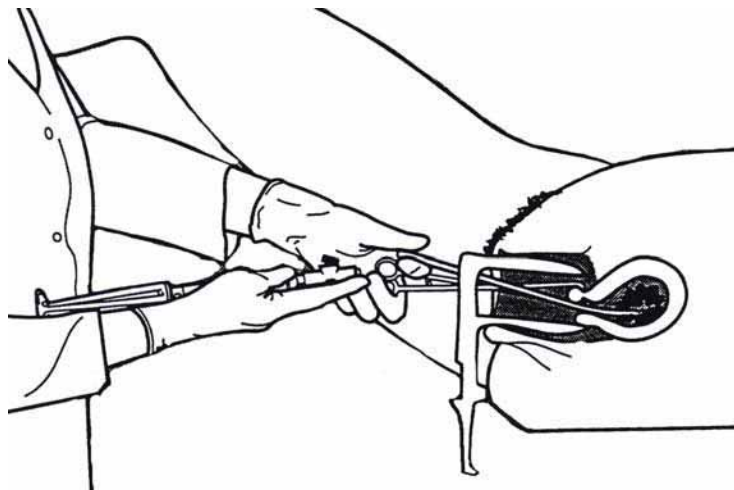


Figure 6.8: Attaching the syringe

6. *Release the valve(s)* on the syringe to transfer the vacuum through the cannula to the uterus (**Figure 6.9**). Bloody tissue and bubbles should begin to flow through the cannula into the syringe.
7. *Evacuate the contents* of the uterus by moving the cannula gently and slowly back and forth within the uterine cavity, rotating the syringe as you do so (**Figure 6.10**).

It is important not to withdraw the cannula opening(s) beyond the cervical os, as this will cause the vacuum to be lost. If this happens, or if the syringe is full, the vacuum should be re-established.

While the vacuum is established and the cannula is in the uterus, never grasp the syringe by the plunger arms as this may cause the arms to move from their locked position on the rim of the barrel. Accidentally allowing the plunger to slip back into the syringe may push tissue back into the uterus, possibly causing complications.

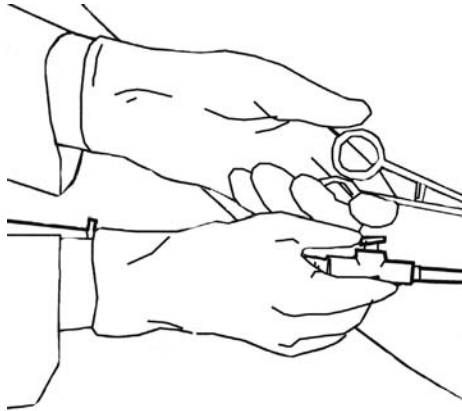


Figure 6.9: Release valve

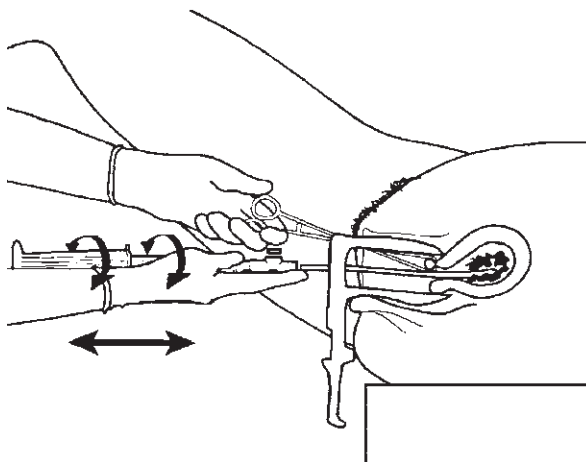


Figure 6.10: Evacuating the uterus

8. *Check for signs of completion.* The procedure is complete when red or pink foam and no more tissue is seen in the cannula. Also, a gritty (rough, abrasive) sensation is felt as the cannula passes over the surface of the evacuated uterus, and the uterus contracts around (or grips) the cannula. Withdraw the cannula and detach the syringe (**Figure 6.11**).

Note: if the cannula penetrates further than expected, or if fat or bowel is observed in the aspirated tissue, the uterus has been perforated (see Session 4 for management of this complication).

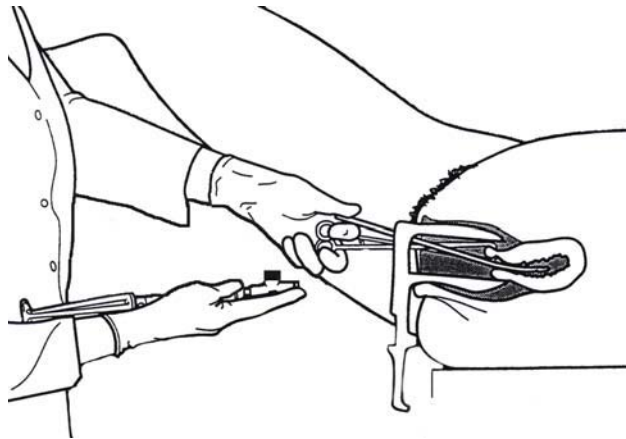


Figure 6.11: Detaching the syringe

9. *Decontaminate all instruments* (syringe, cannulae, tenaculum, and speculum) in chlorine solution. After removing instruments from the patient, draw the decontaminating solution through the cannula into the syringe, and drop the soiled instruments, including the syringe and cannulae, directly into the solution.
10. *Inspect tissue removed from the uterus* for quantity and products of conception. Strain and rinse the tissue to remove excess blood clots, then place in a container of water, saline solution, or weak acetic acid solution (vinegar) to examine visually. Products of conception which may be seen in treating incomplete abortion include villi, fetal membranes, and after nine weeks LMP, fetal parts.

Remove gloves and drop them into the decontaminating solution. Wash hands thoroughly with soap and water.

Immediate post-procedural

- give paracetamol 500mg by mouth as needed
- take vital signs while the woman is still on the treatment table
- allow the patient to rest comfortably in a warm place where her recovery can be monitored
- check bleeding at least once before discharge
- check vital signs again

- check to see that cramping has decreased (prolonged cramping is not considered normal)
- the woman should be kept under close observation for at least one hour after the procedure, depending on her general condition, the amount and type of drugs given
- if treatment for complications (e.g. infection) has been started, continue therapy and/or monitoring as required
- if the woman is Rh negative, administer Rh-immune globulin before discharge.

As soon as she is sufficiently well, the woman should be provided with the following information as part of the pre-discharge procedure. Ensure that she fully understands the information and is given the opportunity to ask questions if there is anything which she feels is not clear:

- **what to expect - signs of a normal recovery:** some uterine cramping over the next few days which may be eased by mild analgaesics, and some spotting or bleeding which should not exceed a normal menstrual period
- **when to expect resumption of menses:** a normal menstrual period should begin within 4–8 weeks
- **clear verbal and written instructions** for taking any prescribed medication
- **advice** on routine personal hygiene and resumption of sexual activity:
 - should not have sexual intercourse or put anything into the vagina until a few days after bleeding stops (no douching, no tampons)
 - fertility will return soon after the procedure, so she needs contraceptive counselling immediately which ideally will be to use a condom until she has decided on contraceptive method or feels ready to try to conceive (get pregnant) again
 - advice on when to make an appointment for routine follow-up visit (i.e. how long should she wait, and how to make the appointment)
- **what signs and symptoms** require immediate emergency attention:
 - prolonged bleeding (more than two weeks)
 - prolonged cramping (more than a few days)
 - bleeding more than normal menstrual bleeding
 - severe or increased pain
 - fever, chills, or malaise
 - syncope (fainting).
- **what to do and sources of emergency care** if any of the above complications occur.

Table 8 summarizes the information that all women treated for post-abortion complications should understand before they are discharged from the health facility.

Table 8: Summary of post-procedure information for patients

Signs of normal recovery	Vaginal bleeding or spotting for a few days, but not more bleeding than with a typical menstrual period Uterine cramping that may be relieved with analgesia
Self-care	Seek care immediately if signs of complication Personal hygiene: do not insert anything into the vagina until a few days after the procedure Pain control: mild analgesia if needed Other medication: as per instructions Contraception: avoid pregnancy until normal menses have resumed
Signs of possible complication	Prolonged bleeding (more than two weeks) or bleeding more than a normal menstrual bleed Prolonged cramping (more than a few days) Severe or increased pain Fever, chills, or malaise Fainting
Return of fertility and family planning	It is possible to become pregnant again even before the next menses Safe contraceptive methods to prevent or delay pregnancy are available Locations where family planning services are available

MANAGEMENT OF PROCEDURAL COMPLICATIONS

The following complications may occur, or be found during or after a uterine evacuation procedure.

Cervical lacerations

Minor superficial tears due to the tenaculum pulling away from the cervical lip may occur with uterine evacuation procedures. More serious lacerations can occur due to excessively forceful dilation of the cervix. Most superficial cervical tears will have stopped bleeding by the end of the procedure and require no further treatment. All lacerations and any superficial tears that continue to bleed should be sutured.

Uterine perforation

Uterine perforation may be present as a result of an unsafe abortion procedure before the woman presents at a health facility, or it may occur during the course of treatment. Uterine perforation should be suspected if, during the procedure, an instrument penetrates beyond the expected size of the uterus (based on bimanual examination), or if there is sudden lack of resistance to an instrument. If perforation is suspected **do not** undertake the procedure or if occurs during the procedure, **stop** the procedure immediately and refer for higher level care. If IVI not already *in situ*, commence IVI as bleeding could be taking place into the peritoneal cavity.

Atonic uterus	The uterus may become atonic when abnormally heavy bleeding occurs during or after the uterine evacuation procedure. Management may include massage of the uterus (rubbing up a contraction) and administration of an oxytocic (oxytocin 10 IU IV or ergometrine 0.5mg IV, or IM if the IV route is not possible). If bleeding persists and is severe (or causes deterioration in the woman's condition because she is already anaemic), immediately seek higher level care and commence intervention to control the bleeding and treat shock. Bimanual compression of the uterus may help. If this fails, or is not possible, manual compression of the aorta may be applied while the cause of bleeding is being determined.
Haematometra	Haematometra (sometimes called "post-abortion syndrome") is the condition in which blood is trapped within the uterus. The patient may feel increasing lower abdominal pain and vaginal bleeding may be less than expected. On pelvic examination, the uterus is enlarged and tender. Treatment consists of immediate but careful re-evacuation of the uterus.
Post-procedural infection	Infection which occurs after the uterine evacuation procedure may be due to an infection of the retained products of conception, or to an infection of the uterus itself. If there is any suspicion of retained tissue, broad-spectrum antibiotics should be started and a re-evacuation procedure performed. However it must be remembered that infection will change the lining of the uterus and make it more sponge-like, thus easier to perforate. Therefore, re-evacuation must be undertaken with extreme care. If there is no retained tissue present, the patient may be treated with antibiotics alone.
Minor vasovagal reactions	The signs and symptoms of minor vasovagal reactions include nausea and/or vomiting, a feeling of faintness, bradycardia, and hypotension. Minor vasovagal reactions may be managed by elevation of the patient's legs, close monitoring of vital signs, and by calming and reassuring the patient.
Severe vasovagal reactions	In addition to the steps for management of minor vasovagal reactions, IV fluids should be started and oxygen administered. If the reaction persists, atropine 0.4mg may be given intramuscularly or intravenously. Rarely, severe vasovagal reactions may lead to cardiac arrest, which should be managed with cardiopulmonary resuscitation.
Incomplete evacuation	Failure to completely evacuate all of the products of conception results in a continued incomplete abortion. Therefore, the signs and symptoms of an incomplete evacuation are the same as for incomplete abortion. Management consists of careful re-evacuation of the uterus and administration of antibiotics.
Assessing competence	<i>Allow students sufficient opportunity to practise all the above skills, and then arrange to assess their competence using the following checklist.</i>

Clinical skills checklist for manual vacuum aspiration ✓			
Step	Yes	No	Remarks
Instruments and supplies: ▪ prepares instruments, room and supplies ▪ correctly decontaminates and cleans instruments after the procedure			
Patient preparation: ▪ explains the procedure to the patient ▪ reassures the patient about the procedure ▪ asks the patient to empty her bladder ▪ places the patient in lithotomy position ▪ swabs the cervical and vaginal areas with a water-based antiseptic solution and waits for solution to dry ▪ makes the woman comfortable			
Immediate post-procedural care: ▪ takes vital signs while the patient is still on the treatment table ▪ allows the patient to rest comfortably where recovery can be monitored ▪ checks bleeding at least once before discharge ▪ checks vital signs again ▪ checks to see that cramping has decreased administers Rh-immune globulin before discharge, if necessary ▪ gives post-procedural information about family planning, routine care and follow-up ▪ completes all records			

Teacher's comments:

Student's comments:

7

POST-ABORTION FAMILY PLANNING

SESSION 7

POST-ABORTION FAMILY PLANNING

Aims

- The aim of this session is to enable students to understand the importance of, and develop skills in, post-abortion family planning services.

Objectives

On completion of Session 7, students will be able to:

- Describe the factors affecting postpartum and post-abortion family planning.
- Describe the essential elements of quality of care in post-abortion family planning.
- Explain the content of post-abortion family planning counselling with respect to the use of all available contraceptive methods.
- Explain the guidelines for contraceptive use with respect to the common post-abortion clinical conditions.
- Demonstrate counselling skills for post-abortion family planning.

Plan

Lecture.

Role play.

Feedback and discussion.

Total time: approximately 4 hours.

Resources

Instructions for Students.

Client and counsellor background information.

Counselling skills checklist.

A film or video on counselling. A good example is the PPFN counselling video which is available from John Hopkins University, Centre for communication programme.

Benson J, et al. *Meeting women's needs for post-abortion family planning: framing the questions*. Carrbora, IPAS, 1992.

Winkler J, et al. eds. *Post-abortion care: a reference manual for improving quality of care*. Post-abortion Care Consortium, Baltimore, 1995.

Post-abortion family planning: a practical guide for programme managers. Geneva, World Health Organization, 1997 (WHO/RHT/97.20).

Complications of abortion: technical and managerial guidelines for prevention and treatment. Geneva, World Health Organization, 1995.

Medical eligibility criteria for contraceptive use.

3rd ed. Geneva, World Health Organization, 2004 (WHO/RHR/00.2).

Selected practice recommendations for contraceptive use, 2nd ed. WHO/RHR 2004

Decision-making tool for family planning clients and providers. WHO/RHR, 2005

INTRODUCTION

The content for this session is based on the assumption that students will already have learned during midwifery training and/or in-service training, the following information for the various contraceptive methods, including emergency contraception and the essential elements of voluntary counselling and testing for HIV (VTC).

- *counselling and client assessment*
- *mechanism(s) of action*
- *effectiveness of the method*
- *benefits and limitations*
- *medical eligibility*
- *when to start*
- *client instructions*
- *management of common side effects*
- *psychosocial aspects related to both abortion and family planning, including the particular needs of special groups such as women who have been subject to violence and rape, young and unmarried, and adolescents.*

Therefore, the session does not include the above general elements of family planning and is designed instead to help students understand the factors affecting postpartum and post-abortion family planning, the elements of quality post-abortion family planning, and the particular aspects of method counselling which relate to post-abortion family planning.

If the above general elements have not been covered, these should be covered first prior to commencing this session.

Counselling

Counselling is a very important component of post-abortion care. The teacher should review with the students the process of counselling using the acronyms GATHER, ROLES and CLEAR.

The six elements to the counselling process are:

- G** *Greet the woman warmly and politely*
- A** *Ask her about her concerns*
- T** *Tell her about family planning services available*
- H** *Help her to choose a method*
- E** *Explain how to use the chosen method correctly*
- R** *Return visits, or refer.*

Non-verbal communication skills:

- R** *Relax, be friendly to gain the woman's confidence*
- O** *Open up*
- L** *Lean towards her*
- E** *Maintain eye contact*
- S** *Smile, especially when greeting and reassuring.*

Verbal communication skills:

- C *Clarify*
- L *Listen to the woman and address any concerns*
- E *Encourage her to confide in you and accept her as an individual*
- A *Acknowledge how she feels*
- R *Respect what she says to show that you understand.*

To review the above, show the students a film or video on “counselling” if you have one available.

POSTPARTUM AND POST-ABORTION FAMILY PLANNING

In many countries, family planning is either a separate service/ programme, or in relation to pregnancy and childbirth is viewed as part of a postpartum care programme and as such, usually concentrates on women who have just given birth. Post-abortion family planning is usually not emphasized. Combining postpartum and post-abortion services can often mean that the special needs of post-abortion women are overlooked, and in particular the needs of unmarried women and adolescents. In these circumstances women and young girls including adolescents who have an abortion for whatever reason, can be inadvertently denied access to quality post-abortion care and services. In Table 9 the factors affecting postpartum and post-abortion family planning are summarized.

Discussion point

Before introducing the content of Table 9, make two columns on the blackboard; one headed “postpartum family planning” and the other “post-abortion family planning”. Ask students to identify the factors affecting each of these situations. Write down their responses, which should include at least some of the points in Table 9, under the appropriate column. Use the information in Table 9 to fill in any gaps and discuss any points that may not be clear to students.

What is the experience of students at present? Do they respond to the family planning needs of post-abortion women and young girls differently to postpartum women? Ask them to share their experiences. Stress the importance of meeting the special family planning needs of all post-abortion women, especially young and adolescent girls as this is the group in most countries where, for a wide variety of reasons, there is a growing demand. Part of the discussion can be why there is a growing number of unwanted pregnancies in young women and adolescents.

Table 9: Factors affecting postpartum and post-abortion family planning

Postpartum	Post-abortion
Health system	
▪ Opportunity for counselling/method delivery possibly increased by the woman's multiple contacts with the health system ▪ Family planning care may be available in the maternity ward ▪ Easy to identify women in postpartum period for follow-up family planning ▪ Preventive approach to care ▪ Typically supportive environment, especially health worker attitudes toward mother	▪ Opportunity for counselling/method delivery minimal because woman/young girl typically has only one contact with health system; few return for follow-up ▪ Care delivered in emergency or gynaecological ward where family planning is not offered routinely so maybe inappropriate or inadequate ▪ Difficult to identify women in post-abortion period for follow-up family planning ▪ Curative, crisis-oriented approach to care ▪ Often insensitive and sometimes punitive health worker attitudes toward women especially young women and adolescents and unmarried women who have undergone abortion
Clinical	
▪ Delayed resumption of menses, especially if breastfeeding ▪ Breastfeeding precludes use of some hormonal methods	▪ Prompt return of ovulation and menses ▪ Complications from unsafe abortion may influence choice or timing of method
Psychosocial/cultural	
▪ Woman/young girl identifies herself as mother ▪ Societal support for mothers ▪ Some postpartum practices postpone risk of future pregnancy ▪ Societal fertility role confirmed ▪ Woman/young girl may see risk of subsequent pregnancy to be delayed	▪ Little known about women's or young/girl's perceptions of self and the abortion experience itself ▪ Little societal support after abortion. For adolescents and young girls, there may even be punitive measures against them from family and/or community ▪ Little known about practices after abortion ▪ Societal fertility role may not be confirmed ▪ Woman/young girl may not recognize that there is almost immediate return to fertility

Source: Adapted from Benson J. et al. *Meeting women's needs for post-abortion family planning: framing the questions*. Carrbora, IPAS, 1992.

QUALITY OF CARE

Post-abortion family planning services need to be designed, provided, managed, and evaluated in a way that recognizes the special needs, interests, and attitudes of post-abortion women and young girls, and especially adolescents, in the specific country context. For example, in some countries it would be difficult for young unmarried girls and adolescents, to attend a special clinic for follow-up care where only contraceptives or ANC services were offered. A fully integrated primary health care service delivery point would help avoid such problems, whilst at the same time allowing for maximization of available scarce resources.

Health care practitioners must recognize that every post-abortion client, regardless of age, marital status, ethnicity, socioeconomic status or religious beliefs, has the right to:

Information: to learn about the benefits and availability of family planning.

Access: to obtain services regardless of gender, creed, colour, material status, age or location.

Choice: to decide freely whether to practice family planning and which method to use.

Safety: to be able to practice safe and effective family planning.

Privacy: to have a private environment during counselling or services.

Confidentiality: to be assured that any personal information will remain confidential.

Dignity: to be treated with courtesy, consideration and attentiveness.

Comfort: to feel comfortable when receiving services.

Continuity: to receive contraceptive services and supplies for as long as needed.

Opinion: to be free to express views on the services offered and received, including satisfaction of care provided by the health practitioners.

Six elements of quality care

Six elements of quality of care in post-abortion family planning should be considered. They are:

1. *Timing of counselling and provision of services.*
2. *Choice of methods.*

3. *Information and counselling.*
4. *Technical competence.*
5. *Interpersonal relations.*
6. *Continuity through linkages of services.*

Use the following information to help students understand each of these elements. As you proceed, encourage students to consider the elements in relation to their particular practice settings, but also in relation to different groups of women, e.g. young, unmarried, adolescents and those from marginalized communities.

Timing of counselling and provision of service

The following concerns need to be considered when deciding on the best time to offer post-abortion family planning.

- The provision of contraceptive protection with respect to the immediate possibility of unwanted pregnancy. For a woman/young girl who does not want to become pregnant, she or her partner should use a contraceptive that will be effective as soon as they begin intercourse again
- The provision of counselling to assist the woman/young girl in making her own decisions about family planning and selecting a method she can use effectively for as long as she does not want to become pregnant. A decision to use a contraceptive method, particularly a long-term or permanent method, should be made at a time when the woman/young girl is neither under stress, nor in pain
- The ability to take advantage of the available opportunity. Even though the time of abortion treatment may not be the best for counselling, the woman/young girl should have other opportunities to receive counselling or services. She should have access to family planning counselling and services or the method of her choice if, after abortion care, she leaves the health facility without them. She should not be prevented by someone or some circumstance from using the services that are available.

The answer to the question “When is it best to offer contraceptive counselling and services”? varies with each woman/young girl and according to the capability of the facility where she is treated. In many facilities a full range of family planning services can be made available to women suffering post-abortion complications, while other facilities may be more limited in the services they provide. However, before they are discharged, women in all settings must understand, at least the following information.

- The prompt return of ovulation can lead to the possibility of unwanted pregnancy very soon after abortion and even before the first post-abortion menses
- The availability at the treatment facility or by referral of safe, effective contraceptive methods, including emergency contraception, to prevent additional unwanted pregnancies

- The availability and location of local family planning services for re-supply of methods, provision of long-term and permanent methods, and related ongoing care.

Choice of methods

There is no medical reason to limit the choice of contraceptive methods available to women after treatment for abortion. All methods can be considered for use after abortion, providing there are (a) no complications requiring further treatment, (b) appropriate screening is provided for the contraindications to each method, and (c) good counselling is offered (Table 10).

The particular medical condition of the woman/young girl, her preferences, ability to use a method, and access to follow-up services will determine the suitability of each method for her. For further information, WHO guidelines are available.*

The role of the health care provider is to inform the woman/young girl, in an unbiased manner, about the effectiveness of methods, the benefits and limitations, and the correct use of all available methods or those methods which interest her, and to help her identify the factors in her life that may affect successful contraceptive use and refer her for more specialized counselling and/or treatments if required.

It is also essential to assess the risk of contracting STD/HIV for each woman/young girl receiving post-abortion family planning information and methods. When a risk of STD/HIV transmission is present, it is important that the health care provider strongly recommends the use of latex condoms in addition to the method of her choice.

Regardless of the method chosen, it is recommended that the woman/young girl not have intercourse until post-abortal bleeding has stopped.

Information and counselling

Family planning information and counselling for post-abortion clients should include all the characteristics of quality family planning services. The health care provider should ask the woman/young girl whether she wants to become pregnant again soon, if she has used family planning before, if there were any problems using it, and if she has a preferred method. Particular attention should be given to any woman/young girl who was using a method at the time she became pregnant, to determine the possible reasons for method failure. While some unwanted pregnancies may result from the failure of a method itself, other women may have become pregnant because they used a particular method incorrectly, or because they discontinued a method due to side-effects or were unable to obtain a re-supply. It is also important to see whether partner and/or family disapproval has affected the woman's choice and subsequent use of contraceptives.

* Improving access to quality care in family planning. Medical eligibility criteria for contraceptive use. 2nd ed. Geneva, World Health Organization, 2004 (WHO/RHR/00.02). As new evidence becomes available, this document is regularly updated on our website [www.who.int/reproductive health](http://www.who.int/reproductive_health)

Information should also be provided about the use and availability of emergency contraception for the prevention of unwanted pregnancies, in case of contraceptive failures. This information is especially important for the woman/young girl who cannot begin using her preferred method of contraception immediately.

Sensitivity in asking all these questions is required to take into account the woman's feeling at the time, and the reasons for the abortion. For example, if the abortion followed from an unwanted pregnancy due to rape, it would not be appropriate to ask her if she wanted to get pregnant again. However, questions could be asked about possible future needs around contraception, and offer voluntary counselling and testing for HIV.

Discussion point

Write down on the blackboard or a flip chart, the keys to good family planning counselling and discuss each point with the class. Invite students to share their experiences related to some of the points. For example:

- *How do they earn the client's trust?*
- *How do they encourage clients to ask questions?*
- *How do they present information in an unbiased way?*
- *How do they ensure that they use a nonjudgemental approach?*



Keys to good family planning counselling

A good counsellor:

- Understands and respects the client's rights.
- Earns the client's trust.
- Understands the benefits and limitations of all contraceptive methods.
- Understands the cultural and emotional factors that affect a woman/young girl's (or a couple's) decision to use a particular contraceptive method.
- Encourages the client to ask questions.
- Uses a nonjudgemental approach which shows the client respect and kindness.
- Presents information in an unbiased, client-sensitive manner.
- Actively listens to the client's concerns.
- Understands the effect of non-verbal communication.
- Recognizes when she/he cannot sufficiently help a client and refers the client to someone who can.

Source: McIntosh N. Oliveras E. eds. *Service delivery guidelines for family planning service programs*. Baltimore, JHPIEGO, 1996.

Table 10: Post-abortion contraception: counselling outline

Method	Timing after abortion	Remarks
Oral contraceptives Combined oral contraceptives (COCs) and Progestogen only pills (POPs)	Start COC or POP use immediately, preferably on the day of treatment	Can be started immediately, even if infection is present If adequate counselling and informed decision-making cannot be guaranteed, delay starting pills and provide condoms in the meantime No protection against STI/HIV infection
Injectables Depot medroxy progesterone aretate (DMPA), Norethisterone enantate (NET-EN)	May be given immediately	Can be started immediately, even if infection is present If adequate counselling and informed decision-making cannot be guaranteed, delay first injection and provide condoms in the meantime No protection against STI/HIV
Implants Levonogestrel and etonorgestrel	May be given immediately	Can be started immediately, even if infection is present If adequate counselling and informed decision-making cannot be guaranteed, delay first insertion and provide condoms in the meantime Access to a provider who is skilled in insertion and removal is necessary No protection against STI/HIV
IUD Intra uterine device	First and second trimester abortion: IUDs can be inserted if risk or presence of infection can be ruled out Delay insertion until serious injury is healed, haemorrhage is controlled and acute anaemia improves	Uterine perforation can occur during insertion If adequate counselling and informed decision-making cannot be guaranteed, delay insertion and provide condoms in the meantime Access to a provider who is skilled in insertion and removal is necessary No protection against STI/HIV There is some concern about the risk of expulsion after second trimester abortion
Non-fitted barriers and spermicides (condoms, foam, cream, film, tablets, gel)	Start as soon as intercourse is resumed	Good interim methods if initiation of another method must be postponed Intercourse should be delayed until bleeding has stopped (5 to 7 days) Latex and vinyl condoms provide protection against STI/HIV

Method	Timing after abortion	Remarks
Fitted barriers used with spermicides (diaphragm) cervical cap	Diaphragm can be fitted immediately after first trimester abortion After second trimester abortion, fitting should be delayed until uterus returns to pre-pregnancy size (in 6 weeks)	May provide some protection against STIs; protection against HIV should not be assumed
Fertility awareness-based methods	Not recommended for immediate post-abortion use Women can use calendar-based methods as soon as they have completed three post-abortion menses	No protection against STI/HIV
Tubal occlusion	Tubal occlusion (mini laparotomy or laparoscopy) can be performed immediately after an uncomplicated abortion In cases of post-abortion sepsis or fever, severe post-abortal haemorrhage, severe trauma to the genital tract or acute haematoaetra, the procedure must be delayed until satisfactory treatment has been completed and/or injury has healed	Performing tubal occlusion after a first trimester incomplete abortion is similar to an interval procedure After a second trimester incomplete abortion, it is similar to a postpartum procedure Adequate counselling and informed decision-making and consent must go before voluntary sterilization procedures (tubal occlusion or vasectomy); however this is often not possible at the time of emergency care No protection against STI/HIV

Source: The information in this table is based on *Improving access to quality care in family planning. Medical eligibility criteria for contraceptive use*. 3d ed. Geneva, World Health Organization, 2004 (WHO/RHR/002), and Blumenthal PD, McIntosh N. *Pocket guide to family planning for service providers*. Baltimore. JHPIEGO, 1994.

Technical competence

Health care workers who provide post-abortion care need to have the skills and knowledge to treat abortion complications and provide family planning counselling and services. Core competencies include:

- care, sensitivity and thoroughness in informing the client about the method chosen
- knowledge, attitudes and skills for providing family planning services
- knowledge of, and ability to recognize real and potential problems
- ability to take appropriate clinical action in response to these problems, including knowing when (and where) to refer clients with serious problems
- good clinical judgement.

Interpersonal relations

The attitudes of health care workers have a significant effect on their interactions with patients. Health care workers sometimes express judgemental attitudes toward women who have had an abortion. However, they must not allow their personal views to affect their ability to provide service in a nonjudgemental manner. Family planning counselling requires open two-way communication to help women and, if needed, young girls select methods that are appropriate for their individual situations. This communication is not possible if providers treat women in a judgemental manner.

Continuity through linkages of services

The provision of post-abortion family planning services does not end when a woman/young girl has chosen and started using a contraceptive method. Continuity of family planning care means that women need access to the services and supplies that will enable them to continue to use a chosen method; to receive follow-up treatment in case of complications; to address any concerns about the method; to change methods, and to discontinue use when she wishes.

POST-ABORTION CONTRACEPTION CLINICAL CONCERNS

Clinical concerns related to an abortion or the complications of an unsafe abortion must be considered when assessing the methods most appropriate for each woman/young girl. The most important life-threatening post-abortion complications are: infection ranging from localized pelvic infection to generalized sepsis; injuries including uterine perforation and intra-abdominal injury requiring surgical intervention; haemorrhage; and shock.

Emergency contraception should be used after unprotected intercourse if pregnancy is not planned or desired, and should not be offered as a regular contraceptive method.

Discussion point

Table 10 provides a counselling outline for post-abortion contraception.

For each contraceptive method, information is included with respect to when the method can be introduced following abortion.

Other important points to be considered are included in the “Remarks” column.

Review and discuss with students, the information in Table 10, to ensure that they understand it.

Do the same with Table 11, which provides guidelines for contraceptive use with respect to common post-abortion clinical conditions.

The information in these tables should enhance the family planning knowledge and skills that students already have, and help them to meet the special needs of post-abortion women.

ROLE PLAY

The aim in this activity is to provide students with an opportunity to role play/observe counselling skills for post-abortion family planning. In particular, the role play will enable students to practise positive listening and questioning skills related to post-abortion family planning.

- 1. Arrange for additional space/rooms which can be used to simulate an appropriate setting for providing family planning services.*
- 2. Review the Instructions for Students - role play with the class to make sure that the students understand what is expected of them.*
- 3. Divide the class into groups of three students per group. Each student in the group will have an opportunity to role play a “client,” a “midwife,” and an “observer”.*
- 4. Review the “Checklist for counselling skills” with each group, to make sure that they understand how to use it.*
- 5. Provide each group member with a “Client background information” sheet and a “Counsellor background information” sheet.*
- 6. Allow 1½ hours for each group to complete the activity. This will be sufficient for each group member to role play each of the three roles.*
- 7. Supervise the activity by spending some time with each group. This*

will provide you with an opportunity to make sure that the activity is proceeding as expected, and to observe students' counselling skills.

8. *Allow 10 minutes for each group to provide feedback on the outcome of the role play.*

Feedback and discussion

During the feedback provided by each group, use the following questions to guide discussion:

Did the "midwife" obtain relevant information about the pregnancy and abortion?

Did the "midwife" obtain relevant information about the past and future use of family planning method(s)?

Did the "midwife" determine whether the woman/young girl wants to be pregnant again?

Did the "midwife" provide appropriate method counselling based on the identified clinical concerns?

In addition, discuss the helpful listening and questioning skills used/observed during the activity.

Table 11: Post-abortion contraception: guidelines for contraceptive use by clinical condition

Clinical condition	Precautions	Recommendations
Confirmed or presumed diagnosis of infection: - signs and symptoms of sepsis/infection - signs of unsafe or unclean abortion - unable to rule out infection	IUD: Do not insert until risk of infection ruled out, or infection has completely gone (approximately three months after completion of treatment) Female voluntary sterilization: Do not perform procedure until risk of infection ruled out, or infection has completely gone (approximately three months after completion of treatment)	Oral contraceptives (COCs and POPs) can begin use immediately Patch and ring can begin use immediately Implants can begin use immediately Injectables (DMPA, NET-EN) can begin use immediately Condom can be used when sexual activity is resumed Diaphragm can be used when sexual activity is resumed Spermicides can be used when sexual activity is resumed
Injury to genital tract: - uterine perforation (with or without bowel injury) - serious vaginal or cervical injury, including chemical burns	IUD: Do not insert until serious injury has healed Diaphragm: Do not use until vaginal or cervical injury has healed Spermicides: Do not use until vaginal or cervical injury has healed Ring: Do not use until vaginal or cervical injury has healed	Oral contraceptives (COCs and POPs) can begin use immediately Patch and ring can begin use immediately Implants can begin use immediately Injectables (DMPA, NET-EN, Cycloferm, Mesigyna) can begin use immediately Condom can be used when sexual activity is resumed Diaphragm can be used when sexual activity is resumed (can be used with uncomplicated uterine perforation) Spermicides can be used when sexual activity is resumed (can be used with uncomplicated uterine perforation)
Severe bleeding (haemorrhage) and related severe anaemia (Hb<7 gm/dl or Hct<20)	IUD: (inert or copper-bearing): Delay insertion until acute anaemia improves Female voluntary sterilization: do not perform procedure until the cause of haemorrhage or anemia has been resolved	Oral contraceptives (COCs and POPs) can begin use immediately Implants can begin use immediately Injectables (DMPA, NET-EN): Can begin use immediately Patch and ring can begin use immediately IUD (progestogen-releasing) can be used with severe anaemia (decreases menstrual blood loss) Condom can be used when sexual activity is resumed Diaphragm can be used when sexual activity is resumed Spermicides can be used when sexual activity is resumed

Source: The information in this table is based on Blumenthal PD, McIntosh N. *Pocket guide to family planning for service providers*. Baltimore, JHPIEGO, 1994 and *Medical Eligibility criteria for contraceptive use* 3d ed. Geneva WHO 2004.

INSTRUCTIONS FOR STUDENTS – Simulation role play

1. Each group member will have an opportunity to role play a “client,” a “midwife”, and an “observer”.
2. When you role play the “client,” use the information on the “Client background information” sheet.
3. When you role play the “midwife”, use the information on the “Counsellor background information” sheet.
4. When you play the role of “observer”, use the “Counselling skills checklist” to note how the “midwife” interacts with the “client”. Use the Remarks column to record positive observations and problem areas.
5. You have 1½ hours to complete the activity. This allows 25 minutes for each role play (this includes preparation time), plus 5 minutes for the “observer” to provide feedback about the counselling session. The feedback provided should cover the points on the “Counselling skills checklist”.

Client background information - Mulu

- You are 17 years old.
- You have been treated for an incomplete abortion and given antibiotics for mild infection.
- You have not used contraceptives in the past because you do not know how, or where to get them.
- You want to use contraceptives because you are afraid of becoming pregnant again.
- You have no medical problems and are usually healthy.

Client background information - Sita

- You are 25 years old and have 4 children.
- You have been treated at the health centre for an incomplete abortion.
- You lost a lot of blood before being treated at the health centre.
- You have been using contraceptive pills but you take them only every second day. This helps you to save money because you can make the pills you buy for one month, last for two months.
- You do not want another pregnancy and want to continue taking pills.
- You have low blood (anaemia), but no other health problems.

Client background information - Irma

- You are 37 years old and have 9 children.
- You have been treated at the hospital for an incomplete abortion.
- You have had an operation to repair the damage caused during the abortion.
- You have had three abortions in the last two years, performed by the same untrained person in your village.
- You are very much afraid of becoming pregnant again.
- You have never used contraceptives because you believe that they cause cancer.

Counsellor background information - Mulu

- Mulu is 17 years old.
- She has been treated for an incomplete abortion and given antibiotics for mild infection.
- Mulu now needs to be counselled about post-abortion family planning.
- You need to talk with Mulu about:
 - medical history, including HIV status
 - her recent pregnancy (Did she want to be pregnant? Was this her first abortion?)
 - becoming pregnant again (Does she want to be pregnant again?)
 - whether she has used a family planning method before, and whether she used it correctly, stopped using it, or had problems using it
 - whether she wants to use a method now
 - the method(s) suitable for her to use
 - how and where she will obtain a continuous supply of the method she chooses
 - where she will go if she has any questions or problems with the method, after she starts using it.

Counsellor background information - Sita

- Sita is 25 years old and has 4 children.
- She has been treated at the health centre for incomplete abortion.
- She lost a lot of blood before coming to the health centre for treatment.
- She suffers with anaemia but has no other health problems.
- Sita now needs to be counselled about post-abortion family planning.
- You need to talk with Sita about:
 - medical history, including HIV status
 - her recent pregnancy (Did she want to be pregnant? Was this her first abortion?)
 - becoming pregnant again (Does she want to be pregnant again?)
 - whether she has used a family planning method before, and whether she used it correctly, stopped using it, or had problems using it
 - whether she wants to use a method now
 - the method(s) suitable for her to use
 - how and where she will obtain a continuous supply of the method she chooses
 - where she will go if she has any questions or problems with the method, after she starts using it.

Counsellor background information - Irma

- Irma is 34 years old and has 9 children.
- She has been treated at the hospital for incomplete abortion.
- She required surgery to repair a perforated uterus.
- Irma now needs to be counselled about post-abortion family planning
- You need to talk with Irma about:
 - medical history including HIV status
 - her recent pregnancy (Did she want to be pregnant? Was this her first abortion?)
 - becoming pregnant again (Does she want to be pregnant again?)
 - whether she has used a family planning method before, and whether she used it correctly, stopped using it, or had problems using it
 - whether she wants to use a method now
 - the method(s) suitable for her to use
 - how and where she will obtain a continuous supply of the method she chooses
 - where she will go if she has any questions or problems with the method, after she starts using it.

ASSESSING COMPETENCE IN POST-ABORTION COUNSELLING

Use the following checklist to observe whether the “midwife” meets the criteria with respect to listening and questioning skills, and whether she covers the content areas listed. The Remarks column can be used to record positive observations or problem areas about the “midwife’s” interaction with the “client”.

Counselling skills checklist ✓			
Step	Yes	No	Remarks
Listening skills - treats the woman/young girl as an individual without expressing judgement - gives the woman/young girl time to think, ask questions, and talk - listens carefully to what the woman/young girl has to say - repeats occasionally what the woman/young girl has said to ensure understanding			
Questioning skills - uses a tone of voice that shows interest, concern and friendliness - asks one question at a time and waits for an answer - asks questions that let the woman/young girl express her needs and concerns - avoids expressing judgement of the woman/young girl			
Content The following content should be covered during the counselling session. - medical history including HIV status - recent pregnancy (Did the client want to be pregnant? Was this her first abortion?) - reasons for the abortion? If induced or unsafe abortion - becoming pregnant again (Does she want to be pregnant again?) - previous use of family planning method, including whether it was used correctly, it was stopped, or there were problems using it - desire to use a method now - suitable method for use now - future supply of the method chosen - follow-up care for questions or information for the chosen method - ask about HIV status if this is not already known, and give information on voluntary counselling and testing* and on self-care and protection against STIs and HIV/AIDS infection/re-infection. *offer to help with referral for this if it is not available by provider			

Assessing competence

The students should be provided with an appropriate opportunity to practise the skills in this session, under direct and then indirect supervision. The teacher should arrange to make a formal assessment of competence in a real situation, using the counselling skills checklist.

Teacher's comments:

Student's comments:

8

CASE STUDIES

SESSION 8

CASE STUDIES

Aims

- The aim this session is to enable students to reflect on practice, and appreciate the importance of the link between process and outcome with respect to preventing unwanted pregnancies and managing abortion complications.

Objectives

On completion of Session 8, students will be able to:

- Present a case study and discuss important questions relating to it.
- Identify the link between process and outcome for the case studies, emphasizing the prevention of unwanted pregnancy and the management of incomplete abortion.
- Discuss the lessons learned from the case studies in terms of the positive and negative aspects of practice.
- Describe how improved maternity care can influence the management and outcome of abortion complications.
- Explain the importance of reflecting on practice to evaluate and improve care.

Plan

Optional tutorials.

Case studies.

Group work.

Feedback and discussion.

Total time: approximately 4 hours.

Resources

Instructions for Students: guidelines for case study.

Instructions for Group Work.

Bennett VR, Brown LK, eds. *Myles textbook for midwives*. 12th ed. London, Churchill Livingstone, 1993.

INTRODUCTION

If students are not experienced, it may be helpful to arrange individual or small group tutorials to explain how to do a case study. These tutorials should take place before proceeding with this session.

PREPARATION FOR CASE STUDIES

During clinical practice, students should be asked to select a case for indepth study which will be presented later in the classroom.

- *Remind students of:*
 - *the value of case studies*
 - *the importance of reflecting on practice and learning from experience*
 - *the relationship between process and outcome and the influence that midwives can have on these to make pregnancy safer.*

- *Review the following with students:*

Case studies provide students with the opportunity to evaluate the effectiveness of care in specific situations. Inform the students that they will be able to learn from their own experience as well as from that of others. It is not intended that case studies be used as an opportunity to criticize the practice of others. Instead, students should be encouraged to look at past practice and see what lessons can be learned for the future. The case studies should be based on patient records selected to demonstrate the management of particular conditions e.g. incomplete abortion. It should be noted that patient confidentiality must be maintained throughout the presentation of case studies.

- *Review the Instructions for Students – see the guidelines for case study provided at the end of this session*
- *Divide the students into three groups. Each group will prepare and present one case study which they have selected from the clinical area*
- *All case studies should be related to the management of incomplete abortion and at least one case should have a negative outcome (i.e. the patient died)*
- *Allow one hour for each group to finalize their case study for presentation to the rest of the class.*

PRESENTATION OF CASE STUDIES

1. *Introduce the students who will present the case studies.*
2. *Allow 30 minutes for each case study presentation.*

3. *Proceed with the presentation of case study 1 and allow time for questions and answers following the presentation.*
4. *Proceed with the presentation of case study 2 and allow time for questions and answers following the presentation.*
5. *Proceed with the presentation of case study 3 and allow time for questions and answers following the presentation.*
6. *Summarize the case presentations, emphasizing:*
 - *the link between process and outcome*
 - *the influence that midwives can have on both process and outcome to make pregnancy safer.*
7. *Provide positive feedback to students with respect to the preparation and presentation of the case studies.*

GROUP WORK

This group activity is designed to provide an opportunity for students to discuss relevant questions related to the case studies they have presented.

1. *Review with students the Instructions for Group Work to ensure that they understand what is expected of them (the group composition should remain the same as for the preparation and presentation of case studies).*
2. *Allow 45 minutes for each group to complete the exercise.*
3. *Supervise the group activity by spending some time with each group. This will provide you with an opportunity to ensure that the activity is proceeding as planned and to observe the input of each student.*
4. *Allow 10 minutes for each group to provide feedback on the outcome of the group activity.*

Feedback and discussion

At the end of the session you should have a list of points about good practice. Emphasize the importance of these in saving lives and making pregnancy safer.

The class should have put forward recommendations about improving midwifery practice with respect to the management of incomplete abortion. These recommendations should address the following questions:

- *WHAT needs to happen?*
- *HOW can it happen?*
- *WHO will take responsibility?*
- *WHO will help?*
- *WHERE will the action take place?*
- *WHEN will the action take place?*
- *WHEN will it be evaluated?*

HOW TO END THIS MODULE

Ask each student to write down one thing that she/he has learned from this module, which has already changed her/his practice. It may be a small thing, but small things can be very important.

Emphasize that every midwife who continues to learn and who applies her/his newly gained knowledge to practice, will make pregnancy safer.

Ask each student to write down one thing about her/his practice which she/he intends to change to make pregnancy safer.

Students may wish to share some of the changes they have already made in their practice as well as those they intend to make. Encourage them to do so.

INSTRUCTIONS FOR STUDENTS – Guidelines for case study

Your case study should be concerned with the management of incomplete abortion, and should include the following:

Case number:

(This will enable the case record to be traced if needed but will protect the confidentiality of the woman).

Age:	
Parity:	
Date of first day of the last menstrual period (LMP):	
Estimated date of delivery: (EDD):	
Social background:	
Past obstetric history: (including any previous abortions, and use of family planning methods)	
Relevant medical and surgical history:	
History of present pregnancy: (including use of family planning methods)	

SUMMARY OF CASE MANAGEMENT

You will be required to discuss the following questions related to the case.

1. What happened? Was the abortion spontaneous or induced? What was the end result for the woman? (the answers to these questions should describe the outcome)	
2. How was the woman managed? What procedure was used to treat the incomplete abortion? How were complications managed (e.g. shock, haemorrhage, intra-abdominal injury, sepsis)? (the answers to these questions should describe the process)	
3. What were the main points of midwifery practice with respect to managing the case? (the answer to this question should describe the relationship between process and outcome)	
4. Was the case managed in the best possible way? If not, what should have been done? If the woman died, what should have been done to prevent this? (the answers to these questions should describe lessons learned)	

INSTRUCTIONS FOR GROUP WORK

Each group should:

1. **Appoint** a group member as chairperson to facilitate group discussion.
2. **Appoint** a group member to report back to the class on the outcome of group work.
3. **Discuss** either A or B (depending on whether the case you presented had a positive or negative outcome), and C.
4. **Complete** the group activity in 45 minutes.

A. In cases where the woman survived:

- Which actions saved the woman's life?
- What made these actions possible?
- What more could be done to make care safer for women in the future?

B. In cases where the woman died:

- What was the cause of death?
- What factors lead to the woman's death?
- What were the problems related to providing life-saving care?
- What needs to be done to avoid these problems in the future?

C. Reflecting on practice:

1. List the main things you have learned through these case studies.
2. Make a list of recommendations which you think will help to make the management of incomplete abortion safer in your practice area.

GLOSSARY

As this is a combined glossary for all six modules, the terms below may not necessarily be found in this module.

A

Abortion

The term refers to the termination of pregnancy from whatever cause before the foetus is capable of extrauterine life.

Complete abortion is the expulsion from the uterus of all the products of conception, which is more likely to occur before the eighth week of pregnancy.

Incomplete abortion is the partial expulsion of the products of conception. All or part of the placenta may be retained resulting in profuse bleeding. Usually occurs in the second trimester of pregnancy. Women who seek emergency treatment for complications of abortion, whether they have had a spontaneous or induced abortion, are most often diagnosed with incomplete abortion.

Induced abortion refers to the termination of pregnancy through deliberate interference to end the pregnancy. Induced abortion may take place in a safe health care setting and in accordance with the law and health policy guidelines or it may occur outside of the health care system and the provisions of the law.

Inevitable abortion involves vaginal bleeding, abdominal cramping and progressive dilation of the cervix, with or without rupture of the membranes. It is impossible for the pregnancy to continue and eventual expulsion of the products of conception will occur.

Missed abortion occurs when the fetus dies and is retained in the uterus. The dead conceptus will be expelled eventually, although blood coagulation disorders may develop in cases of missed abortion which persist for more than 6–8 weeks.

Septic abortion

An abortion (loss of pregnancy during the first 22 weeks) that is followed by infection of the uterus and may spread throughout the genital tract causing fever and chills, foul-smelling vaginal discharge, pelvic pain and septicaemia. Septic abortion happens most commonly where facilities and standards are poor.

Spontaneous abortion refers to terminated pregnancy for which no deliberate steps have been taken to end the pregnancy. Spontaneous abortion, which is sometimes referred to as miscarriage, affects approximately 10–15% of all known or suspected pregnancies.

Threatened abortion involves vaginal bleeding with or without cervical dilatation. The symptoms may resolve and a viable pregnancy may continue. If the symptoms continue, the pregnancy will result in an inevitable, complete or incomplete abortion.

Unsafe abortion refers to the termination of pregnancy by persons lacking the necessary skills or in an environment lacking the minimal standards of care or both.

Abscess	A localized collection of pus in any part of the body due to infection.
AIDS	Acquired immune deficiency syndrome.
Amnion	The innermost of the membranes enveloping the baby in the uterus and which produces and contains the amniotic fluid.
Amniotic fluid	The fluid produced and contained within the amnion. During the latter half of pregnancy it also contains fluid from the fetal lungs and kidneys. This fluid provides space for unimpeded fetal growth and, in late pregnancy and in labour, it equalizes the pressure exerted by contractions, equalizes the temperature and provides some nutritive substances for the fetus.
Amniotic fluid embolism	This rare but often fatal condition is caused by amniotic fluid entering the maternal circulation via the uterine sinuses of the placental bed. It is most likely to occur in labour or in the immediate postpartum period, following very strong contractions. Symptoms and signs include cyanosis, chest pain, dyspnoea, blood-stained, frothy sputum, convulsions and collapse.
Amniotomy	Surgical rupture of the fetal membranes to induce labour.
Anaemia	A reduction in the number of red blood cells or in the amount of haemoglobin present in them. Anaemia can be caused by excessive blood loss, or by not eating enough foods rich in iron or folic acid. Other causes are excessive breakdown of red cells (e.g. in malaria), or failure to manufacture them
Analgesic	A drug given to relieve pain.
Aneurysm	A sac formed by the dilatation of the wall of an artery.
Anoxia	A state of being deprived of oxygen.
Antepartum	Before delivery.
Antepartum haemorrhage	Bleeding from the genital tract at any time after the 22nd week of pregnancy and before the birth of the baby. There are two main causes of antepartum haemorrhage, placenta praevia and abruptio placentae.
Anterior	Situated in front or directed towards the front.
Antero posterior	From front to back.
Antibiotic	Drugs derived from living micro-organisms which destroy or inhibit the growth of pathogenic bacteria. They are given to treat infection.
Antibody	A protein produced in the body to fight micro-organisms or foreign substances which may enter the body. In pregnancy, maternal antibodies to specific conditions are transferred across the placenta to the fetus. This gives the baby a passive immunity to some diseases in the first few months of life.

Anticonvulsant drug	A drug which controls convulsions.
Antihypertensive	A drug given to reduce high blood pressure.
Antipyretic	A drug given to reduce fever.
Antiseptic	A substance that prevents infection by killing certain bacteria on skin or body tissues. Antiseptics include surgical spirits, chlorhexidine and iodine.
Anuria	No urine is produced by the kidneys. This life-threatening condition may be associated with obstetric emergencies such as severe haemorrhage, eclampsia and septic shock.
Apex	The top or highest point.
Apnoea	Absence of breathing.
Aseptic technique or asepsis	Aseptic technique refers to special precautions taken to achieve a bacteria-free environment, e.g. at delivery or at surgical operations. Precautions include use of the correct hand-washing technique, correct use of sterile instruments and drapes, the wearing of appropriate clothing by staff, e.g. gown, cap and gloves.
Asphyxia	A condition in which there is a deficiency of oxygen in the blood and an increase in carbon dioxide. If the baby fails to breathe at birth, it suffers from asphyxia and requires urgent resuscitation.
Asymmetrical	Unequal size or shape of two normally similar structures. The pelvis may be asymmetrical if distorted by disease, injury or congenital malformation.
Atonic	Lack of muscle tone.
Atonic postpartum bleeding	Occurs from the placental site because the uterus is unable to contract adequately and thus the blood vessels are not compressed and bleeding is not controlled. Any condition that interferes with uterine contraction, such as a retained placenta, will predispose to atonic bleeding.
Augment	To increase: in augmented labour, oxytocin may be used to increase the effectiveness of contractions if progress is slow.
Avoidable factors	Factors causing or contributing to maternal death where there is departure from generally accepted standards of care.
Axilla	The armpit.
B	
Bacteria	Microscopic, unicellular organisms which, if pathogenic, can cause disease. They reproduce extremely quickly, thus can rapidly multiply in the body.
Bacteriuria	Presence of bacteria in the urine

Bandl's ring	The area between upper and lower uterine segments when it becomes visible and/or palpable during obstructed labour. It is caused by the extreme thickening of the upper segment and the dangerous thinning of the lower segment and is a sign of impending rupture of the uterus.
Bartholin's glands	Two small mucous-producing glands, one on each side of the vaginal orifice.
Bimanual compression of uterus	A manoeuvre to arrest severe postpartum haemorrhage after delivery of the placenta when the uterus is atonic. The right hand is inserted into the vagina and closed to form a fist which is placed in the anterior vaginal fornix. The left hand is pressed deeply into the abdomen behind the uterus, applying pressure against the posterior wall of the uterus. Pressure is maintained until bleeding is controlled.
Bolus	A dose of a pharmaceutical preparation which is given all at once.
Broad ligament	Two folds of peritoneum draped over the uterus which extend to the side walls of the pelvis and help to keep the uterus in its place. They contain the uterine tubes, parametrium, blood vessels and nerves.
C	
Capsular decidua	The part of the decidua which lies over the developing embryo during the first 12 weeks of pregnancy.
Caput succedaneum	Swelling of the fetal scalp due to pressure from the cervix. The swelling may be exaggerated in obstructed labour.
Cavity	A hollow place or space in the body.
Cephalic presentation	The head (i.e. cephal) lies in the lower pole of the uterus.
Cephalopelvic disproportion	A misfit between the fetal head and the pelvis through which it has to pass. It may be caused by a small or abnormally-shaped pelvis, or a large or abnormal baby.
Cerebral haemorrhage	Bleeding in the brain due to a ruptured blood vessel.
Cerebrospinal fluid	The liquid contained inside the brain and around the spinal cord.
Cervical os	The internal os is the opening between the cervix and the body of the uterus and the external os is the opening between the cervix and the vagina. After effacement of the cervix in labour, there is only os and that lies between the lower segment of the uterus and the vagina.
Chorioamnionitis	Infection of the membranes that envelop the fetus in the uterus.
Chorion	The outermost of the two membranes which envelope the fetus in the uterus.
Chronic	Prolonged or permanent.

Circulatory overload	Overloading the circulation. This may occur in cases of excessive intravenous infusion of fluids. It leads to respiratory problems due to an accumulation of fluid in the lungs and to cardiac failure.
Coagulation	Formation of a blood clot.
Coagulation failure	Disturbance of the coagulation system resulting in widespread formation of clots, mainly in the capillaries. Eventually haemorrhage occurs because all the clotting factors are depleted. These events result in ischaemic damage within the body organs and, unless urgent treatment is instituted, will result in death. It is triggered by certain conditions which introduce coagulation-promoting factors into the circulation, e.g. abruptio-placentae, severe pre-eclampsia and eclampsia, retained dead fetus after several weeks, amniotic fluid embolism and some very severe infections.
Coccyx	The small bone at the end of the sacrum which is formed by four fused vertebrae. It forms a movable joint with the sacrum and moves backwards out of the way during vaginal delivery, thereby increasing the size of the pelvic outlet.
Coma	A state of unconsciousness from which the person cannot be aroused. The person is said to be in a coma or comatose.
Contraction (of pelvis)	Reduction in size.
Cortical necrosis	Death of the outer part of the substance of an organ (e.g. the kidney).
Crepitations	Dry, crackling sound.
Cross-matching (of blood)	A test of the compatibility of donor and recipient blood performed before transfusion.
Crowning	The moment during birth when the widest presenting diameter of the fetal skull distends the vaginal orifice and the head no longer recedes between contractions.
Cubital fossa	The depression in the part of the arm which is in front of the elbow.
Cyanosis	A bluish discolouration of skin and mucous membranes due to lack of tissue oxygenation.
Cystitis	Infection of the urinary bladder.
D	
Decidua	The name given to the endometrium (innermost layer) of the pregnant uterus. The part of the decidua that is underneath the placenta is the decidua basalis. The part that lines the uterus elsewhere than at the site of placental attachment is the decidua vera or parietalis.

Deep vein thrombosis	The formation of a thrombus (clot) in a deep vein, most commonly in the leg or pelvis. It causes swelling and pain when walking. If a clot detaches itself from the wall of the vein it may be carried in the blood-stream to the heart or lungs causing collapse and, unless immediate resuscitation is successful, death.
Deficiency	A lack of.
Deflexed (head)	Erect head, rather than a flexed head with the chin on the chest. occurs in occipito-posterior positions and may cause prolonged labour because larger presenting diameters of the fetal head have to pass through the pelvis.
Deformity	Distortion of any part of the body. Malformation.
Dehydration	Condition caused by excessive loss of body fluid or by an inadequate intake of fluid. Signs of dehydration include dry mouth, thirst, sunken eyes, skin pinch goes back slowly and reduced urinary output.
Delirium	Disordered state of mind with incoherent speech, hallucinations and excitement. Commonly occurs with high fever.
Diameter	A straight line passing through the centre of a circle or sphere. A number of diameters of the pelvis and fetal skull are described and appropriate measurements given.
Differential diagnosis	Deciding which of two or more conditions may be the cause of symptoms and signs noted.
Direct obstetric death	A death resulting from obstetric complications of the pregnant state (i.e. pregnancy, labour and puerperium), from interventions, omissions, incorrect treatment, or a chain of events resulting from any of the above.
Disseminated intravascular coagulation	Disturbance of the coagulation system triggered by certain conditions (e.g. septic or haemorrhagic shock, eclampsia) and characterized by generalized bleeding. (See coagulation failure).
Distended	Stretched.
Distortion	The state of being twisted out of normal shape.
Diuresis	Passing increased amounts of urine following some treatment.
Diuretic	A drug that is given to increase the production of urine.
Dorsal position	Lying on the back.
Drowsy	Half asleep, dozing.
Dysentery	Infection in the intestines due to bacteria or parasites, causing pain in the abdomen and frequent stools containing blood, pus or mucous.

E

Eclampsia	A condition peculiar to pregnancy or a newly delivered woman, characterized by fits followed coma. The woman usually has hypertension and proteinuria. The fits may occur in the antepartum, intrapartum or early postpartum periods.
Empathy	Intellectual and emotional awareness and understanding of another person's thoughts, feelings and behaviour, even those that are distressing and disturbing.
Endocarditis	Inflammation of the membrane lining the cavities of the heart.
Endometritis	Infection of the endometrium (inner lining of the uterus).
Endometrium	The innermost layer of the uterus.
Engorged breasts	Painful accumulation of secretion in the breasts, often accompanied by lymphatic and venous stasis and oedema at the onset of lactation. Frequent feeding and ensuring that the baby is correctly positioned at the breast helps to relieve the condition.
Epigastric	The upper middle region of the abdomen.
Episiotomy	A cut made in the perineum just before the head crowns to facilitate delivery. It should not be a routine procedure, but only performed for fetal distress to speed up the birth, before complicated vaginal deliveries, e.g. breech, shoulder dystocia, and for preterm infants to relieve the pressure on their soft skulls, thereby reducing the risk of cerebral injury.
Essential hypertension	High blood pressure occurring without discoverable cause.
Expansile	Capable of stretching.
Extend the knee	To straighten the leg.
Extension (head)	Lengthening. It is the opposite of flexion. Used to describe the mechanism by which the head is born, i.e. after flexion, the head extends to allow the forehead, face and chin to be born.
External	Situated on the outside.

F

False labour	Painful uterine contractions which are not accompanied by cervical effacement and dilatation. Contractions often irregular and cease spontaneously after a few hours.
Fatal	Ending in death.
Fetal sac	The bag of membranes which envelop the baby in the uterus.
Feto-maternal transfusion	Passage of fetal blood into the blood circulation of the mother, through the placenta.
Fibroids	A benign tumour of the myometrium (muscle of the uterus).

Fistula	An abnormal passage or communication between two organs such as, for example, the urinary bladder and the vagina, i.e. a vesico-vaginal fistula, or the vagina and the rectum, i.e. recto-vaginal fistula. It is a serious complication of obstructed labour and results in urinary or faecal incontinence. Operative repair is usually required.
Flexed	Bent forward.
Flexible	Pliant, i.e. bends easily.
Flexion (head)	Head is bent forward.
Fluctuating	Giving the sensation of wavelike motion on palpation, due to a liquid content (e.g. pus in an abscess).
Foaming	Collection of small bubbles formed in liquid by agitation; froth. Foaming at the mouth: occurs during a fit due to saliva and mucus bubbles.
Fontanelle	A membranous space on the baby's head where two or more sutures meet. Often called the 'soft spots.' The anterior fontanelle is the diamond-shaped membranous space on the front part of the head at the meeting of four suture lines. The posterior fontanelle is the small triangular membranous space on the back part of the head at the meeting of three suture lines.
Fundus	The rounded upper part of the uterus, above the insertion of the fallopian tubes.

G

Genital mutilation	The traditional surgical practice of cutting away part or all of the external genitalia of a woman. In the most extreme form, called "infibulation", the two sides of the vulva are also stitched together to leave a very small opening.
Genital tract	The pathway formed by the genital organs including the uterine tubes, uterus, cervix, vagina, vulva.
"Gishiri" cut	A traditional practice among the Hausa people of Nigeria whereby the vagina is cut to facilitate delivery when labour is obstructed.
Glycosuria	The presence of glucose (sugar) in the urine.
Grand mal epilepsy	A major epileptic fit followed by loss of consciousness.
Grand multiparity	A woman who has borne five or more children.
Groin	The junctional region between the abdomen and the thigh.
Grouping (of blood)	Determining blood type (A, B, O, AB).

H

Haematemesis	The vomiting of blood.
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Haematocrit	The percentage volume of packed red cells in a blood specimen. This measurement is obtained by centrifugation (spinning very fast) of the specimen. It is a screening test for anaemia.
Haematoma	A localized collection of blood in an organ or tissue due to blood leaking from a blood vessel.
Haemoglobin	The substance in red blood cells which carries oxygen from the lungs to the tissues.
Haemoglobinopathies	Disorders of the blood caused by abnormal forms of haemoglobin (e.g. sickle cell anaemia, thalassaemia). Severe anaemia occurs in these conditions.
Haemolytic anaemia	Anaemia caused by destruction of red blood cells, as in malaria. Haemolytic disease of the newborn may occur as a result of rhesus incompatibility. These babies may require an exchange transfusion after birth.
Haemorrhage	Excessive bleeding from a torn or severed blood vessel. It may occur externally or within the body.
Hemiplegia	Paralysis of one side of the body.
HIV	Human immune deficiency virus.
Hollow (of the sacrum)	The concave anterior surface of the sacrum.
Humerus	The bone that extends from the shoulder to the elbow.
Hydatidiform mole	An abnormal pregnancy resulting in a mass of cysts resembling a bunch of grapes. Termination of pregnancy is required and follow-up is essential because of the risk of chorion carcinoma developing.
Hydration	The absorption of or combination with water.
Hydrocephalus	A condition characterized by accumulation of cerebrospinal fluid within the ventricles of the brain. The baby with hydrocephalus has an enlarged head and a prominent forehead. Severe cases are incompatible with life, but mild cases may be treated by an operation which diverts excess fluid from the brain into the blood stream.
Hyperemesis gravidarum	Excessive vomiting during pregnancy. It is a serious condition which causes dehydration and ketosis and the woman will deteriorate quickly unless appropriate treatment is given. Liver and renal damage may occur leading to coma and death.
Hypertension	High blood pressure.
Hypertonic	Excessive tone. Hypertonic uterine contractions are abnormal and extremely painful, with only a short interval between them. Usually result in fetal distress and may cause rupture of the uterus. Often associated with prolonged and difficult labour, or excessive use of oxytocic drugs to augment or induce labour.
Hyponatraemia	Insufficient sodium (salt) in the blood.

Hypovolaemia	Abnormally low volume of blood circulating in the body. This can happen when the body loses a lot of blood (e.g. in postpartum haemorrhage).
Hypoxia	A diminished oxygen supply to the tissues.
I	
Idiopathic	With no known cause.
Idiopathic thrombocytopenia purpura	Condition of unknown cause characterized by a decrease in the number of blood platelets resulting in inability of the blood to coagulate properly.
Imminent	Soon to happen.
Incision	A surgical cut.
Indirect obstetric death	A death resulting from previous existing disease or disease which developed during pregnancy and which was not due to direct obstetric causes, but which was aggravated (or made worse) by the physiological effects of pregnancy.
Induced labour	A labour that is started artificially by the use of oxytocic drugs and/or by rupturing the membranes.
Infarct	An area of necrosis (dead tissue) in an organ caused by local ischaemia, (i.e. poor blood supply). Placental infarcts may be seen, especially in cases of hypertension in pregnancy.
Infertility	Difficulty or inability to conceive.
Infiltration (of local anaesthetic)	Method of injecting a local anaesthetic into the tissues. Infiltration of the perineum is carried out before an episiotomy is made.
Internal	On the inside.
Intrapartum	Occurring during childbirth.
Intraperitoneal	Within the peritoneal cavity.
Intrauterine death	Death of the fetus in the uterus.
Intrauterine growth retardation (IUGR)	Poor fetal growth in the uterus. The reason is not always known, but it is more likely in cases of malnutrition, anaemia, pre-eclampsia, malaria, tuberculosis and in women who smoke.
Involution of the uterus	Uterus returning to normal size after delivery. Involution occurs by autolysis, (i.e. breaking down) and ischaemia (i.e. reduced blood supply) of excess muscle fibres. It starts soon after birth and is completed within about six weeks.
Ischial spines	The two small protuberances of the pelvis that project into the pelvic cavity and can be felt laterally upon vaginal examination.
Isthmus	The narrow connection between the body of the uterus and the cervix.

K

Ketoacidosis A state of electrolyte imbalance with ketosis and lowered blood pH. It may occur in labour if the woman becomes dehydrated and ketotic. The woman with ketosis has sweet or fruity odour to her breath. Treatment is to rehydrate the woman, giving adequate fluid and carbohydrate.

Ketonuria The presence of ketone bodies in the urine.

Kyphosis Abnormally increased convexity in the curvature of the thoracic spine as viewed from the side.

L

Laparotomy Incision through the uterine wall to enter the peritoneal cavity.

Lateral To the side.

Leukopenia An abnormal decrease in the number of white blood cells which are the cells in the blood which fight infection.

Liquor Another word for amniotic fluid.

Lithotomy poles Special poles attached to either side of a delivery bed or theatre table. They have slings which are used to support the woman's legs during certain procedures which are carried out in the genital area, e.g. vacuum extraction, perineal suturing.

Lithotomy position The woman lies down on her back with legs wide apart and supported by the slings which hang on the lithotomy poles.

Lochia The discharge from the uterus after childbirth. It consists of blood, mucus, shreds of decidua and other debris from the uterus. During the first 2–3 days it consists mainly of blood, then changes to a pinky/brown colour and contains more serous fluid. Finally it changes to a whitish colour and consists mainly of white blood cells and mucus. The lochia lasts for 2–3 weeks after the birth. Persistent red, profuse lochia may be associated with retained products of conception. Foul-smelling lochia is a sign of infection.

Loin The part of the back between the thorax and the pelvis.

Lumbar puncture The procedure whereby a hollow needle is inserted into the subarachnoid space between the third and fourth lumbar vertebrae to obtain a specimen of cerebrospinal fluid for examination, and to measure the pressure within the fluid. It may also be carried out for spinal anaesthesia.

M

Malar bones	The cheek bones.
Malnutrition	Inadequate nourishment resulting from a poor diet or from a defect in metabolism that prevents the body from using its food properly. The symptoms of malnutrition are physical weakness, lethargy and a sense of detachment from reality. In starvation there may be oedema, abdominal distension and excessive loss of weight. In addition there are signs of multiple vitamin deficiency.
Marginal	Borderline.
Mastitis	Infection of the breast. A wedge-shaped area of the breast becomes tender, red and hot and the woman feels generally unwell. The infection responds well to treatment with antibiotics. If untreated, it may lead to breast abscess.
Mastoiditis	Infection of the bone behind the ear. This can be a complication of otitis media (middle ear infection).
Meconium	A dark green material present in the intestines of the full-term fetus. It consists of bile-pigments and salts, mucus, epithelial cells and often some amniotic fluid. It is the first stool passed by the baby and continues for a day or two. Occasionally it is passed in utero when it may be a sign of fetal distress.
Median	Situated in the midline of a body or structure.
Median cubital vein	The vein situated in the midline of the cubital fossa.
Medical audit	Official examination of medical records.
Meningitis	Infection of the membranes enveloping the brain.
Mental retardation	Delayed mental development.
Mento vertical diameter	The distance between the chin and the vertex (highest point) of the head.
Mid-biceps	Halfway down the biceps (the muscle on the inside of the upper arm).
Monoplegia	Paralysis of one limb (arm or leg).
Moulding (of the fetal head)	Overlapping of fetal skull bones at the sutures and fontanelles to allow the bones to adapt to the pelvis through which it is passing. The presenting diameter is decreased and the diameter at right angles increased. If moulding is excessive (e.g. in obstructed labour), in the wrong direction, as occurs in malpositions and malpresentations, or occurs too quickly, there is a danger of intracranial haemorrhage.
Multipara	A woman who has borne more than one viable child.
Multiple pregnancy	A pregnancy of more than one fetus, such as in the case of twins or greater multiples.

Myometrium	The muscle layer of the uterus.
N	
Nape	The back of the neck.
Necrosis	Death of tissues.
Normal saline	A solution of 0.9% sodium chloride (salt) that may be given in an intravenous infusion.
Nullipara	A woman who has never borne a viable child.
O	
Obesity	Excessive fat throughout the body. Weight gain increases beyond that which is considered desirable with regard to age, height and bone structure. In pregnancy the obese woman is at greater risk of complications such as hypertension.
Oblique	Slanting, inclined, diagonal.
Obstructed labour	A labour in which progress is arrested by mechanical factors and delivery is impossible without operative intervention.
Occipito frontal diameter	The distance between the bridge of the nose and the occipital protuberance (i.e. the prominence which can be felt on the occipital bone at the back of the head). It is the presenting diameter when the head is deflexed and measures 11.5 cm.
Occiput	The area of the head which lies below the posterior fontanelle to the junction with the neck.
Oedema	An excess of fluid in the tissues of the body. It causes excessive weight gain and swelling which pits on pressure. In pregnancy it is a common feature affecting the feet and ankles, but may also affect the hands, face and become generalized. It is no longer considered a significant sign of pre-eclampsia because some oedema is a common feature in so many pregnancies.
Offensive	Smelling very bad.
Oliguria	Diminished secretion of urine. It may be associated with impaired renal function following severe complications such as haemorrhage, pre-eclampsia and eclampsia and septic shock.
Os	An opening. A bone.
Osteomalacia	Adult rickets. It is caused by a gross deficiency of vitamin D which results in painful softening of the bones.
Otitis media	Infection of the middle ear. Usually happens as a complication of an upper respiratory tract infection. Symptoms include pain in the ear and fever.

Oxygen	A colourless, odourless gas which is essential for life. It constitutes 21% of the atmosphere and is drawn into the lungs during the process of breathing. It then circulates in the blood to oxygenate all the tissues of the body. Lack of oxygen, (hypoxia) causes cyanosis , when the skin and mucous membranes have a bluish colour. Anoxia (no oxygen) causes death and is a common cause of perinatal death.
Oxytocic	Term applied to any drug which stimulates contractions of the uterus in order to induce or accelerate labour, or to prevent or treat postpartum haemorrhage.
P	
Parametritis	Infection of the parametrium.
Parametrium	Connective tissue around the lower part of the uterus. It fills in the spaces between the uterus and related organs.
Parity	The number of viable children a woman has borne.
Partograph	A record of all of the clinical observations made on a woman in labour, the central feature of which is the graphic recording of the dilatation of the cervix, as assessed by vaginal examination, and descent of the head. It includes an alert and action line which, if crossed when recording cervical dilatation, indicates that labour is progressing more slowly than normal and intervention is required.
Patella	The bone situated at the front of the knee, forming the kneecap.
Pathogenic	An agent or microorganism which causes disease, e.g. pathogenic bacteria.
Pelvic brim (or inlet)	The pelvic brim is the first part of the true pelvis to be negotiated by the fetus. As a general rule, if the fetal head can enter the pelvic brim, it should be able to pass through the rest of the pelvis.
Pelvic inflammatory disease (PID)	An infection of the reproductive organs (uterus, fallopian tubes, ovaries, parametrium). The infection may follow delivery or abortion, or it may be secondary to other infections of the genital tract or abdomen, or be a blood borne infection, e.g. tuberculosis. Symptoms include lower abdominal pain, fever, and vaginal discharge. Unless treated early and effectively with antibiotics, the fallopian tubes may be blocked and lead to secondary infertility. The condition may also become chronic.
Pelvic outlet	The diamond-shaped bony outlet of the pelvis through which the fetus passes at birth.
Pericarditis	Inflammation of the sac (pericardium) which surrounds the heart.
Perimetrium	The outermost layer of the uterus. It is draped over the uterus like a sheet and extends to the side walls of the pelvis forming the broad ligaments.
Perinatal	Around the time of birth.

Perineum	The area extending from the pubic arch to the coccyx, with underlying tissues. In obstetrics the perineal body is the fibromuscular pyramid between the lower third of the vagina anteriorly and the ischial spines laterally. In the second stage it thins and stretches during the birth of the baby and, in some cases, is torn.
Peritoneal cavity	The space containing the internal organs of the abdomen.
Peritoneum	Membrane covering the internal organs of the abdomen and lining the abdominal and pelvic cavity.
Peritoneum, parietal	Peritoneum lining the abdominal and pelvic cavity.
Peritoneum, visceral	Peritoneum that covers the abdominal organs, holding them into position.
Peritonitis	Infection of the peritoneum.
Persistent occiput posterior	The fetus has its occiput (i.e. back of head) directed towards the back of the maternal pelvis. Usually the head flexes and rotates to an anterior position, but a persistent occipito-posterior position fails to rotate and the baby is delivered face to pubes. Labour is often more difficult in these cases because wider diameters of the fetal head have to pass through the pelvis, contractions may be less effective, cervical dilatation slower, descent of the fetus delayed and injuries to mother and child are more common.
Photophobia	When light hurts the eyes.
Physical disability	A physical defect which may limit the individual's capacity to participate fully in normal life.
Pivot	To turn or swivel on a central point.
Placenta praevia	An abnormally situated placenta in the lower segment of the uterus which completely or partly covers the os (the opening between the uterus and the cervix). The stretching of the lower segment of the uterus during the last trimester of pregnancy causes some placental separation from the uterine wall. As a result episodes of vaginal bleeding occur which are typically painless. The danger is that the woman will have a catastrophic haemorrhage during late pregnancy.
Placental abruption	Premature separation of a normally-situated placenta, that is a placenta in the upper segment of the uterus, which occurs after the 22nd week. In this case there may be abdominal pain as well as bleeding. If the bleeding is concealed, i.e. collects behind the placenta, the abdomen will feel hard and be very painful. Shock may be severe and fetal distress is common.
Pleurisy	Infection of the membrane covering the lungs and lining the walls of the chest.
Polyhydramnios	A condition characterized by an excess of amniotic fluid. It is associated mainly with multiple pregnancy, fetal abnormality, diabetes and hydrops fetalis, a rare condition caused by severe haemolytic disease.

Polyuria	Excessive urination.
Posterior	Situated at the back of, or in the back part of, a structure.
Postpartum	After labour.
Postpartum haemorrhage	Blood loss of 500 ml or more from the genital tract after delivery. The commonest cause is atony (poor muscle tone) of the uterus, or it may be caused by trauma to the genital tract, e.g. tears of the vagina, cervix, or lower segment of the uterus. Postpartum haemorrhage is the commonest cause of maternal death.
Potency	The power of a medicinal agent to produce its desired effect.
Pouch of Douglas	The pocket like space between the rectum and the uterus.
Pre-eclampsia	A condition specific to pregnancy, arising after the 20th week of gestation, characterized by hypertension and proteinuria. Oedema may also be present, but is no longer considered a cardinal sign because it is present to some extent in most pregnancies. If not controlled, pre-eclampsia will lead to eclampsia which is characterized by fits, followed by coma, and has a high mortality rate.
Pre-term baby	A baby who is born before the 37th completed week of pregnancy.
Precipitate labour	Labour which progresses unusually quickly.
Primary postpartum haemorrhage	Excessive bleeding from the genital tract in the first 24 hours after delivery. The amount of blood is 500 ml or more.
Primigravida	A woman pregnant for the first time.
Primipara	A woman who has borne one viable child.
Prolonged labour	Labour which exceeds 12 hours.
Prolonged rupture of membranes	Ruptured membranes for more than 18 hours, regardless of whether labour has started or not.
Prophylactic	An agent which is used to try and prevent disease.
Prophylactic antibiotic treatment	Giving antibiotics to prevent infection.
Proteinuria	Presence of protein in the urine. Causes are contamination by vaginal discharge, infection or pre-eclampsia. It should always be investigated because, if due to pre-eclampsia, it is a serious sign. If caused by infection, treatment with antibiotics is required.
Pubic arch	The curved bowlike bony structure which lies at the front of the pelvis.
Puerperal sepsis	An infection of the genital tract at any time between the onset of rupture of membranes or labour and the 42nd day following delivery or abortion.
Puerperium	The 42-day period following delivery of the baby. Another word meaning the same is "postpartum period".

Pulmonary embolism	The blood circulation in the lungs is blocked by an embolus (blood clot).
Pulmonary oedema	Accumulation of fluid in the lungs.
Purpura	Small haemorrhage in the skin.
Pyelonephritis	Infection of the kidneys due to bacteria that have come up from the bladder after entering through the urethra.

R

Rales	A rattling sound heard when listening to lungs that are diseased.
Recumbent position	Lying down.
Resistant bacteria	Bacteria which are not killed by a drug that usually kills that kind of bacteria.
Resuscitation	Bringing back to life or consciousness a person who is apparently dead.
Retained placenta	Describes the situation when the placenta has not been delivered within 30 minutes after the birth of the baby.
Retracted	Drawn back.
Retroplacental	Behind or underneath the placenta.
Reversal	A turn or change in the opposite direction.
Rhesus factor	An antigen present on the red blood cells of most people. Those having this antigen are classified “rhesus positive”. Those that do not have it are “rhesus negative”. Rhesus incompatibility occurs when the mother is “rhesus negative” and the fetus is “rhesus positive”.
Rickets	Softening of bones due to vitamin D deficiency during childhood.
Risk factor	Factors which make a condition more likely to happen or more dangerous.
Rotation (of fetal head)	The movement of the fetal head as it descends through the birth canal.
Rupture	Tearing or bursting of a structure, e.g. rupture of uterus following obstructed labour.
Ruptured uterus	Tearing or bursting of the uterus due to obstructed labour.

S

Sacral promontory	The part of the first sacral vertebra which projects into the pelvic inlet.
Sacrum	The lowest part of the spine. It is formed by five sacral vertebrae.

Sagittal suture	The membranous line between fetal skull bones (parietal bones) running from the posterior fontanelle to the anterior fontanelle.
Sanitation	The establishment of conditions favourable to health. It includes the safe disposal of faeces by the use of adequate latrines, to avoid the transmission of diseases.
Scoliosis	A lateral deviation in the normally straight vertical line of the spine.
Secondary postpartum haemorrhage	Includes all cases of PPH occurring between 24 hours after delivery of the baby and 6 weeks postpartum.
Segment	A section or a part of something.
Self-retaining catheter	A catheter that is left <i>in situ</i> in the bladder.
Semiprone position	Lying down on the left side.
Semi-recumbent position	Lying down with head and shoulders raised up.
Septic shock	A very serious infection of the blood stream causing high fever, low blood pressure, fast pulse and fast breathing. Untreated septic shock leads to coma and death.
Septicaemia	The presence and multiplication in the blood of harmful microorganisms in the blood, causing high fever and chills. Untreated, septicaemia can lead to shock and death.
Shock	A life-threatening condition characterized by failure of the circulatory system to maintain normal blood flow to vital organs (e.g. kidneys, heart brain). <i>Haemorrhagic shock</i> is shock due to low blood volume resulting from excessive blood loss. <i>Septic shock</i> is shock due to overwhelming infection and results from the action of the pathogenic bacteria on the vascular system.
Sinciput	The brow, or forehead.
Sinusitis	Infection in the sinuses (air cavities in the cranial bones on either side of the nose and above the eyes).
Sitz bath	Soaking of the genital area in a tub of clean warm water. This may be done in the postpartum to soothe pain from an episiotomy or perineal tear.
Smear	A specimen of superficial cells, e.g. from the cervix or vagina, which can be examined microscopically and gives information about the level of hormones or early malignant disease.
Sodium lactate	A solution of sodium lactate, sodium chloride, potassium chloride and calcium chloride which can be given via an intravenous infusion.
Sonar	A term for ultrasound in medical diagnosis.
Spasms	Sudden, strong, involuntary muscular contractions.

Specific gravity	Relative weight of any kind of matter (e.g. urine), expressed by the ratio of the weight of a certain volume of that matter to the weight of the same volume of water. The specific gravity of water is 1.
Specimen	A sample or part of a thing taken to determine the character of the whole e.g. specimen of urine.
Splint	A strip of rigid material such as wood, used to keep in place a movable body part.
Sputum	Matter ejected from the lungs, bronchi and trachea, through the mouth.
Stasis (of urine)	Standing still, not flowing properly.
Stat	A medical abbreviation meaning “at once”.
Statistics	A collection of numerical facts.
Status	Social position, relative importance of a person.
Stenosis (of vagina)	Narrowing of the vagina which is usually due to scarring caused by genital mutilation or unrepaired lacerations.
Stillbirth	A baby that is delivered dead (after the 22nd week of pregnancy).
Stillborn	A baby that is delivered dead.
Stunted growth	When a person is short, often because of insufficient food intake during childhood.
Subarachnoid haemorrhage	Bleeding within the membranes enveloping the brain due to a ruptured blood vessel.
Subinvolution (uterus)	The uterus is not reducing in size normally, (i.e. is slow to involute) during the early postpartum period.
Suboccipitobregmatic diameter (of head)	The distance from beneath the occiput to the anterior fontanelle.
Symphysiotomy	A surgical incision of the symphysis pubis to widen the pelvic outlet when there is cephalopelvic disproportion. It is an alternative emergency procedure when facilities for safe caesarean section are not available.
Symphysis pubis	The cartilaginous area where the two pubic bones join at the front of the pelvis
T	
Talipes	Clubfoot. A congenital abnormality when the foot has developed at an abnormal angle to the leg.
Tenderness	Painful when palpated.
Term baby	Baby born between 37 and 42 completed weeks of pregnancy.

Testicles/testes	The two glands in the scrotum which produce spermatozoa and male sex hormones.
Tetanus	A disease caused by microorganisms found in the soil and dust which is spread by animal and human faeces. The microorganisms enter the body through a break in the skin and cause a severe condition with muscle spasm and convulsions leading to death. Because stiffness of the jaw is often the first symptom, it is also known as lockjaw. This severe disease can be prevented by adequate immunization with tetanus toxoid.
Thorax	The chest.
Thrombophlebitis	Inflammation of a superficial vein together with clot formation. In these cases the clot rarely separates from the wall of the vein and so the risk of embolism is small.
Thrombosis	The formation of a blood clot. This occurs in the deep veins and if the clot becomes detached from the vessel wall, there is a serious risk of embolism leading to death.
Tocolytic agent	An agent that stops uterine contractions, e.g. ritodrine hydrochloride, salbutamol.
Traditional birth attendant (TBA)	Name given to a person who traditionally assists women in childbirth at community level. Most are illiterate and become birth attendants without training, but efforts are now being made to give them basic training for a few weeks, and to encourage them to use basic but essential birthing kits. They are not considered as a “skilled birth attendant” but do have an important role to play in the community - to be linked to skilled birth attendants.
Transient	Temporary, not lasting a long time.
Trauma	Injury.
Traumatic bleeding	In obstetrics, occurs as a result of injury to the genital tract.
Tumour	A new growth of tissue which could be benign (harmless) or cancerous.
Twitch	Sudden, small, involuntary contractions.
U	
Ultrasound	Sound at frequencies above the upper limit of normal hearing which is used in obstetrics (and other branches of medicine) in the technique of ultrasonography. It is used to assess the maturity and size of the fetus, locate the site of the placenta, diagnose fetal abnormalities and pelvic tumours.
Umbilical cord	The cord which connects the fetus to its placenta. Nourishment and oxygen pass along the umbilical vein from the placenta to the fetus. Waste products pass from the fetus to the placenta via two umbilical arteries.

Uraemia	An excess of urea in the blood. It is one of the signs of chronic kidney failure.
Utero vesical pouch	The pocket-like space between the uterus and the bladder.
Uterus inversion	The uterus is turned inside out, with the fundus of the uterus being forced through the cervix and protruding into or right outside of the vagina. It is a serious obstetric emergency which leads to severe shock. The uterus must be replaced as quickly as possible.
V	
Vacuum extraction	A procedure in which a metal or plastic cup is attached to the baby's head by creating a vacuum. By gently pulling on the chain leading to the cup during contractions, the baby's head gradually descends through the birth canal. It is important to check that there is no cephalo-pelvic disproportion before attempting a vacuum delivery.
Vaginal fornix	The space formed between the vaginal wall and the part of the cervix which projects into the vagina. There are four fornices, the anterior, posterior and two lateral fornices.
Varicose veins	Veins that are abnormally tortuous and distended. If painful during pregnancy, the woman should be advised to wear support stockings which should be applied before the woman rises to her feet in the morning, and to rest with her legs elevated above the level of the heart.
Venepuncture	The puncture of a vein to get a blood sample or to set up an intravenous infusion.
Vertex	The area of the head between the anterior and posterior fontanelles and the two parietal eminences (i.e. bumps on each side top of the head. In normal labour when the head is well-flexed, the vertex presents.
Virus	Small infective agent which grows and reproduces in living cells. Viruses may cross the placenta in pregnancy and cause fetal abnormalities, especially in the first trimester.
Vitamins	Essential food substances. Vitamins A, all of the B's, C, D, E and K are essential to nutrition and health and deficiencies cause a variety of health problems.
W	
Waddling gait	Walking with an exaggerated elevation of the hips (rather like a duck walks).
Water intoxication	The condition caused by excess fluid in the circulation and insufficient sodium. It may be caused by over-transfusion and can lead to nausea, vomiting and, in severe cases, convulsions, coma and death.

APPENDIX: PRE- AND POST-TEST QUESTIONS

The pre- and post-test questions (and answers) which follow are provided as examples, and do not constitute the full and complete range of questions which should be included in pre- and post-tests, should you choose to use them as a method of student assessment. You may wish to use these questions, together with other questions relevant to the content of this module, to establish a baseline for students' theoretical knowledge. The questions used in the pre-test should be used again in the post-test to determine change in theoretical knowledge. The teacher may also wish to add more questions for the post-test.

Each time you use the module for teaching about the management of incomplete abortion, it is important to change at least some of the questions used in pre- and post-tests. This is particularly relevant in, for instance, schools of midwifery and nursing where students communicate frequently with each other about the content of tests and examinations.

Pre- and post-tests must not be used to the exclusion of other options for assessment of students. It is critical to use at least some, if not all, of the other options, found at intervals throughout the modules, for assessing the progress of students during the course of study. Moreover, it is essential to bear in mind that the assessment of clinical competence constitutes the major component of student assessment in this and the other technical modules.

Q1 *What is abortion?*

A The term refers to the termination of pregnancy from whatever cause before the fetus is capable of extrauterine life.

Q2 *What is incomplete abortion?*

A Incomplete abortion usually occurs in the second trimester of pregnancy, and is the partial expulsion of the products of conception.

Q3 *What are three signs or symptoms of incomplete abortion?*

A Vaginal bleeding, abdominal cramping, lower abdominal pain.

Q4 *What is unsafe abortion?*

A The term refers to the termination of pregnancy by persons not having the necessary skills or in an environment lacking the minimal standards of care, or both.

Q5 *What is the estimated number of abortions that take place daily worldwide?*

A 55 000.

Q6 *What percentage of abortions take place in the developing world?*

A 95%.

- Q7 *What is manual vacuum aspiration?*
- A A procedure involving the use of suction to remove tissue and blood from the uterus through a cannula and into a syringe.
- Q8 *What are the life-threatening complications associated with abortion?*
- A Shock, haemorrhage, sepsis, intra-abdominal injury.
- Q9 *What methods of contraception can be considered for use after abortion?*
- A All methods can be considered, **providing** there are no complications requiring further treatment, appropriate screening is provided for the contraindications to each method, and good counselling is offered.
- Q10 *How soon after an abortion can injectable contraceptives be given?*
- A Immediately.
- Q11 *List three cases when MVA should be used with caution and only in health facilities with emergency backup?*
- A History of bleeding disorder
Severe anemia
Haemodynamic instability due to cardiac disease.
- Q12 *List 5 advantages of MVA over Dilatation and Curettage (D&C) in the treatment of incomplete abortion?*
- A Reduced risk of uterine perforation
Less use of pain control drugs
Reduced hospital costs
Can be an outpatient or treatment room procedure
Lower complication rates.
- Q13 *Name at least 3 good techniques of nonverbal communication?*
- A Sitting in an upright position, talking and looking directly at the patient
Making encouraging gestures such as nodding or leaning forward
Using a tone of voice that shows interest and concern
Avoiding distracting movements such as fidgeting
Avoid looking at your watch or papers on the desk, or around the room
Avoid frowning, yawning, or expression of boredom.
- Q14 *List 3 occasions a health worker should wash their hands?*
- A Before any procedure
Before putting on gloves
After any procedure.
- Q15 *Name 3 ways to reduce a woman's anxiety during MVA?*
- A Gentle treatment
Good communication and reassurance by health team
Use of anxiolytic drugs.

- Q16 *What are 3 goals of patient assessment?*
- A Formulating correct diagnosis
 Determining proper treatment
 Precautions on treatment such as drug allergy.
- Q17 *List the 2 most important criteria on selecting the appropriate size of a cannula to use?*
- A Uterine size measured by bimanual examination
 Degree of cervical dilation.
- Q18 *List 4 possible complications in patients with incomplete abortion?*
- A Infection and/or sepsis
 Uterine perforation
 Haemorrhage
 Intra-abdominal injury
 Shock.
- Q19 *Name 2 methods of high-level disinfection of MVA equipment. ?*
- A Boiling
 Chemical, e.g. chlorine or cidex.
- Q20 *Name the 3 components of post-abortion care?*
- A Emergency treatment of post-abortion complications
 Post-abortion family planning counselling and services
 Providing linkages between post-abortion emergency services and other reproductive health services (good referral system).