



**Deliverable 5**

**Competency-based training modules for service providers**



**MODULE**  
**BLEEDING IN PREGNANCY**

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**IN COOPERATION WITH**  
**USAID**

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## MODULE OVERVIEW

### Purpose

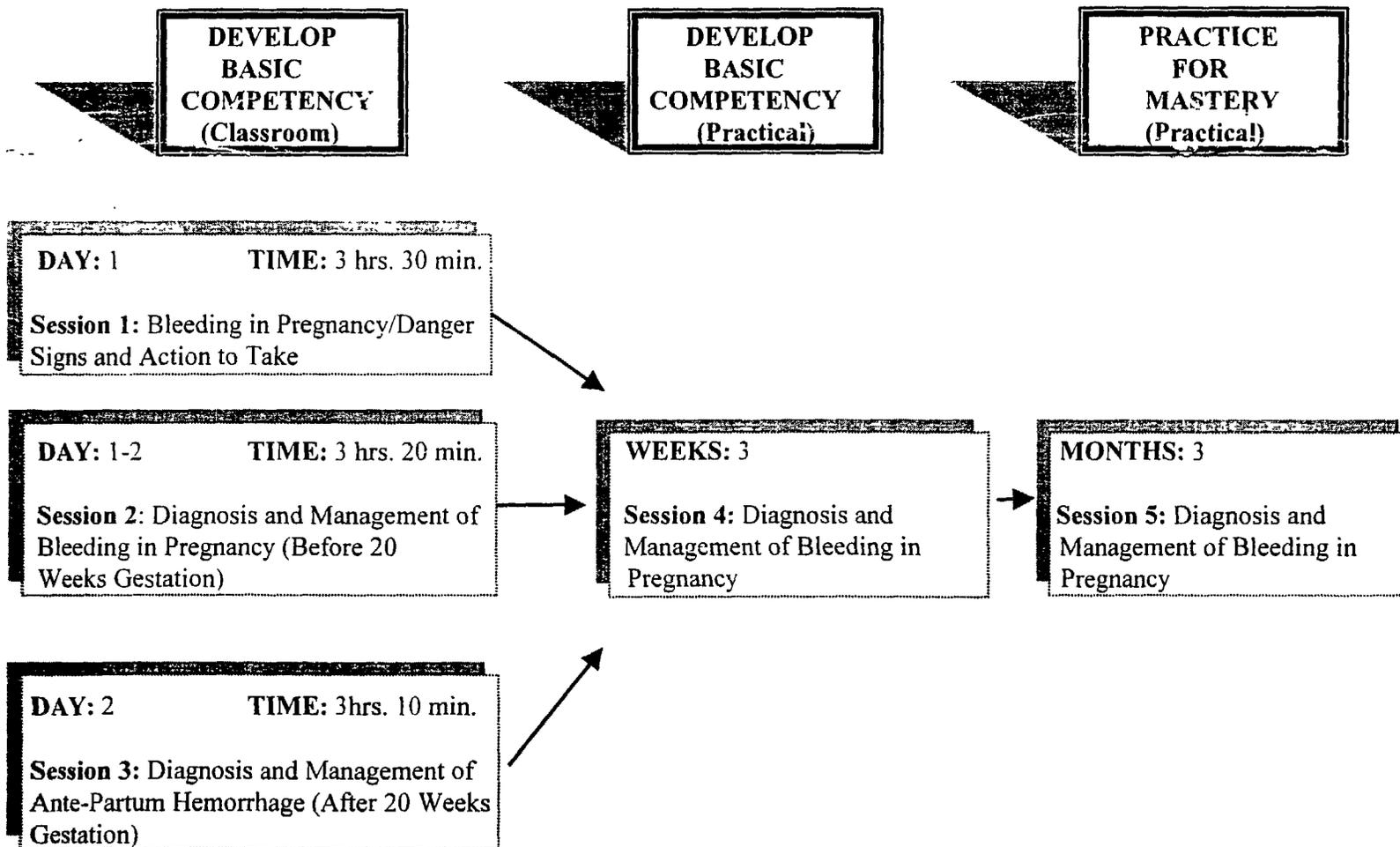
The purpose of this module is to provide facilitators with a sound competency-based training (CBT) methodology, if implemented as designed, will result in physicians reaching the level of Amastery concerning the competencies and skills required to prevent, diagnose and manage bleeding in pregnancy.

### Story

Hemorrhage is the first of the ten leading causes of maternal mortality in Egypt. It represents (31.9%) of all maternal deaths. Bleeding in pregnancy represents 8.1% of all maternal deaths. Placental abruption 6.8% while placenta previa represents 1.3% of all maternal deaths. This is due to two reasons. First, many women do not understand that bleeding in pregnancy is abnormal and is a danger sign. As a result, many women arrive too late to a health care facility to be saved. Of those pregnant women with bleeding who do reach a hospital in time to be saved, they too frequently die due to incompetent performance of physicians either due to lack of clinical skills, inadequate equipment and supplies or a combination of both. The intent of this training is to rectify this problem and to reduce mortality of women due to bleeding in pregnancy.

**MODULE: BLEEDING IN PREGNANCY**

**AGENDA & SEQUENCE OF SESSIONS**



**Task:** Prevent, diagnose and manage bleeding in pregnancy

Before 20 weeks gestation:

- Abortion
- Ectopic pregnancy
- Molar pregnancy

After 20 weeks gestation:

- Placental abruption
- Placenta previa

**Competency 1:** Communicate effectively with client danger signs and action to take with these danger signs

**Skills**

- 1.1 Explain the importance of regular ante-natal visits.
- 1.2 Recognize the alarming (danger) signs associated with pregnancy and action to be taken with appearance of any alarming signs.
- 1.3 Discuss with client the alarming (danger) signs associated with bleeding in pregnancy and action to be taken with the appearance of any alarming signs.

**Competency 2:** Identify, assess and manage abortion (bleeding in pregnancy before 20 weeks gestation)

**Skills**

- 2.1 Record the full history of the client
- 2.2 Assess the cases at risk of abortion (bleeding in pregnancy before 20 weeks gestation)
- 2.3 Differentiate between the cases of abortion (bleeding in pregnancy before 20 weeks gestation)
- 2.4 Manage the cases of abortion (bleeding in pregnancy before 20 weeks gestation)

**Competency 3:** Identify, assess and manage ante-partum hemorrhage (bleeding in pregnancy after 20 weeks gestation)

**Skills**

- 3.1 Take complete history and recognize symptoms due to bleeding after 20 weeks gestation

3. 2 Perform a physical examination of the patient and recognize signs due to bleeding after 20 weeks gestation
3. 3 Interpret laboratory results to reach a proper diagnosis
3. 4 Manage bleeding in pregnancy after 20 weeks gestation

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## Session 1: Bleeding in Pregnancy - Danger Signs & Action to Take

**DEVELOP  
BASIC  
COMPETENCY  
(Classroom)**

### Facilitator-Led Session

**Day:**

**Time:** 3 hr. 30 min.

**Task:** Prevent, diagnose and manage bleeding in pregnancy

Before 20 weeks gestation:

- Abortion
- Ectopic pregnancy
- Molar pregnancy

After 20 weeks gestation:

- Placental abruption
- Placenta previa

**Competency 1:** Communicate with client to clarify danger signs and action to take with bleeding in pregnancy

### Skills

- 1.1 Explain the importance of regular antenatal follow-up visits
- 1.2 Recognize the alarming (danger) signs associated with bleeding in pregnancy and the action to be taken with appearance of any alarming sign
- 1.3 Discuss with the client the alarming (danger) signs associated with bleeding in pregnancy and action to be taken with the appearance of any alarming signs

## OVERVIEW

### Purpose

The purpose of this session is to communicate effectively by sharing health messages with clients, the danger signs of bleeding in pregnancy and the action to be taken so to minimize the potential of maternal and fetal mortality and morbidity. In Sessions 4 & 5, the skills addressed in this session will be practiced in a practical setting.

## Story

**Aswan Governorate:** The mother-in-law reported that her daughter-in-law was weak during her last pregnancy. At the last month of the pregnancy, she complained of bleeding. She went to an obstetrician who did ultrasonography and told her that the infant was living and OK. She was given treatment by means of injections. The hemorrhage stopped for 3-4 days, then bleeding started for the second time. Her husband took her to Komombo General hospital, where she received treatment and returned back home. The hemorrhage stopped again for 3-4 days, then bleeding started for the third time. Then they transferred her to Komombo General Hospital by Ambulance. Her family gave blood for transfusion and a cesarean delivery was conducted. The infant was dead. The mother died six hours later.

In Egypt in general, it was reported that 99% of all mothers identified hemorrhage during pregnancy as a reason to consult a doctor (SPAAC KAP Study, 1995). But in Upper Egypt, only 38% of rural women mentioned bleeding during pregnancy as a danger sign. Why?

## LEARNING OBJECTIVES

By the end of this session, each participants should be able to:

1. Communicate effectively with clients to clarify the importance of regular antenatal follow-up visits for women attending the antenatal clinic as listed on a handout.
2. List the alarming (danger) signs associated with bleeding in pregnancy that must be discussed with the client according to the protocol.
3. Discuss with the client the “plan of action” to be taken with the appearance of any of the alarming (danger) signs of bleeding in pregnancy according to the protocol.

## LEARNING ACTIVITIES

**A. Motivate learning:** The facilitator reviews the session purpose, story, learning objectives, activities and assessment strategies. The session purpose and story are presented using an overhead transparency. The session learning objectives are presented using a flip chart. The different learning activities to be used during the session, role play, case study, group discussion and brain storming are reviewed with the group. How the participants will be assessed at the end of the session against the criteria stated in the learning objectives is reviewed.

**Time**

**10 min.**

**LEARNING  
ACTIVITIES**

**Time**

**Learning Objective 1**

- B. Presentation:** In preparation for a role play, the facilitator reviews the six (6) important reasons for regular antenatal clinic visits and follow-up schedule of any pregnant woman. The facilitator reviews the criteria in the following:
1. Important six (6) reasons for attending ante-natal clinic
  2. Standard Ante-natal Schedule
  3. Skill Checklist – Obstetric Communications & Recording

**10 min.**

**Learning Objective 1**

- C. Role Play:** Two participants will volunteer for a role play following guidelines of the Obstetric Communications and Recording Skill Checklist. One will act as a client who is pregnant for the first time and needs to talk to the physician about her concerns. The second participant will take the role of the physician who will actively listen to the client's concerns, answers questions, and correctly explains the six (6) important reasons for regular antenatal clinic visits and antenatal follow-up schedule, following the criteria in the skill checklist "Obstetric Communications and Recording". The rest of the group observes the role play against the skill checklist.

**20 min.**

**Feedback & Discussion:** Feedback concerning the role play is recorded on a flip chart, using an overhead projection of the skill checklist as a reference. The feedback is then discussed.

**10 min.**

**Repeat Role Play:** The participants are then divided into groups of three people (physician, mother, observer). Each group chooses and completes one of the following role plays:

- 1) Role play script # 1
- 2) Role play script # 2

The same role play and feedback process discussed above is repeated in each group until everyone has had the opportunity to play all three roles. The facilitator rotates between the small groups, coaching and providing feedback as necessary.

**60 min.**

**Learning Objective 2**

- D. Discussion:** The facilitator reviews the alarming (danger) signs as noted in the handout and Protocol: Bleeding in Pregnancy, which may happen during the course of pregnancy and are contributing factors in increasing the incidence of maternal mortality.

**10 min.**

**LEARNING  
ACTIVITIES**

**Time**

**Case Study:** The facilitator introduces the alarming (danger) signs during pregnancy that must be discussed with the client as listed in the Protocol: Bleeding in Pregnancy. S/he notes that early detection and action concerning bleeding in pregnancy is a major factor in decreasing the maternal mortality rate.

The facilitator explains the objectives of the case study which are to:

- A) Identify alarming (danger) signs during pregnancy that must be discussed with the client as listed in the Protocol: Bleeding in Pregnancy.
- B) Discuss with the client the “plan of action” to be taken at the appearance of any of the alarming (danger) signs during pregnancy.

Then the facilitator divides the participants into two groups (A & B) and distributes case study 1 to group (A) and case study (2) to group (B). Each group reads and come to their conclusions.

**30 min.**

**Case Study Discussion:** Against the criteria in the Protocol: Bleeding in Pregnancy as well as that listed on an OHT, the group case study findings and client “plan of action” are discussed.

**20 min.**

**Learning Objective 3**

**E. Brain Storming:** The facilitator discusses the “Plan of action” to be taken concerning the appearance of any of the alarming (danger) signs during pregnancy with the group. For each alarming (danger) sign, the group “brain storms” what action to that, the client should take against the criteria on the Flow Chart: Bleeding in Pregnancy, which is distributed as a handout and referred to on an OHT, recording their suggestions on a flip chart.

**30 min.**

**F. Summary:** At the end of the session, the facilitator asks one of the participants to summarize the session against the criteria in the learning objectives. The facilitator then completes the session summary using the flip chart graphics and overhead transparencies used during the session.

**10 min.**

## ASSESSMENT OF COMPETENCIES

To start developing “basic competency”, each participant will be assessed against the criteria in the learning objectives while learning activities are being conducted.

Learning Objectives	Assessment Strategy/Methods
1. Communicate effectively with clients the importance of regular antenatal follow-up visits for women attending the antenatal clinic as listed on a handout.	1. Outcome of role play ; group discussion and Skill Checklist “Obstetric Communications and Recording”
2. List the alarming (danger) signs associated with bleeding in pregnancy that must be discussed with the client according to the protocol.	2. Outcome of case study; problem solving
3. Discuss with the client the “plan of action” to be taken with the appearance of any of the alarming (danger) signs associated with pregnancy according to the protocol.	3. Outcome of brain storming and flow chart discussion

### PREPARATION (Session Specific)

**Facilitator:** The facilitator must prepare all of the materials listed under the following resources.

### RESOURCES

- **Module: Bleeding in Pregnancy**
- **Essential Obstetric Care Resource Manual, Protocol: Bleeding in Pregnancy (Before 20 weeks Gestation)**
- Overhead transparency, flip chart graphic or handouts of the following:
  - Session Purpose and Story
  - Session Learning Objectives
  - Importance of regular antenatal follow-up visits
  - Handout: Standard Ante-natal Schedule
  - Skill Checklist: Obstetric Communications & Recording
  - Role play: Script for Physician and Antenatal Mother
  - Handout and OHT: Alarming (Danger) Signs of bleeding during Pregnancy
  - Case Study: Alarming (Danger) Signs of bleeding during Pregnancy
  - Handout and OHT: Flow Chart, Alarming (Danger) Signs of bleeding during Pregnancy and “Plan of action”
  - Flip chart and marking pens
  - Overhead projector and screen

**RESOURCE (OHT & HANDOUT)**

**Importance of regular Ante-natal follow-up visits**

1. Record the blood pressure
2. Record the weight
3. Determine the gestational age and compare it with the fundal level
4. Check the Fetal viability (movement and heart sounds)
5. Detect presence of edema (face, abdomen, lower limbs)
6. Test the urine for Albumin/Sugar/Acetone

**RESOURCE (HANDOUT)**

**Standard Ante-natal Schedule**

- \* Once / 4 weeks (till 28 weeks gestation)
- \* Once / 2 weeks (28 weeks – 36 weeks gestation)
- \* Once weekly (36 weeks – delivery)

RESOURCE (OHT & HANDOUT)

SKILL CHECKLIST  
Obstetric Communications & Recording

**Facilitator:** Use this skill checklist as a guide when demonstrating the skill and assessing participant performance.

**Participants:** Use the skill checklist as a guide when practicing this skill. Your performance will be assessed against the criteria in this checklist.

**Rating:** 1 = Needs Improvement  
2 = Satisfactory

STEPS	RATE	COMMENTS
1. Greeted and welcomed the client		
2. Introduced yourself		
3. Took & recorded correctly the client personal Data: - Name - Age - Address - Profession, marital status (1 <sup>st</sup> or no. of yr.) - Consanguinity - Special habits		
4. Was patient with the client		
5. Took and recorded a complete reproductive history: - Menstrual: pattern /flow/ 1 <sup>st</sup> day LMP - Obstetric: parity /pregnancy outcome (age, sex, live births, stillbirths) - How many children are presently alive - If they had died, from what cause - Mode of delivery (cesarean, forceps, ventous, normal) - Abortions (number, types) - Date of last labor - Date of last abortion - Congenital anomalies of previous deliveries		

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## SKILL CHECKLIST

### Obstetric Communications & Recording

**Facilitator:** Use this skill checklist as a guide when demonstrating the skill and assessing participant performance.

**Participants:** Use the skill checklist as a guide when practicing this skill. Your performance will be assessed against the criteria in this checklist.

**Rating:**        1 = Needs Improvement  
                       2 = Satisfactory

STEPS	RATE	COMMENTS
6. Took and recorded correctly the client medical history: <ul style="list-style-type: none"> <li>- Diabetes mellitus</li> <li>- Hypertension</li> <li>- Tuberculosis</li> <li>- Rheumatic heart disease</li> <li>- Anaemia</li> <li>- Pre- eclampsia &amp; eclampsia</li> <li>- Tetanus toxoid immunization</li> <li>- Genital tract infection</li> <li>- Schistosomiasis</li> <li>- Urinary tract infection</li> <li>- Antepartum hemorrhage</li> <li>- Allergies</li> <li>- Any medications the patient is taking</li> <li>- If the patient is presently under a physician care for any specific reason</li> </ul>		
7. Took and recorded client complete surgical history.		
8. Reviewed and recorded the client family history.		
9. Was respectful, listened actively, gave complete attention to the client.		

## SKILL CHECKLIST

### Obstetric Communications & Recording

**Facilitator:** Use this skill checklist as a guide when demonstrating the skill and assessing participant performance.

**Participants:** Use the skill checklist as a guide when practicing this skill. Your performance will be assessed against the criteria in this checklist.

**Rating:**     **1 = Needs Improvement**  
                   **2 = Satisfactory**

STEPS	RATE	COMMENTS
10. Explained clearly to the client: <ul style="list-style-type: none"> <li>- The complete duration of pregnancy and her EDD.</li> <li>- The division of the 3 trimesters of pregnancy</li> <li>- The concerns of each trimester (complaints and medical importance)</li> <li>- The essential and routine investigations               <ul style="list-style-type: none"> <li><u>Blood:</u> <ul style="list-style-type: none"> <li>- Complete blood picture (CBC)</li> <li>- Venereal disease research laboratory (VDRL)</li> <li>- Blood grouping (ABO – Rh)</li> <li>- Fasting blood sugar (FBS)</li> <li>- Toxoplasmosis.</li> </ul> </li> <li><u>Urine:</u> complete urine analysis</li> <li><u>Stool:</u> analysis for ova &amp; parasites</li> </ul> </li> <li>- The schedule of antenatal follow up visits was completed:               <ul style="list-style-type: none"> <li>A. Once/ 4 weeks(till 28 weeks gestation)</li> <li>B. Once/2 weeks (28-36 weeks gestation)</li> <li>C. Once weekly (36 weeks - delivery)</li> </ul> </li> </ul>		
11. Used easy and understandable language.		

**SKILL CHECKLIST**  
**Obstetric Communications & Recording**

**Facilitator:** Use this skill checklist as a guide when demonstrating the skill and assessing participant performance.

**Participants:** Use the skill checklist as a guide when practicing this skill. Your performance will be assessed against the criteria in this checklist.

**Rating:**        1 = Needs Improvement  
                      2 = Satisfactory

STEPS	RATE	COMMENTS
12. Care strategy during the antenatal period included: <ul style="list-style-type: none"> <li>- Complete physical examination on first visit:               <ul style="list-style-type: none"> <li>- Heart</li> <li>- Chest</li> <li>- Height,</li> <li>- Weight</li> </ul> </li> <li>- Antenatal status checked regularly during every visit and recorded the findings on the antenatal card:               <ul style="list-style-type: none"> <li>- Blood pressure</li> <li>- Weight</li> <li>- Gestational age</li> <li>- Fundal level,</li> <li>- Lie</li> <li>- Presenting part,</li> <li>- Fetal heart sounds (FHS),</li> <li>- Lower limb edema, Hb%,</li> <li>- Urine (albumen, sugar, acetone)</li> </ul> </li> </ul>		
13. Identified the present patient's complaint.		
14. Explained and solved the patient complaint.		
15. Encouraged the client to ask questions.		
16. Asked about breast-feeding history: <ul style="list-style-type: none"> <li>- Previous, breast-feeding experience</li> <li>- Breast feeding of other relative</li> <li>- Family support for breast feeding</li> <li>- Anticipated separation ( return to work)</li> </ul>		

**SKILL CHECKLIST**  
**Obstetric Communications & Recording**

**Facilitator:** Use this skill checklist as a guide when demonstrating the skill and assessing participant performance.

**Participants:** Use the skill checklist as a guide when practicing this skill. Your performance will be assessed against the criteria in this checklist.

**Rating:**        1 = Needs Improvement  
                     2 = Satisfactory

STEPS	RATE	COMMENTS
17. Basic education plan about adequate nutrition during pregnancy.		

**NB** Each step must receive a rating of 2. Note corrective action to be taken under "comments" for any step receiving a rating of 1 (needs improvements).

**RESOURCE (ROLE PLAY)**

**"Communication Skills in Antenatal Clinic"**

**Script for Physician and Antenatal Mother**

**Role -Play**

**Role Script #1**

Wafaa is 23 years old, married since 10 month. She missed her period for the last 2 months and she had pregnancy test just today which gave her positive result. She needs to talk to the physician about her concerns.

**Role Script #2**

Mona is 23 yrs old, married since 1.5 year. She missed her last 2 menstrual periods. She had a pregnancy test yesterday that gave a positive result. She is so worried as she had been through an evacuation and curettage 10 weeks for an incomplete abortion after a previous conception.

## RESOURCE (OHT & HANDOUT)

### Alarming (Danger) Signs of Bleeding During Pregnancy

- 1. Vaginal bleeding:**
- |                |                   |
|----------------|-------------------|
| Light          | (spotting)        |
| Moderate       | (menstrual flow)  |
| Severe (heavy) | (>menstrual flow) |
- 2. Vaginal discharge:**
- |             |                              |
|-------------|------------------------------|
| Amount      | (light, moderate, heavy)     |
| Consistency | (watery, viscid)             |
| Odor        | (foul, "fishy")              |
| Color       | (yellowish, greenish, brown) |
- 3. Abdominal pain:** Severe lower abdominal pain and rigidity
- 4. Urinary symptoms:**
- Dysuria
  - Frequency
  - Interrupted flow
  - Retention
  - Oliguria
- 5. Signs of hypotension or hypovolemia:**
- Nausea/Vomiting
  - Dizziness
  - Headache
  - Pallor, Tachycardia
  - Visual disturbance
  - Thirst
  - Diaphoresis
  - Fainting
  - Oliguria

## **RESOURCE (CASE STUDY)**

### **Alarming (Danger) Signs of Bleeding During Pregnancy**

#### **Case Study #1**

Mona is a 28 years old lady with two children. She is now 16 weeks pregnant. She showed at the clinic today with lower abdominal pain and dark - brown vaginal discharge.

1. What additional questions would you like to ask her?
2. What areas would you focus on during the physical examination?
3. What is your diagnosis?
4. What do you now tell her and what do you do for her?

#### **Case Study #2**

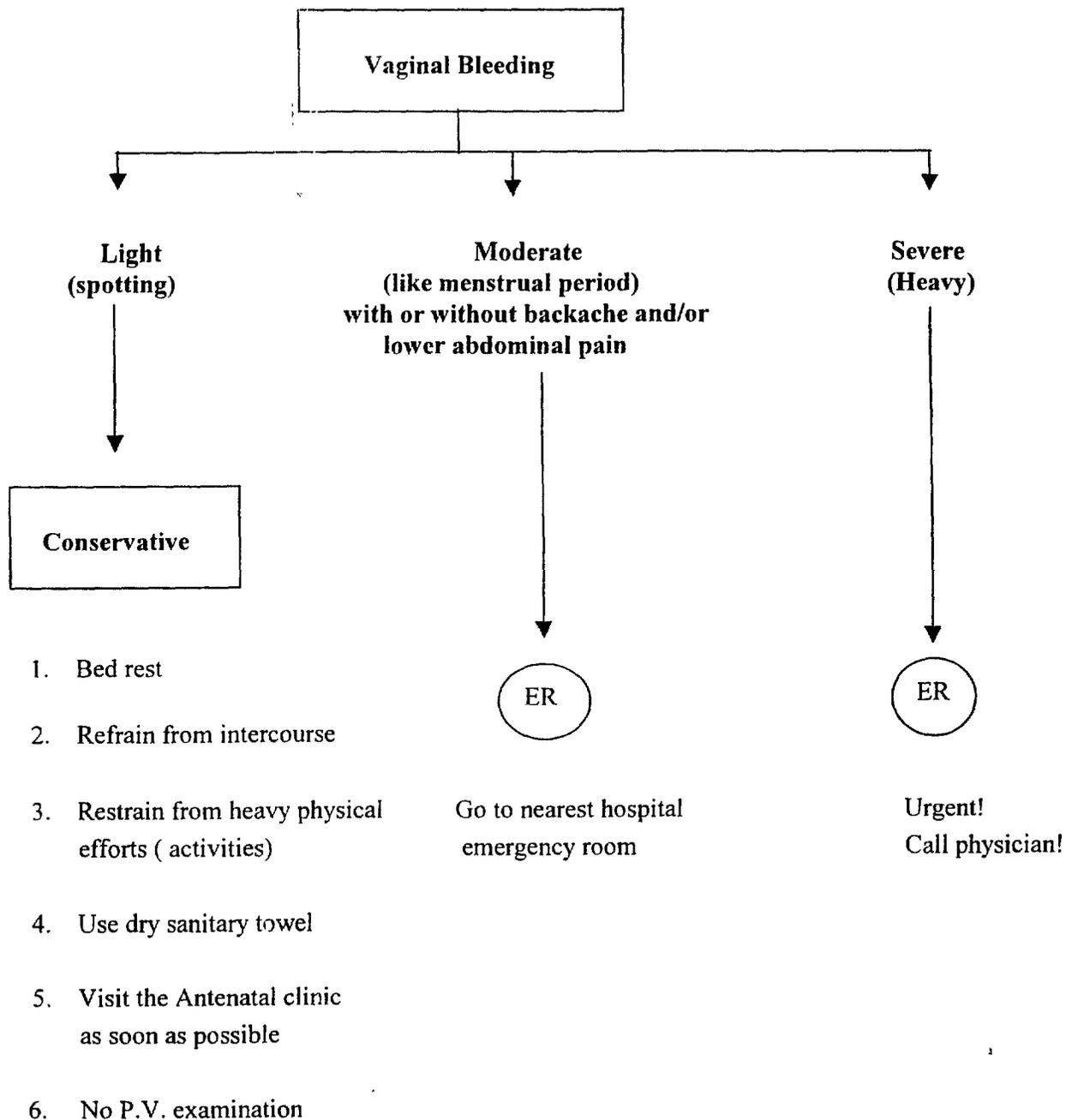
Randa is 25 years old, with one child who is two years old. She came to the clinic with supra-pubic colic, and menses ten (10) days after her expected date. She is worried about these symptoms.

1. What additional questions would you like to ask her?
2. What areas would you focus on during the physical examination?
3. What do you now tell her and what do you do for her?

RESOURCE (OHT & HANDOUT)

Flow Chart

Alarming (Danger) Signs of Bleeding During Pregnancy  
and "Plan of Action"



**DEVELOP  
BASIC  
COMPETENCY  
(Classroom)**

**SESSION OUTLINE**

**MODULE: Bleeding In Pregnancy**

**Session 1: Bleeding in Pregnancy – Danger Signs & Action to Take**

**Key: K = Knowledge S = Skill A = Attitudes**

Session Agenda	Learning Objectives	Assessment of Competencies	Learning Activities	Key Resources
<p><b>Day: 1</b> <b>Time: 3 hrs.</b> <b>30 min.</b></p>	<p>1. Communicate effectively with clients to clarify the importance of regular antenatal follow-up visits for women attending the antenatal clinic as listed on a handout.</p>	<p>1. <b>K:</b> Outcome of role play, group discussion and skill checklist</p>	<p><b>A. Motivate Learning:</b></p> <ul style="list-style-type: none"> <li>- Purpose of session</li> <li>- Story: ninety nine percent (99%) of all mothers identified hemorrhage during pregnancy as a reason to consult a doctor. But in Upper Egypt, only thirty eight percent (38%) of rural women mentioned bleeding during pregnancy as a danger sign</li> <li>- Review learning objectives, activities and assessment</li> </ul> <p><b>B. Presentation:</b></p> <p>The facilitator reviews the following:</p> <ul style="list-style-type: none"> <li>- Important six (6) reasons for attending antenatal clinic</li> <li>- Standard ANC schedule</li> <li>- Skill Checklist – Obstetric Communication &amp; Recording</li> </ul>	<ul style="list-style-type: none"> <li>- Module</li> <li>- OHT: Purpose and Story</li> <li>- Flip chart: Session Learning Objectives</li> <li>- Protocol: Bleeding In Pregnancy</li> <li>- Handout: Standard Obstetrics Record Form</li> <li>- Handout: Standard Antenatal Schedule</li> <li>- Role play script</li> </ul>

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**Session 1: Bleeding in Pregnancy – Danger Signs & Action to Take**

**Key: K = Knowledge      S = Skill      A = Attitudes**

Session Agenda	Learning Objectives	Assessment of Competencies	Learning Activities	Key Resources
	<p>2. List the alarming (danger) signs associated with bleeding in pregnancy that must be discussed with the client according to the protocol.</p>	<p>2. <b>K:</b> Outcome of case study and problem solving</p>	<p><b>C. Role play:</b></p> <p>Two participants will volunteer for a client &amp; physician. The rest of the group will observe the role play against the skill checklist</p> <ul style="list-style-type: none"> <li>- <b>Feed back &amp; Discussion</b></li> <li>- <b>Repeat role</b></li> </ul> <p><b>D. Discussion</b></p> <p>The facilitator reviews the alarming (danger) signs which may noted with bleeding in pregnancy</p> <p><b>Case Study:</b></p> <ul style="list-style-type: none"> <li>- Identify the alarming signs</li> <li>- Discuss plan of action</li> </ul> <p><b>Case Study Discussion:</b></p> <ul style="list-style-type: none"> <li>- Case study findings and plan of action</li> </ul>	<ul style="list-style-type: none"> <li>- Case study: Danger signs and plan of action</li> </ul>
	<p>3. Discuss with the client the “plan of action” to be taken with the appearance of any of the alarming (danger) signs of bleeding in pregnancy according to the protocol.</p>	<p>2. <b>K:</b> Outcome of brain storming</p>	<p><b>E. Brain Storming:</b></p> <p>For each alarming sign, the group “brain storms” what action to that, the client should take and record their suggestions on a flip chart</p> <p><b>F. Summary</b></p> <p>One of the participants summarizes the session against the criteria in the learning objectives</p>	<ul style="list-style-type: none"> <li>- Flip Chart: Plan of action</li> </ul>

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**Authors:** Drs. Nevine Hassanein, Alaa Sultan, Mohamed Abou Gabal, Mohsen El-Said and Tom Coles

## **Session 2: Diagnosis and Management of Bleeding in Pregnancy (Before 20 Weeks Gestation)**

**DEVELOP  
BASIC  
COMPETENCY  
(Classroom)**

**Facilitator-led Session**

**Day:**

**Time:** 3 hr. 20 min.

**Task:** Prevent, diagnose and manage bleeding in pregnancy.

**Competency 2:** Identify, Assess and manage abortion (bleeding in pregnancy before 20 weeks gestation)

### **Skills**

- 2.1 Record the full history of the client
- 2.2 Assess the cases at risk of abortion (bleeding in pregnancy before 20 weeks gestation)
- 2.3 Differentiate between the cases of abortion (bleeding in pregnancy before 20 weeks gestation)
- 2.4 Manage the cases of abortion (bleeding in pregnancy before 20 weeks gestation)

### **OVERVIEW**

#### **Purpose**

The purpose of this session is to inform the participant about diagnosis as well as management of bleeding in pregnancy before 20 weeks gestation. In **Sessions 4 & 5**, the skills addressed in this session will be practiced in a practical setting.

#### **Story**

Amal is a lady having two (2) children, one boy 6 years old and one girl 3 years old. She was using intra-uterine contraceptive device (IUD) as a family planning method, but she got pregnant on top of IUD. She went to a physician, who did pregnancy test for her and the result was positive. The physician extract the IUD. After about one month, mild vaginal bleeding occurred. She returned to the physician, who gave her injection to save the pregnancy and advised her not to do severe effort for one week. The hemorrhage did not stop. She returned back to the physician in a private hospital, who did ultrasonography and

## Story

diagnosed as “incomplete abortion”. He decided to make curettage to stop the uterine bleeding. He gave (by himself) general anesthesia and did the curettage. She died in the private hospital.

Sixty percent (60%) of ante-partum hemorrhage deaths were attributed to delay in seeking care. (NMMS 1992-1993, MOHP/CSP, 1994)

## LEARNING OBJECTIVES

By the end of this session each participant should be able to:

1. Take and record client personal data following the Standard Obstetric Record Form and criteria mentioned in the protocol.
2. Complete the client obstetric data following the Standard Obstetric Record Form and criteria mentioned in the protocol.
3. Examine the client at risk of abortion following the criteria in the Skill Checklist, Physical Examination (Bleeding in Pregnancy Before 20 Weeks Gestation) and in the protocol.
4. Investigate the client at risk of abortion according to the protocol.
5. Differentiate between the types of abortions following the criteria in the Diagnostic Flow Charts, “Cervix is Opened”; “Cervix is Closed” and according to the protocol.
6. Manage the case of abortion following the criteria in the Management Flow Chart, “Management of Abortion” and according to the protocol.

**LEARNING  
ACTIVITIES**

**Time**

- A. Motivate Learning:** The facilitator reviews the session purpose and learning objectives, learning activities and assessment strategies. The session purpose and story are presented using an overhead transparency. The different activities to be used during the session, and how the participants will be assessed at the end of the session are reviewed with group. **10 min.**
- B. Learning Objectives 1 & 2**  
**Group Discussion:** In the large group the facilitator discusses with the Participants the importance of taking and recording a detailed history (personal & obstetric) from pregnant women before 20 weeks gestation, following the criteria in the protocol. Then on a flip chart, the questions to be asked during the history are recorded and compared against the Standard Obstetric Record Form showed on the OHT and distributed as HO. **20 min.**
- C. Learning Objective 3**  
**Small Groups Exercise:** Participants are divided into small groups 3-4 each, and are asked to list the steps they should follow when doing a physical examination of a woman with bleeding in pregnancy before 20 weeks gestation. **30 min.**
- Large Group Discussion:** Then during a large group discussion, the outcome of the work of the small groups recorded on flip chart is discussed and compared against the criteria in the Skill Checklist, Physical Examination (Bleeding in Pregnancy Before 20 Weeks Gestation) and the protocol projected as an OHT. **20 min.**
- D. Learning Objective 4**  
**Case Study:** The facilitator introduces the importance of the proper investigation that must be done with a case of bleeding in pregnancy before 20 weeks gestation, s/he divides the participants into two groups then distributes handouts of a different case studies. The objectives of this case are:  
1) Emphasize the importance of investigations for cases of bleeding in pregnancy before 20 weeks gestation.  
2) List the investigations needed for these cases.  
3) Stress on the importance of these investigations for proper management of bleeding in pregnancy. **20 min.**  
Each participant must complete the case study.
- Case Study Discussion:** The facilitator discusses and critiques the outcome of the case study against the investigations needed for proper management of different cases according to the criteria in the protocol used as an OHT. **30 min.**

**LEARNING  
ACTIVITIES**

**Time**

**E. Learning Objectives 5 & 6**

**Brain Storming & Case Studies:** The participants are instructed to make differential diagnosis and management for case studies of bleeding in pregnancy before 20 weeks gestation. The facilitator opens a covered flip chart wall graphics on which four (4) cases are recorded (one for each), where two (2) case studies cover the closed cervix topic and another two (2) case studies cover the opened cervix topic.

The outcome of the brain storming is recorded on flip chart and compared against the criteria in the flow-charts showed as OHT:

- 1) Diagnostic Flow Chart, Cervix is Opened
- 2) Diagnostic Flow Chart, Cervix is Closed. and
- 3) Management Flow Chart, Management of Abortion

**60 min.**

**F. Summary:** At the end of this session the facilitator asks one of the participants to summarize the session against the criteria in the learning objectives. The facilitator then completes the session summary using the flip chart graphics and overhead transparencies used during the session.

**10 min.**

**ASSESSMENT OF  
COMPETENCIES**

To start developing “basic competency” each participant will be assessed against the criteria in the learning objectives while learning activities are being conducted.

<b>Learning Objectives</b>	<b>Assessment Strategy/Methods</b>
1. Take and record client personal data following the Standard Obstetric Record Form and criteria mentioned in the protocol.	1. Outcome of group discussion
2. Complete the client obstetric data following the Standard Obstetric Record Form and criteria mentioned in the protocol.	2. Outcome of group discussion
3. Examine the client at risk of abortion following the criteria in the Skill Checklist, Physical Examination (Bleeding in Pregnancy Before 20 Weeks Gestation) and in the protocol.	3. Outcome of small and large group discussion
4. Investigate the client at risk of abortion according to the protocol.	4. Outcome of case studies
5. Differentiate between the types of abortions following the criteria in the	5. Outcome of brain storming

## ASSESSMENT OF COMPETENCIES

To start developing "basic competency" each participant will be assessed against the criteria in the learning objectives while learning activities are being conducted.

Learning Objectives	Assessment Strategy/Methods
Diagnostic Flow Charts, "Cervix is Opened"; "Cervix is Closed" and according to the protocol.	
6. Manage the case of abortion following the criteria in the Management Flow Chart. "Management of Abortion" according to the protocol.	6. Outcome of brain storming

### PREPARATION (session specific)

**Facilitator:** The facilitator must make sure that there are enough variety of case studies to be able to conduct the learning activities.

### RESOURCES

- **Module: Bleeding in Pregnancy**
- **Essential Obstetric Care Resource Manual, Protocol: Bleeding in Pregnancy (Before 20 weeks Gestation)**
- Overhead transparency, flip chart graphic or handouts of the following:
  - Session Purpose and Story Session Learning Objectives
  - Standard Obstetric Record Form
  - Skill Checklist, Physical Examination (Bleeding in Pregnancy Before 20 Weeks)
  - Investigations required for a case of bleeding in pregnancy before 20 weeks gestation
  - (2) Case Studies: Bleeding in Pregnancy (Before 20 Weeks Gestation)
  - (2) Case Studies: Cervix is Opened
  - (2) Case Studies: Cervix is Closed
  - Diagnostic Flow Chart: Cervix is Opened
  - Diagnostic Flow Chart: Cervix is Closed
  - Management Flow Chart, Management of Abortion
  - Flip chart and marking pens
  - Overhead projector and screen

## Standard Obstetric Record Form

### Personal data:

- Name
- Age
- Address
- Profession
- Marital status \* 1<sup>st</sup>/ Previous marriage  
\* No. of years
- Consanguinity
- Special habits

### Obstetric data:

#### 1- GP

- 1.1 Parity number (pregnancy outcome, route of delivery)
- 1.2 Live births (Sex and Age)
- 1.3 Still births (Sex and No.)
- 1.4 How many children are presently alive?
- 1.5 If they had died, from what cause?
- 1.6 Mode of delivery (cesarean, forceps, ventous, normal)
- 1.7 Abortions (gestational age, No. and types)
- 1.8 Date of last labor
- 1.9 Date of last abortion
- 1.10 Congenital anomalies of previous deliveries

#### 2- L.M.P

#### EDD.

- 2.1 Pattern
- 2.2 Amount
- 2.3 Date of 1<sup>st</sup> day

#### 3- Vaginal bleeding

- 3.1 Color
  - Brownish
  - Rosy
  - Red
- 3.2 Amount
  - Light
  - Moderate
  - Severe
- 3.3 Duration
- 3.4 Presence or absence of clots
- 3.5 Passed tissue or not

**RESOURCE (HANDOUT)**

**Standard Obstetric Record Form**

**4- Pain**

- 4.1 Back pain
- 4.2 Lower Abdominal pain

**5- Symptoms of Hypotension/Hypovolaemia**

- 5.1 Dizziness (Drowsiness)
- 5.2 Nausea / Vomiting
- 5.3 Headache
- 5.4 Pallor
- 5.5 Visual disturbances
- 5.6 Thirst
- 5.7 Diaphoresis
- 5.8 Fainting
- 5.9 Oliguria

**6- Urinary tract associating Symptoms**

- 6.1 Dysuria
- 6.2 Frequency
- 6.3 Retention
- 6.4 Urinary flow interruption
- 6.5 Oliguria

**RESOURCE (OHT & HANDOUT)**

**SKILL CHECKLIST**

**Title: Physical Examination (Bleeding in Pregnancy before 20 Weeks)**

**Facilitator:** Use this skill checklist as a guide when demonstrating the skill and assessing participants' performance.

**Participants:** Use the skill checklist as a guide when practicing this skill. Your performance will be assessed against the criteria in this checklist.

**Rating:** 1 = Needs Improvement  
2 = Satisfactory

STEPS	RATE	COMMENTS
<b>1. Vital Signs</b> 1.1 Blood Pressure 1.2 Pulse 1.3 Temperature 1.4 Respiratory Rate		
<b>2. Physical Examination</b> 2.1 General Conditions: - Strong - Weak 2.2 Coloration: - Pale - Jaundiced - Cyanosed 2.3 Neck veins: - Absent - Prominent 2.4 Chest examination: - Inspection - Auscultation 2.5 Heart auscultation: - Normal sounds - Abnormal sounds 2.6 Abdominal examination - Fundal level - FHS - Masses - Tenderness - Rigidity 2.7 Lower limbs: - Color - edema		

## SKILL CHECKLIST

### Title: Physical Examination (Bleeding in Pregnancy before 20 Weeks)

**Facilitator:** Use this skill checklist as a guide when demonstrating the skill and assessing participants' performance.

**Participants:** Use the skill checklist as a guide when practicing this skill. Your performance will be assessed against the criteria in this checklist.

**Rating:**        1 = Needs Improvement  
                      2 = Satisfactory

STEPS	RATE	COMMENTS
<p><b>3. Local examination</b></p> <p>3.1 Inspection</p> <p style="padding-left: 20px;">- Vulva                      - Vagina</p> <p>3.2 Bimanual: [it may induce a bleeding attack]</p> <p style="padding-left: 20px;">- Cervix:</p> <p style="padding-left: 40px;">- opened                      - closed</p> <p style="padding-left: 40px;">- Products of conception (vesicles)</p> <p style="padding-left: 40px;">- Infection</p> <p style="padding-left: 20px;">- Uterus:</p> <p style="padding-left: 40px;">- Size                              - Shape</p> <p style="padding-left: 40px;">- Consistency</p> <p style="padding-left: 20px;">- Adnexa</p> <p style="padding-left: 40px;">- Pain                              - Masses</p>		
<p>3.3 Speculum examination</p> <p style="padding-left: 20px;">- Cervix:</p> <p style="padding-left: 40px;">- Blood</p> <p style="padding-left: 40px;">- Products of conception</p> <p style="padding-left: 40px;">- Vesicles (Molar pregnancy)</p> <p style="padding-left: 20px;">- Vagina</p> <p style="padding-left: 40px;">- Blood</p> <p style="padding-left: 40px;">- Products of conception</p> <p style="padding-left: 40px;">- Vesicles (Molar pregnancy)</p>		

**NB** Each step must receive a rating of 2. Note corrective action to be taken under "comments" for any step receiving a rating of 1 (needs improvements).

**RESOURCE (OHT)**

**Investigations Required for Case of Bleeding in Pregnancy  
(Before 20 Weeks Gestation)**

**A. Blood:**

- A.1 Complete Blood Count
- A.2 Hematocrit
- A.3 ABO-Rh
- A.4 Sample for cross-matching
- A.5 Serum chorionic gonadotropin (B-subunit)

**B. Urine:**

- B.1 Complete urine analysis
- B.2 Urinary chorionic gonadotropin

**C. Ultrasonography:**

- C.1 Uterine size & content
- C.2 Adenexal masses
- C.3 Pouch of Douglas (Blood Collection/masses)
- C.4 State of the cervix

## Case Study

### Bleeding in Pregnancy (Before 20 Weeks Gestation)

Ola is married since 2 years, she has no children but she was pregnant 2 times before and aborted. The lady has missed 2 menstrual periods and today she showed at the clinic because there is vaginal spotting since yesterday, night and some lower abdominal pain.

- What additional questions would you like to ask her?
- What areas would you focus on during the physical examination?
- What is your diagnosis?
- What do you now tell her and what do you do for her?

## RESOURCE (HANDOUT)

### Case Study

#### Bleeding in Pregnancy (Before 20 Weeks Gestation)

Dina is 30 years old. She has three girls. She is pregnant, for the fourth time, hoping to have a baby boy. She came to the clinic today because she feels that her tummy is small being in the fourth month compared with her previous pregnancies.

- What additional questions would you like to ask her?
- What areas would you focus on during the physical examination?
- What is your diagnosis?
- What do you now tell her and what do you do for her?

## Case Study

### Cervix is Opened

Noha is 24 years old, she has one child, boy who is 2 years old. She is 10 weeks pregnant now, this is her third pregnancy as she aborted 6 months ago, an 8 weeks conception which didn't require a curettage as advised by her obstetrician. Today she showed at the Clinic very anxious, she has low backache and bleeding like the menses. She is wondering what is happening? After examination, her cervix found to be opened and bleeding (++)

- What additional questions would you like to ask her?
- What areas would you focus on during the physical examination?
- What is your diagnosis?
- What do you now tell her and what do you do for her?

## RESOURCE (Wall Graphic)

### Case Study

#### Cervix is Opened

Samar is 26 years old, married since 3 years. She had 1 previous 2<sup>nd</sup> trimester abortion, but the fetus was 5 months. Now she is 10 weeks pregnant and she is complaining of lower abdominal colics and backache. On examination the cervix found to be opened but no vaginal bleeding.

- What additional questions would you like to ask her?
- What areas would you focus on during the physical examination?
- What is your diagnosis?
- What do you now tell her and what do you do for her?

## Case Study

### Cervix is Closed

Gihan is 27 years old. she has 2 children, a girl 5 years old & a boy 2 years old. She got her periods since 1 week but it was 17 days late. Today she is complaining of lower abdominal pain, brownish vaginal discharge and vomiting. On examination her blood pressure was 90/50, her lower abdomen was rigid. Per vagina the cervix found to be closed and tender but bleeding was slight and brownish

- What additional questions would you like to ask her?
- What areas would you focus on during the physical examination?
- What is your diagnosis?
- What do you now tell her and what do you do for her?

## Case Study

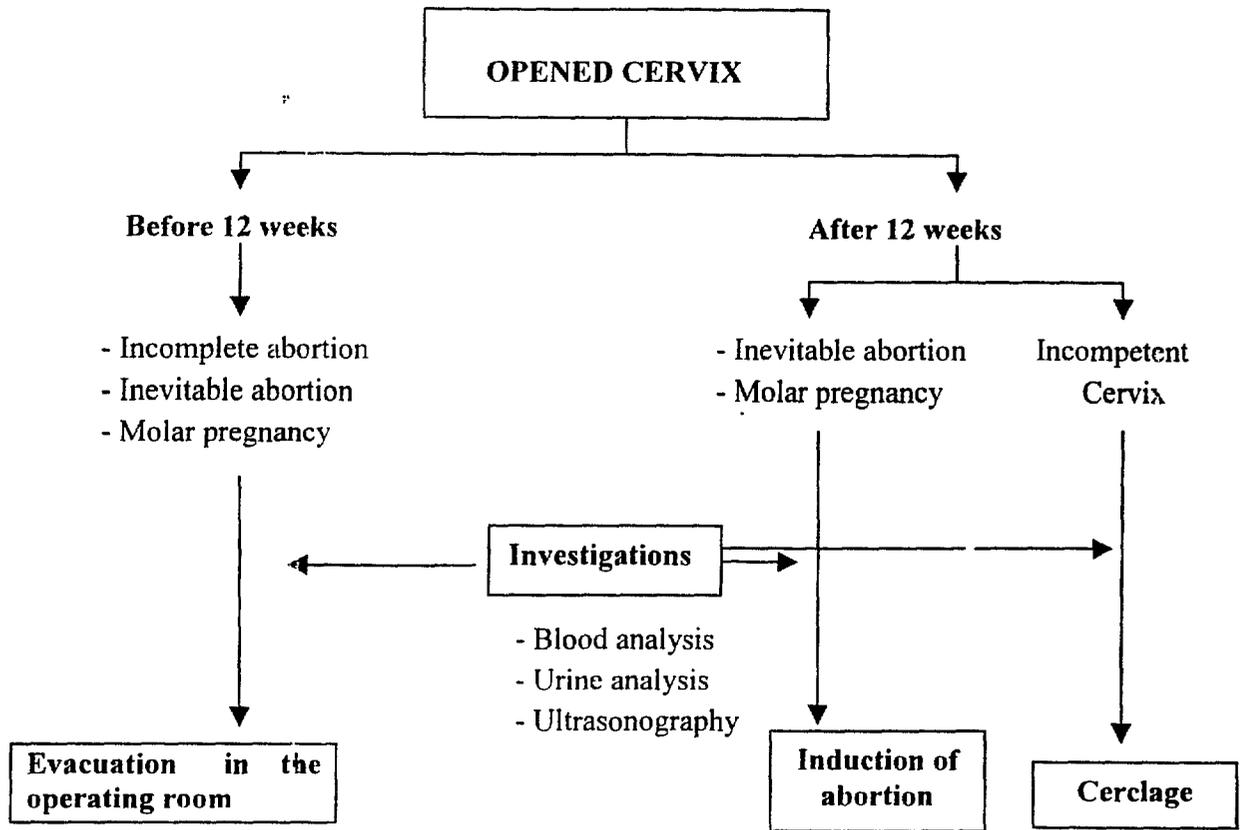
### Cervix is Closed

Nora is 26 years old. She has a baby girl 2 years old. She is pregnant 12 weeks and complaining of spotting since 2 days. On examination by ultrasonography the cervix was found to be closed and uterine size corresponds to her dates.

- What additional questions would you like to ask her?
- What areas would you focus on during the physical examination?
- What is your diagnosis?
- What do you now tell her and what do you do for her?

Diagnostic Flow Chart

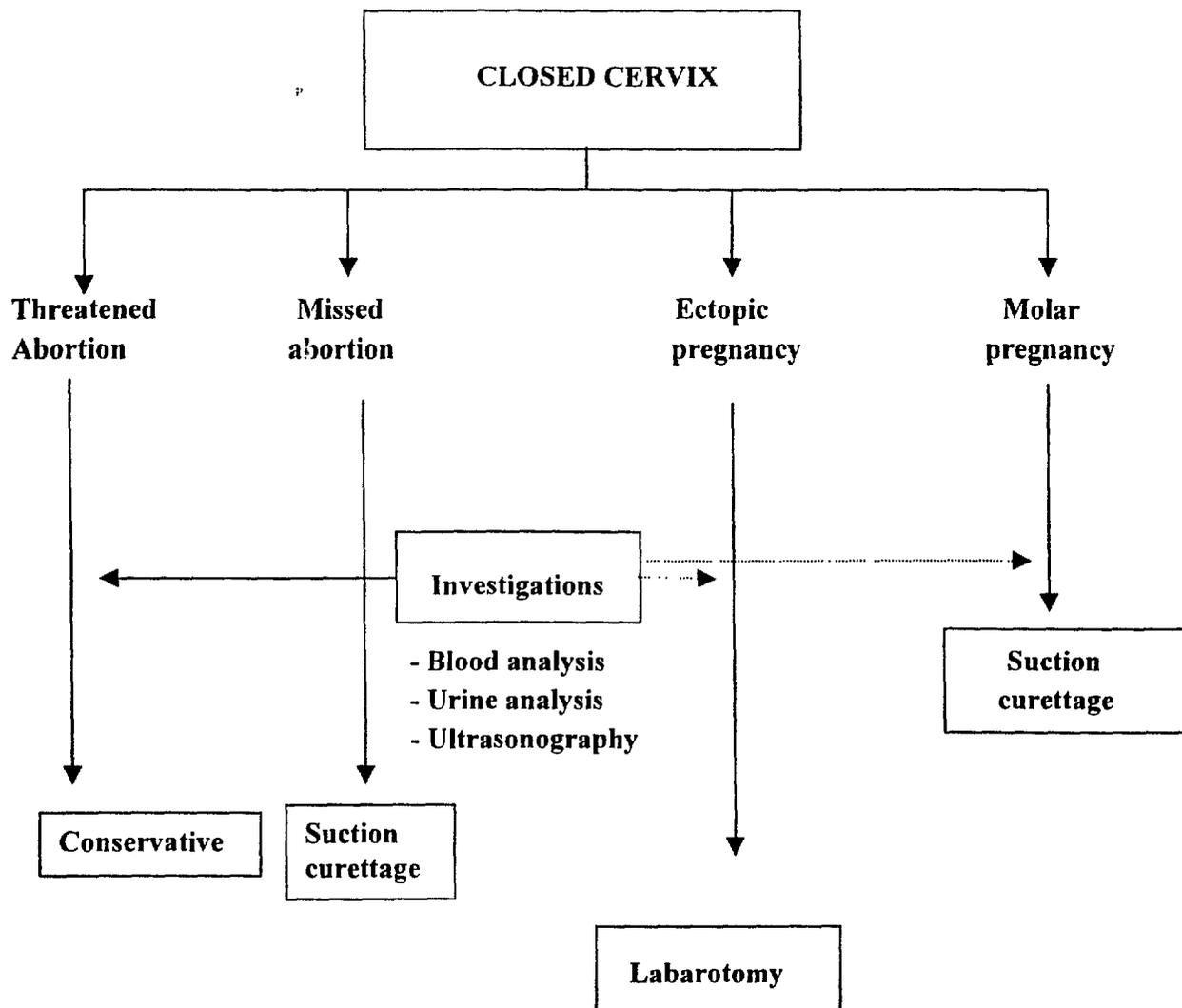
Cervix is Opened



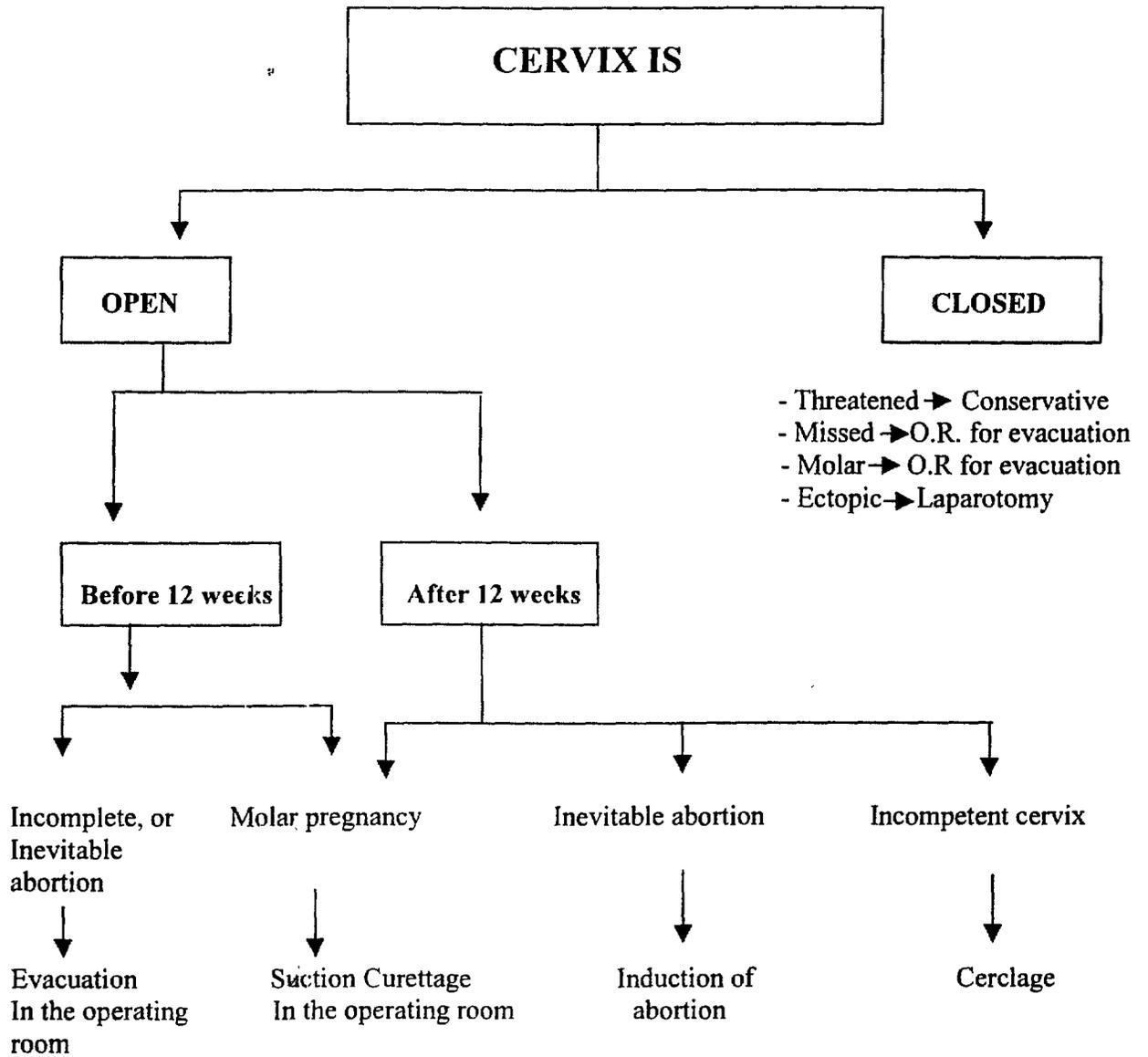
The outcome of discussion is presented on an overhead transparency

Diagnostic Flow Chart

Cervix is Closed



Management Flow Chart  
Bleeding in Pregnancy (before 20 weeks gestation)  
Management of Abortion



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**DEVELOP  
BASIC  
COMPETENCY  
(Classroom)**

**SESSION OUTLINE**

**MODULE: Bleeding In Pregnancy**

**Session 2: Diagnosis and Management of Bleeding in Pregnancy (Before 20 Weeks Gestation)**

**Key:** K = Knowledge      S = Skill      A = Attitudes

Session Agenda	Learning Objectives	Assessment of Competencies	Learning Activities	Key Resources
<p><b>Day: 1</b> <b>Time: 3 hrs.</b> <b>20 min.</b></p>	<p>1. Take and record client personal data following the Standard Obstetric Record Form and criteria mentioned in the protocol</p> <p>2. Complete the client obstetric data following the Standard Obstetric Record Form and criteria mentioned in the protocol.</p>	<p>1. K: Outcome of group discussion</p> <p>2. K: As above</p>	<p><b>A. Motivate Learning:</b></p> <ul style="list-style-type: none"> <li>- Purpose of session</li> <li>- Story: Sixty percent (60%) of antepartum hemorrhage deaths are attributed to delay in seeking care.</li> <li>- Review learning objectives, activities and assessment</li> </ul> <p><b>B. Group Discussion:</b></p> <ul style="list-style-type: none"> <li>- Importance of taking and recording a complete history from pregnant women before 20 weeks gestation</li> <li>- Points to be recorded are compared against the criteria in the Standard Obstetric Record Form are recorded on a flip chart</li> </ul>	<ul style="list-style-type: none"> <li>- Module</li> <li>- OHT: Purpose and Story</li> <li>- Flip chart: Session Learning Objectives</li> <li>- Protocol: Bleeding in Pregnancy</li> <li>- Handout: Standard Obstetrics record Form</li> </ul>
	<p>3. Examine the client at risk of abortion following the criteria in the Skill Checklist, Physical Examination (Bleeding in Pregnancy Before 20 Weeks gestation) and in the protocol.</p>	<p>3. K: Outcome of small and large group discussions</p>	<p><b>C. Small Group Exercise:</b></p> <ul style="list-style-type: none"> <li>- Small groups list the steps they should follow when examining a client with</li> </ul>	



**Session 2: Diagnosis and Management of Bleeding in Pregnancy (Before 20 Weeks Gestation)**

**Key: K = Knowledge      S = Skill      A = Attitudes**

Session Agenda	Learning Objectives	Assessment of Competencies	Learning Activities	Key Resources
	<p>5. Differentiate between the types of abortions according to the criteria in the Diagnostic Flow Charts, "Cervix is Opened", "Cervix is Closed" and as noted in the protocol.</p> <p>6. Manage the case of abortion following the criteria in the Management Flow Chart, " Management of Abortion" and according to the protocol.</p>	<p>5. K: Outcome of brain storming S: Problem solving using flow chart</p> <p>6. Outcome of brain storming S: Problem solving using flow chart</p>	<p><b>E. Brain Storming:</b></p> <ul style="list-style-type: none"> <li>- Participants make a differential diagnosis of bleeding in pregnancy (before 20 weeks gestation) associated with abortion, following the two Diagnostic Flow Charts and then make management decisions according to the criteria in the Management Flow Chart</li> <li>- Outcome of brain storming is recorded on flip chart and compared against criteria in the Flow Charts</li> </ul> <p><b>F. Summary:</b> Determine if <u>each</u> participant met the criteria in all of the learning objectives</p>	<ul style="list-style-type: none"> <li>- Handout: Diagnostic Flow Chart, Cervix Open</li> <li>- Handout: Diagnostic Flow Chart, Cervix Closed</li> <li>- Handout: management Flow Chart, management of Abortion</li> <li>- Protocol</li> <li>- wall graphic or OHT: Learning Objectives</li> </ul>

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**Session 3: Diagnosis and Management of Bleeding in Pregnancy  
(After 20 Weeks Gestation)**

**DEVELOP  
BASIC  
COMPETENCY  
(Classroom)**

**Facilitator - led Session**

**Day:**

**Time:** 3 hrs. 10 min.

**Task:** Prevent, diagnose, and manage bleeding in pregnancy

**Competency 3:** Identify, assess and manage ante-partum hemorrhage (bleeding in pregnancy after 20 weeks gestation)

**Skills**

3. 1 Take complete history and recognize symptoms due to bleeding after 20 weeks gestation
3. 2 Perform a physical examination of the patient and recognize signs due to bleeding after 20 weeks gestation
3. 3 Interpret laboratory results to reach a proper diagnosis
3. 4 Manage bleeding in pregnancy after 20 weeks gestation

**OVERVIEW**

**Purpose**

The purpose of this session is to provide the participant with clear diagnosis and management of ante-partum hemorrhage.

## Story

The woman was 34 years old. her health status before pregnancy was well. She had vaginal bleeding in the seventh month of pregnancy. She didn't feel fetal movement, three days before death. She sought medical advice of an obstetrician who told her that she had intra-uterine fetal death. She was admitted at the hospital, labor had been induced when it failed, evacuation had been done. The woman died in the hospital during evacuation.

Early diagnosis and management of such a critical condition, as mentioned above, is considered life-saving for the mother and prevents fetal wastage.

In maternal mortality survey, there were 229 total maternal deaths due to hemorrhage. 58 were antepartum and 178 were postpartum. Hemorrhage represents 32% of all maternal deaths and 46% of all direct obstetric causes of maternal deaths. Ninety eight (98%) of deaths due to antepartum hemorrhage and 99% of deaths due to postpartum hemorrhage deaths were preventable.

## LEARNING OBJECTIVES

By the end of this session, each participant should be able to:

1. Define the ante-partum hemorrhage according to the protocol.
2. List the possible causes of ante-partum hemorrhage as outlined in the protocol.
3. Take a complete history of a woman with bleeding in pregnancy (after 20 weeks gestation) according to the "Standard Obstetric Record Form".
4. Perform physical examination required for the patient with ante-partum hemorrhage according to the Skill Checklist "Physical Examination" (bleeding in pregnancy after 20 weeks gestation).
5. Perform the investigations needed for a patient with bleeding in pregnancy (after 20 weeks gestation) according to the Skill Checklist "Physical Examination" (bleeding in pregnancy after 20 weeks gestation).
6. Recognize the symptoms & signs of ante-partum hemorrhage as noted in the protocol.
7. Manage the cause of ante-partum hemorrhage following the Management Scheme outlined in the protocol.

**LEARNING  
ACTIVITIES**

**Time**

- A. **Motivate Learning:** The facilitator reviews the session purpose, story and learning objectives, learning activities and assessment strategies. The session purpose and story are presented using an overhead transparency. The session learning objectives are presented using a flip chart. The different learning activities to be used during the session are reviewed with the group. How the participants will be assessed at the end of the session against the criteria stated in learning objectives is reviewed. **10 min.**

**Learning Objective 1:**

- B. **Large Group Discussion:** The facilitator defines ante-partum hemorrhage using overhead transparency for definition of ante-partum hemorrhage according to the protocol after discussing it with the group. **10 min.**

**Learning Objective 2:**

- C. **Brain Storming:** The facilitator asks participants what are the possible causes of ante-partum hemorrhage, records the causes mentioned by the participants on a flip chart. **30 min.**

**Presentation:** The facilitator reviews the possible causes of bleeding in pregnancy after 20 weeks gestation following the protocol. **10 min.**

**Learning Objectives 3, 4 & 5:**

- D. **Brain Storming:** The facilitator asks the participants how to take and record a medical history in general using the flip chart to record what points the participants mentioned. The facilitator uses an overhead transparency of history taking according to the Standard Obstetric Record Form & the protocol then starts to compare between the flip chart (wall graphic) and the transparency.

Repeat again as was done in history, ask physical examination how it is done and the investigations needed according to the Skill Checklist Physical Examination (bleeding in pregnancy after 20 weeks) doing same as above. **60 min.**

**LEARNING  
ACTIVITIES**

**Time**

**Learning Objectives 6 & 7**

- E. Group Discussion:** The participants are divided into small groups 3 - 4 each, each group is asked to prepare a management scheme for different cases of bleeding in pregnancy according to symptoms & signs. Groups are asked to present their work on the flip chart, feed back from the facilitator is given referring to the symptoms & signs of a case with (bleeding in pregnancy after 20 weeks) and schemes of Management in the protocol shown on OHTs. **60 min.**
- F. Summary:** At the end of this session, the facilitator asks some of the participants to summarize the session against the criteria in learning objectives. The facilitator then completes the session summary using the wall graphics and overhead transparencies used during the session. **10 min.**

**ASSESSMENT OF  
COMPETENCIES**

To start developing “basic competency”, each participant will be assessed against the criteria in the learning objectives while learning activities are being conducted.

<b>Learning Objectives</b>	<b>Assessment Strategy/Methods</b>
1. Define the ante-partum hemorrhage according to the protocol.	1. Questions and answers
2. List the possible causes of ante-partum hemorrhage as outlined in the protocol.	2. Brain storming , questions and answers
3. Take a complete history of a woman with bleeding in pregnancy (after 20 weeks gestation) according to “the Standard Obstetric Record Form”.	3. Brain storming , questions and answers
4. Perform physical examination required for the patient with anti-partum hemorrhage according to the Skill Checklist “Physical Examination” (bleeding in pregnancy after 20 weeks gestation).	4. Brain storming , questions and answers

## ASSESSMENT OF COMPETENCIES

To start developing "basic competency", each participant will be assessed against the criteria in the learning objectives while learning activities are being conducted.

Learning Objectives	Assessment Strategy/Methods
5. Perform the investigations needed for a patient with bleeding in pregnancy (after 20 weeks gestation) according to the Skill Checklist "Physical Examination" (bleeding in pregnancy after 20 weeks gestation).	5. Brain storming , questions and answers
6. Recognize the symptoms & signs of ante-partum hemorrhage as noted in the protocol	6. Outcome of group discussion
7. Manage the cause of ante-partum hemorrhage following the Management Scheme outlined in the protocol	7. Outcome of group discussion

### PREPARATION (session specific)

There is no session specific preparation required.

### RESOURCES

- **Module: Bleeding in Pregnancy**
- **Essential Obstetric Care Resource Manual, Protocol: Bleeding in Pregnancy after 20 weeks gestation**
- Overhead transparencies, flip chart graphics or handouts of the following:
  - Session Purpose and Story
  - Session Learning Objectives
  - Definition of Ante-partum hemorrhage
  - Possible Causes of Ante-partum Hemorrhage
  - Standard Obstetric Record Form
  - Skill Checklist "Physical Examination" (Bleeding in pregnancy after 20 weeks gestation)
  - Symptoms & Signs of Ante-partum Hemorrhage
  - Management Scheme of Placenta Previa
  - Management Scheme of Uncertain Diagnosis of Placenta Previa
  - Management Scheme of Abruptio Placentae
  - Flip Chart and marking pens
  - Overhead projector and screen

**RESOURCE (OHT)**

**Ante-Partum Hemorrhage**

**Definition**

Bleeding from the reproductive tract during pregnancy after 20 weeks gestation. It must be considered due to a placenta previa or abruptio placentae till proven otherwise.



**RESOURCE (OHT)**

**Possible Causes of Ante-partum Hemorrhage**

- Placenta Previa
- Abruptio Placentae
- Trauma
- Tumors
- Vasa previa
- Ruptured uterus
- Gynecologic causes:
  - Cervical polyp
  - Cervical neoplasm
  - Cervical erosion
  - Vaginal varicosities
  - Vaginal neoplasm

**RESOURCE (OHT & HANDOUT)**

**Standard Obstetric Record Form**

**Personal Data:**

- Name
- Age
- Address
- Profession
- Marital Status
  - \* 1<sup>st</sup> previous marriage
  - \* numbers of years
- Consanguinity
- Special habits

**Obstetric Data:**

1. **GP**

- 1.1 Parity number (pregnancy outcome, route of delivery)
- 1.2 Live births (Sex and Age)
- 1.3 Still births (Sex and No.)
- 1.4 How many children are presently alive
- 1.5 If they had died, from what cause
- 1.6 Mode of delivery (cesarean, forceps, ventous, normal)
- 1.7 Abortions (gestational age, No. and types)
- 1.8 Date of last labor
- 1.9 Date of last abortion
- 2.1 Congenital anomalies of previous deliveries

2. **L.M.P**

**EDD**

- 2.1 Pattern
- 2.2 Amount
- 2.3 Date of 1<sup>st</sup> day

3. **Vaginal Bleeding:**

- 3.1 Color
  - brownish
  - rosy
  - red

**RESOURCE (HANDOUT)**

**Standard Obstetric Record Form**

**Obstetric Data:**

- 3.2 Amount
  - light "
  - moderate
  - severe

**3. Pain**

- 4.1 Backpain
- 4.2 lower abdominal pain

**5. Symptoms of Hypotension/Hypervolaemia:**

- 5.1 Dizziness (drowsiness)
- 5.2 Nausia/vomiting
- 5.3 Headache
- 5.4 Pallor
- 5.5 Visual disturbances
- 5.6 Thirst
- 5.7 Diaphoresis
- 5.8 Fainting
- 5.9 Oliguria

**6. Urinary Tract associating Symptoms:**

- 6.1 Dysuria
- 6.2 Frequency
- 6.3 Retention
- 6.4 Urinary flow interruption
- 6.5 Oliguria

**RESOURCE (HANDOUT) (OHT)**

**SKILL CHECKLIST**

**Title: Physical Examination (Bleeding in Pregnancy after 20 Weeks)**

**Facilitator:** Use this skill checklist as a guide when demonstrating the skill and assessing participant performance.

**Participants:** Use the skill checklist as a guide when practicing this skill. Your performance will be assessed against the criteria in this checklist.

**Rating:** 1 = Needs Improvement  
2 = Satisfactory

STEPS	RATE	COMMENTS
<b>1. Vital Signs</b> 1.1 Blood Pressure 1.2 Pulse 1.3 Temperature 1.4 Respiratory Rate		
<b>2. Physical Examination</b> 2.1 General Conditions: - Strong            - Weak 2.2 Coloration: - Pale              - Jaundiced - Cyanosed 2.3 Neck veins: - Absent           - Prominent 2.4 Chest examination: - Inspection      - Auscultation 2.5 Heart auscultation: - Normal sounds - Abnormal sounds		

## SKILL CHECKLIST

### Title: Physical Examination (Bleeding in Pregnancy after 20 Weeks)

**Facilitator:** Use this skill checklist as a guide when demonstrating the skill and assessing participant performance.

**Participants:** Use the skill checklist as a guide when practicing this skill. Your performance will be assessed against the criteria in this checklist.

**Rating:**     1 = Needs Improvement  
                  2 = Satisfactory

STEPS	RATE	COMMENTS
2.6 Abdominal examination - Fundal level - FHS - Masses - Tenderness - Rigidity 2.7 Lower limbs: - Color           - Edema		
3. <b><u>Local examination</u></b> 3.1 Inspection for: - Vulva           - Vagina		
4. <b><u>Ultrasound</u></b> 4.1 Fetal Scanning: - Viability       - Dating - Measurements 4.2 Placental Scan: - Location & retroplacental area - Grading 4.3 Liquor - Amount         - Appearance		

## SKILL CHECKLIST

**Title: Physical Examination (Bleeding in Pregnancy after 20 Weeks)**

**Facilitator:** Use this skill checklist as a guide when demonstrating the skill and assessing participant performance.

**Participants:** Use the skill checklist as a guide when practicing this skill. Your performance will be assessed against the criteria in this checklist.

**Rating:** 1 = Needs Improvement  
2 = Satisfactory

STEPS	RATE	COMMENTS
<b>5. Investigations</b> 5.1 Blood: <ul style="list-style-type: none"><li>- Complete blood count</li><li>- Hematocrite</li><li>- Sample for cross-matching</li><li>- Fibrinogen</li><li>- Prothrombin time</li><li>- Partial thromboplastin time</li></ul> 5.2 Urine: <ul style="list-style-type: none"><li>- Complete urine analysis</li></ul>		

**NB** Each step must receive a rating of 2. Note corrective action to be taken under A comments A for any step receiving a rating of 1 (needs improvements).

**RESOURCE (OHT)**

**Symptoms & Signs  
of Ante-partum Hemorrhage**

	<b>Placenta Previa</b>	<b>Abruptio Placentae</b>
A. Vaginal bleeding - Light (spotting) - Moderate (like menstrual period) - Heavy	Present + Visible Revealed	May be present + Visible                      Not visible Revealed                      Concealed
B. Vaginal discharge - Brown                      - Maroon	May be present	May be present [Port-wine colored amniotic fluid] is highly suggestive
C. Lower abdominal pain	Absent	Present
D. Uterine condition	Soft	Painful & tense
E. Fetal condition: - F.H.S. - Fetal parts	Usually present Usually palpable	Usually absent Difficult to feel
F. Hypovolemia - Tachycardia - Nausea, vomiting - Oliguria - Shock	May be present	May be present
G. Coagulopathies	When severe	30% of cases

**RESOURCE (OHT)**

**Management Scheme  
Uncertain Diagnosis of Placenta Previa**

“Patient should be treated as if she” has a Placenta Previa

**A. Vaginal Examination:**

- A.1 Performed when labor begins
- A.2 To exclude presence of placenta covering the internal os of the cervix and impending the birth of the baby
- A.3 Must take place in the operating room
- A.4 Prepare the operating room for emergency cesarean and management of severe hemorrhage (Anesthesiologist, nurses, instruments, blood, 2 intravenous lines), because examination can provoke catastrophic bleeding.
- A.5 If placenta is not felt on vaginal examination the patient may be allowed to labor, with close monitoring to hemorrhage.
- A.6 Important clues to a previa include the station of the presenting part and whether the membranes are bulging or not.

## RESOURCE (OHT)

### Management Scheme Placenta Previa

- Hospitalization with complete bedrest.
- Hemoglobin and hematocrit twice a week with blood transfusions as needed to keep hematocrit above 30%
- Daily evaluation of fetal well-being with fetal movement counts or Non-Stress Test (NST) fetal monitoring, or twice weekly with a biophysical profile.
- Serial ultrasound examinations every 4 weeks documenting fetal growth and placenta location.
- Cesarean delivery when any of the following conditions are present:
  - Fetal pulmonary maturity is documented by amniocentesis
  - 38 weeks gestation are completed
  - There is uncontrollable hemorrhage
  - There is another obstetric or medical indication (ex: pre-eclampsia, evidence of severe fetal compromise, etc).
- Have available 1 or 2 units of blood during the hospital stay if possible, and always have this available blood in the operating room at the time of the cesarean section.
- Be prepared for uterine atony (have oxytocin, ergotrate and prostaglandins on hand) and for the possibility of a placenta accreta (be ready to perform an emergency hysterectomy).

## RESOURCE (OHT)

### Management Scheme Abruptio Placentae

- Hospitalization with complete bedrest
- Rapid evaluation of the maternal condition, including orthostatic vital signs, abdominal examination, fundal height measurement, and evaluation of other possibly co-existing conditions (pre-eclampsia, chronic hypertension, etc)
- Diagnose whether the patient is in labor by monitoring uterine contractions and a pelvic examination
- Intravenous line x2: one of these should be central in moderate and severe cases, or if pre-eclampsia, chronic hypertension or other associated condition exists
- Obtain laboratory examinations (see orders)
- Insert Foley's catheter
- Oxygen mask
- Evaluate fetal state: alive or dead, presence of fetal distress, gestational age
- With a mild abruptio and an immature fetus, management is conservative. In all other cases the fetus must be delivered, preferably vaginally:
  - Amniotomy in all patients.
  - Continuous monitoring of fetal heart rate and uterine activity
  - Oxytocin augmentation when necessary, but with caution (the uterine response to oxytocin may be erratic, and there is an increased chance of uterine rupture, especially in multiparas)
  - Cesarean delivery for obstetrical indications (fetal distress, failure to progress in labor). Give fresh frozen plasma and platelets to patients with coagulopathies who are going to be operated upon
  - Aggressive transfusions of whole blood or packed red blood cells, using urinary output (greater than 120ml/4hours, maternal pulse and blood pressure monitoring) as guides (**DO NOT USE** the observed blood loss as a guide for transfusion. This will almost always underestimate the actual loss in a patient with abruptio placentae).

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**DEVELOP  
BASIC  
COMPETENCY  
(Classroom)**

**SESSION OUTLINE**

**MODULE: Bleeding in Pregnancy**

**Session 3: Diagnosis and Management of Bleeding In Pregnancy (After 20 Weeks Gestation)**

**Key: K = Knowledge S = Skill A = Attitudes**

Session Agenda	Learning Objectives	Assessment of Competencies	Learning Activities	Key Resources
Day: 1 Time: 3 hrs. 10 min.	1. Define the ante-partum hemorrhage according to the protocol	1. <b>K:</b> Questions and answers	<b>A. Motivate Learning:</b> - Purpose of session - Story: 98% of maternal deaths in Egypt due to hemorrhage are preventable! - Review learning objectives, activities and assessment  <b>B. Large Group Discussion:</b> - Define ante-partum hemorrhage	- Module - OHT: Purpose and Story - Flip chart: Session Learning Objectives  - OHT: Definition of ante-partum hemorrhage - Protocol: Bleeding in pregnancy
	2. List the possible causes of ante-partum hemorrhage as outlined in the protocol	2. <b>K:</b> Brain storming; questions and answers	<b>C. Brain Storming:</b> - Participants brain storm causes of ante-partum hemorrhage  <b>Presentation:</b> - The facilitator reviews the possible causes	- Flip Chart: causes of ante-partum hemorrhage

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**Session 3: Diagnosis and Management of Bleeding In Pregnancy (After 20 Weeks Gestation)**

**Key: K = Knowledge S = Skill A = Attitudes**

Session Agenda	Learning Objectives	Assessment of Competencies	Learning Activities	Key Resources
			which is listed on a flip chart	
	3. Take a complete history of a woman with bleeding in pregnancy (after 20 weeks gestation) according to the "Standard Obstetric Record Form". 4. Perform physical examination required for the patient with ante-partum hemorrhage according to the Skill Checklist "Physical Examination" (bleeding in pregnancy after 20 weeks gestation) 5. Perform the investigations needed for a patient with bleeding in pregnancy (after 20 weeks gestation) according to Skill Checklist "Physical Examination" (bleeding in pregnancy after 20 weeks gestation)	3. <b>K:</b> Brain storming; questions and answers  4. <b>K:</b> as above  5. <b>K:</b> as above	<b>D. Brain Storming:</b> - Participants note the symptoms of ante-partum hemorrhage - Symptoms are listed on a flip chart - Listed symptoms are compared to those in the protocol  NB: The above process is repeated for the signs of ante-partum hemorrhage and the required investigations.	- Flip Chart: List of symptoms - OHT: Protocol  - Flip Chart: List of signs - Flip Chart: Investigations - OHT: Protocol
	6. Recognize the symptoms and signs of ante-partum hemorrhage as noted in the protocol	6. <b>K:</b> outcome of group discussion	<b>E. Small Group Discussion:</b> - Each group prepare a management scheme for the different types of bleeding in pregnancy (after 20 weeks gestation) on a flip chart  <b>Large Group Discussion:</b> - Small group's lists of the above are compared and critiqued against the criteria in the protocol  <b>F. Summary:</b> - Determine if <u>each</u> participant met the criteria in all of the learning objectives	- Flip Chart: List of management steps - OHT: Protocol  - Flip Chart: List of management steps - OHT: Protocol  - Wall graphic or OHT: Learning Objectives

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Session 3: Diagnosis and Management of Bleeding In Pregnancy (After 20 Weeks Gestation)

Key: K = Knowledge S = Skill A = Attitudes

Session Agenda	Learning Objectives	Assessment of Competencies	Learning Activities	Key Resources
	7. Manage the cause of ante-partum hemorrhage following the Management Scheme outlined in the protocol			

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### Session 4: Diagnosis and Management of Bleeding in Pregnancy

**DEVELOP  
BASIC  
COMPETENCY  
(Practical)**

**Supervisor-led Session**

**Day:**

**Time:** Three weeks

**Session 1:** Bleeding in Pregnancy-Danger Signs & Action to Take

**Session 2:** Diagnosis and Management of Bleeding in Pregnancy (Before 20 Weeks Gestation)

**Session 3:** Diagnosis and Management of Ante-Partum Hemorrhage (After 20 Weeks Gestation)

**Task:** Prevent, diagnose and manage bleeding in pregnancy:

Before 20 weeks gestation

- Abortion
- Ectopic pregnancy
- Molar pregnancy

After 20 weeks gestation

- Placental abruption
- Placenta Previa

**Competency 1:** Communicate with client to clarify danger signs and action to take with bleeding in pregnancy.

#### **Skills**

1. 1 Explain the importance of regular ante-natal follow-up visits for **ten (10)** cases in the out-patient clinic
1. 2 Recognize the alarming (danger) signs associated with pregnancy and action to be taken with appearance of any alarming sign for **ten (10)** cases in the out-patient clinic

**Competency 2:** Identify, assess and manage bleeding in pregnancy before 20 weeks gestation.

**Skills**

- 2.1 Record the full history of the client for **thirty (30)** cases in outpatient clinic with bleeding in pregnancy before 20 weeks gestation
- 2.2 Assess the cases at risk of abortion for **ten (10)** cases with bleeding in pregnancy before 20 weeks gestation
- 2.3 Differentiate the cases of abortion for **ten (10)** cases recorded according to the state of the cervix
- 2.4 Manage the cases of abortion (bleeding in pregnancy before 20 weeks) for **ten (10)** cases recorded

**Competency 3:** Identify, assess and manage bleeding in pregnancy after 20 weeks gestation

**Skills**

- 3.1 Record the full history of the client with bleeding after 20 weeks gestation to reach the diagnosis for **ten (10)** cases in the emergency department
- 3.2 Assess the cases at risk of ante-partum hemorrhage for **three (3)** cases (bleeding in pregnancy after 20 weeks gestation)
- 3.3 Manage the case of ante-partum hemorrhage for **three (3)** cases with bleeding in pregnancy after 20 weeks gestation

**OVERVIEW**

**Purpose**

The purpose of this two-to-three week practical session is to allow each participant to practice what s/he has learned in the classroom about diagnosis and management of bleeding in pregnancy under close supervision.

## Story

According to training progression which is:

- Provide participant with background facts,
- Tell participant how to perform skill,
- Have participant simulate skill in safe setting.
- Now it is the step to have participant perform the practical skills in the health facilities under close supervision from the supervisor to fulfil the criteria for proper diagnosis and management of bleeding in pregnancy according to the protocol for management of bleeding in pregnancy.

## LEARNING OBJECTIVES

### **Session 1: Bleeding in Pregnancy-Danger Signs & Action to Take**

By the end of this three week practical session, each participant should be able to do the following with **ten (10)** pregnant woman:

1. Explain the importance of regular ante-natal follow up visits as listed on a handout.
2. Recognize the alarming (danger) signs associated with bleeding in pregnancy and action to be taken with appearance of any alarming sign according to the protocol.

### **Session 2: Diagnosis and Management of Bleeding in Pregnancy Before 20 Weeks Gestation**

By the end of this three week practical session, each participant should be able to:

3. Record the full history of the client following the criteria in the Standard Obstetrical Record Form for **thirty (30)** cases in outpatient clinic with bleeding in pregnancy before 20 weeks gestation.
4. Assess the cases at risk of abortion for **ten (10)** cases with bleeding in pregnancy before 20 weeks of gestation according to the protocol.
5. Differentiate between the types of abortion following the Diagnostic Flow Chart for **ten (10)** cases recorded according to the state of the cervix.
6. Manage the cases of abortion according to management scheme of bleeding in pregnancy

**LEARNING  
OBJECTIVES**

before 20 weeks gestation for **ten (10)** cases recorded.

**Session 3: Diagnosis and Management of Bleeding in Pregnancy After 20 Weeks Gestation**

By end of this three week practical session, each participant should be able to:

7. Record the full history of the client with bleeding after 20 weeks gestation to reach the diagnosis following the criteria in the Standard Obstetrical Record Form for **ten (10)** cases in emergency department.
8. Assess the patients at risk of ante-partum hemorrhage for **three (3)** cases of bleeding in pregnancy after 20 weeks gestation according to protocol.
9. Manage the case of ante-partum hemorrhage according to management scheme for **three (3)** cases recorded with bleeding in pregnancy after 20 weeks gestation.

**LEARNING  
ACTIVITIES**

	<b>Time</b>
<b>A. Motivate Learning:</b> The supervisor reviews the purpose, story and learning objectives, learning activities and assessment strategies. The session purpose and story are presented using an overhead transparency. The session learning objectives are presented using flip chart. How the participant will be assessed at the end of session against the criteria stated in the learning objectives is reviewed.	<b>10 min.</b>
<b>B. Presentation:</b> The supervisor makes a presentation on the skills to practice during this session according to the objectives.	<b>30 min.</b>

**LEARNING  
ACTIVITIES**

**Time**

Learning Objectives 1-9

**C. Practical Experience & Coaching:** Participant will be assigned to interview pregnant women attending the outpatient clinic and emergency department concerning history and physical examination following the criteria checklists, and manage selected cases according to the management scheme.

**3 weeks**

Learning Objectives 1-9

**D. Weekly Clinical Conference:** The Supervisor will hold a weekly clinical conference with the participants for individual case presentations (against the criteria in the learning objectives) and review of any issues which have come up during training Remedial learning experiences are planned as required.

**2 hrs. per  
conference**

Learning Objectives 1-9

**E. Seminar & Summary:** All obstetrical staff are invited to attend the end of two (2) week seminar. Each participant has prepared **one (1)** case presentation on bleeding in pregnancy. Each presentation is critiqued against the criteria in the learning objectives (as well as protocol and skill checklists).

Individual and collective learning experiences during the three (3) weeks are discussed against the criteria in the learning objectives. Suggestions for strengthening the learning experience are noted and remedial action planned as required.

One participant then summarizes the three (3) week practical learning experience against the criteria in the learning objectives

**2 hrs.**

**ASSESSMENT OF  
COMPETENCIES**

To start developing "basic competency", each participant will be assessed against the criteria in the learning objectives while learning activities are being conducted.

Learning Objectives	Assessment Strategy/Methods
1. Explain the importance of regular ante-natal follow up visits for ten (10) pregnant women.	1. Direct supervision; fulfillment of the criteria according to skill checklist" Obstetric communications & recording" and protocol

**ASSESSMENT OF  
COMPETENCIES**

To start developing “basic competency”, each participant will be assessed against the criteria in the learning objectives while learning activities are being conducted.

Learning Objectives	Assessment Strategy/Methods
2. Recognize the alarming (danger) signs associated with pregnancy and action to be taken with appearance of any alarming signs for <b>ten (10)</b> pregnant women.	2. Direct supervision; fulfillment of the criteria according to the protocol
3. Record the full history of the client following the criteria in Standard Obstetrical Record Form for <b>thirty (30)</b> cases in outpatient clinic with bleeding in pregnancy before 20 weeks gestation.	3. Direct supervision; fulfillment of the criteria according to skill checklist “Standard Obstetric Record Form” and protocol
4. Assess the cases at risk of abortion for <b>ten (10)</b> cases with bleeding in pregnancy before 20 weeks of gestation.	4. Direct supervision; fulfillment of the criteria according to skill checklist “Physical Examination” (bleeding in pregnancy before 20 weeks gestation) and protocol
5. Differentiate the cases of abortion follow the Differential Diagnostic flow Charts for <b>ten (10)</b> cases recorded.	5. Direct supervision; fulfillment of the criteria according to Diagnostic Flow Charts and protocol
6. Manage the cases of abortion according to management scheme of bleeding in pregnancy before 20 weeks gestation for <b>ten (10)</b> cases recorded.	6. Direct supervision; fulfillment of the criteria according to Management Flow Charts and protocol
7. Record the full history of the client with bleeding after 20 weeks gestations to reach the diagnosis following the criteria in Standard Obstetrical Record form for <b>ten (10)</b> cases in emergency department.	7. Direct supervision; fulfillment of the criteria according to Standard Obstetric Record Form
8. Assess the patients at risk of ante-partum hemorrhage for <b>three (3)</b> cases of bleeding in pregnancy after 20 weeks gestation.	8. Direct supervision; fulfillment of the criteria according to skill checklist “Physical Examination” (bleeding in pregnancy after 20 weeks gestation) and protocol
9. Manage the case of ante-partum hemorrhage according to management scheme for <b>three (3)</b> cases recorded with bleeding in pregnancy after 20 weeks gestation	9. Direct supervision; fulfillment of the criteria according to management scheme in the protocol

## PREPARATION (session specific)

**Supervisor:** The supervisor must prepare all of the material listed under the following resources and organize the practical learning experience in the hospital assuring that the facilities and support system are ready for the participants. The roles of other health team members are reviewed to facilitate the learning process

**Participant:** Each participant must have met all of the criteria in the learning objectives for **Sessions 1, 2 & 3** as a prerequisite for starting this session.

## RESOURCES

- **Module: Recognize and Manage Labor**
- **Essential Obstetric Care Resource Manual, Protocol: Recognize and Manage Labor**
- Overhead transparencies, flip chart wall graphics and handouts of the following:
  - Session Purpose and Story
  - Session Learning Objectives
  - Competent and oriented obstetrical team.
  - Supervisor readily available to supervise each participant.
  - **Ten (10)** women with bleeding in pregnancy before 20 weeks gestation.
  - **Three (3)** women with bleeding in pregnancy after 20 weeks gestation.
  - Any of the resources used for **Sessions 1, 2 & 3**

**DEVELOP  
BASIC  
COMPETENCY  
(Practical)**

**SESSION OUTLINE**

**MODULE: Bleeding in Pregnancy**

**Session 4: Diagnosis and Management of Bleeding in Pregnancy**

**Key:** K = Knowledge      S = Skill      A = Attitudes

Session Agenda	Learning Objectives	Assessment of Competencies	Learning Activities	Key Resources
<p><b>Weeks:</b> 3</p>	<p><b>Session 1: Bleeding in Pregnancy – Danger Signs and Action to Take</b></p> <p>By the end of this <b>three (3)</b> week practical session, <u>each</u> participant should be able to do the following with <b>ten (10)</b> pregnant women:</p> <ol style="list-style-type: none"> <li>1. Explain the importance of regular ante-natal follow-up visits as listed on a handout</li> <li>2. Recognize the alarming (danger) signs associated with bleeding in pregnancy and action to be taken as listed in the protocol: Bleeding in Pregnancy.</li> </ol> <p><b>Session 2: Diagnosis and Management of Bleeding in Pregnancy (Before 20 Weeks Gestation)</b></p> <p>By the end of this <b>three (3)</b> week practical session, <u>each</u></p>	<ol style="list-style-type: none"> <li>1. KSA: Direct supervision in a practical setting; met criteria in skill checklist(s) and protocol</li> <li>2. KSA: as above</li> </ol>	<p><b>A. Motivate Learning:</b></p> <ul style="list-style-type: none"> <li>- Purpose of session</li> <li>- Story: 98% of maternal deaths in Egypt due to hemorrhage are preventable!</li> <li>- Review learning objectives, activities and assessment</li> </ul> <p><b>B. Presentation and Discussion:</b></p> <ul style="list-style-type: none"> <li>- Based on the learning objectives, the supervisors reviews the case to be assessed and managed under his/her supervision over the next three (3) weeks</li> <li>- The logistical requirements for making the practical experience a success, i.e., the roles of the obstetrical services team, on-call schedule, facility readiness against the criteria in the Obstetrical Service Standards, etc, are discussed</li> </ul> <p><b>C. Demonstration:</b></p>	<p><b>Preparation:</b></p> <ul style="list-style-type: none"> <li>- OBs Team: Competent</li> <li>- Supervisor: Readily available</li> <li>- Facility: Meets criteria in Obs Service Standards</li> <li>- HIS: Functional</li> </ul> <p><b>Motivate Learning:</b></p> <ul style="list-style-type: none"> <li>- <b>Module</b></li> <li>- <b>OHT: Purpose &amp; Story</b></li> <li>- Flip chart: Session Learning Objectives</li> </ul>

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### Session 4: Diagnosis and Management of Bleeding in Pregnancy

**Key:**      **K = Knowledge**          **S = Skill**          **A = Attitudes**

Session Agenda	Learning Objectives	Assessment of Competencies	Learning Activities	Key Resources
	<p>participant should be able to do the following:</p> <ol style="list-style-type: none"> <li>3. Record the full history of the client following the criteria in the Obstetrical Form for <b>thirty (30)</b> cases in the outpatient clinic with bleeding in pregnancy before 20 weeks gestation.</li> <li>4. Assess the cases at risk of abortion for <b>ten (10)</b> cases with bleeding with pregnancy before 20 weeks gestation according to the criteria in the protocol.</li> <li>5. Make a differential diagnosis of <b>ten (10)</b> cases of abortion following the criteria in the Differential Diagnosis (DD) Chart.</li> <li>6. Manage the <b>ten (10)</b> cases of abortion according to the management scheme for bleeding in pregnancy before 20 weeks as outlined in the protocol</li> </ol> <p style="text-align: center;"><b>Session 3: Diagnosis and Management of bleeding in pregnancy (After 20 weeks Gestation)</b></p> <p>By the end of this <b>three (3)</b> week practical session, <u>each</u> participant should be able to do the following:</p> <ol style="list-style-type: none"> <li>7. Record the full history of the client following the criteria in the Obstetrical Record Form for <b>ten (10)</b> cases in emergency department.</li> <li>8. Assess <b>three (3)</b> cases of ante-partum hemorrhage (bleeding after 20 weeks gestation) according to the criteria in the protocol</li> </ol>	<ol style="list-style-type: none"> <li>3. <b>KSA:</b> as above; met criteria in Obstetrical Record Form</li> <li>4. <b>KSA:</b> as above; met criteria in protocol</li> <li>5. <b>KSA:</b> as above; met criteria in DD Chart</li> <li>6. <b>KSA:</b> as above; met criteria in protocol</li> </ol> <ol style="list-style-type: none"> <li>7. <b>KSA:</b> as above; met criteria in Obstetrical Record Form</li> <li>8. <b>KSA:</b> as above; met criteria in protocol</li> </ol>	<ul style="list-style-type: none"> <li>- As each relevant case listed in the objectives present in the clinical setting, the supervisor first demonstrates how to correctly assess and manage patients according to the criteria to be followed</li> </ul> <p><b>D. Practical Experience and Coaching:</b></p> <ul style="list-style-type: none"> <li>- Under close supervision, participants practice the skills for this <u>module</u></li> </ul> <p><b>E. Weekly Clinical Conference:</b></p> <ul style="list-style-type: none"> <li>- Supervisors holds weekly clinical conference with participants to review progress towards meeting learning objectives, any logistical or other issues which may have come up</li> <li>- Remedial learning experiences are planned as required</li> </ul> <p><b>Case Presentations:</b></p> <ul style="list-style-type: none"> <li>- Each participant presents a minimum of one (1) interesting case assessed and manage during the week</li> <li>- Group an supervisor critique of each presentation</li> </ul> <p><b>F. Seminar and Summary:</b></p> <ul style="list-style-type: none"> <li>- All obstetrical staff are invited to attend the end of three (3) week seminar</li> <li>- Each participant has prepared one (1) presentation on each of the following</li> </ul>	<p><b>Demonstration and Practical Experience:</b></p> <ul style="list-style-type: none"> <li>- Handout: Obstetrical Service Standards</li> <li>- Protocol: Bleeding in Pregnancy</li> <li>- Handout: Obstetrical Record Form</li> <li>- Handouts: All Skill checklist from Session 1,2 &amp; 3</li> <li>- Clients: 30 cases per participant</li> <li>- Clients: of the 30 case, 10 with bleeding in pregnancy before 20 weeks per participant</li> <li>- Handout: DD Chart</li> <li>- Clients: of the 30 cases, 10 cases of abortion</li> </ul> <p><b>Case Presentations:</b></p> <ul style="list-style-type: none"> <li>- One (1) case study per participant per week</li> </ul> <p><b>Seminar and Summary:</b></p>

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### Session 4: Diagnosis and Management of Bleeding in Pregnancy

Key:      K = Knowledge      S = Skill      A = Attitudes

Session Agenda	Learning Objectives	Assessment of Competencies	Learning Activities	Key Resources
	<p>9. Manage <b>three (3)</b> cases of ante-partum hemorrhage (bleeding after 20 weeks gestation) according to the management scheme.</p>	<p>9. <b>KSA:</b> as above; met criteria in protocol</p>	<ol style="list-style-type: none"> <li>1) A pregnant woman who did not know that bleeding during pregnancy was a danger sign</li> <li>2) A client with bleeding in pregnancy before 20 weeks gestation</li> <li>3) A client with bleeding in pregnancy after 20 weeks gestation</li> <li>4) An assessment of Obstetrical Service against the criteria in the Obstetrical Service Standards</li> </ol> <ul style="list-style-type: none"> <li>- For <u>each</u> participant, <b>one (1)</b> of the <b>four (4)</b> prepared topics (cases) is selected and presented</li> <li>- <u>Each</u> presentation is critiqued against the relevant learning objectives criteria associated with the presentation</li> <li>- The individual and collective learning experience during the <b>three (3)</b> weeks are discussed against the criteria in the learning objectives</li> <li>- Suggestions for strengthening the learning experience are noted</li> <li>- Remedial learning experience is planned as necessary</li> </ul> <p>One (1) participant then summarizes the <b>three (3)</b> week practical learning experience against the session learning objectives</p>	<ul style="list-style-type: none"> <li>- Four (4) case studies topics per participant prepared</li> <li>- Wall graphic or OHT: Learning Objectives</li> </ul>

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### Session 5: Diagnosis and Management of Bleeding in Pregnancy

**Practice for  
Mastery  
(Practical)**

**Supervisor-led Session**

**Day:**

**Time:** 3 months

**Session 1:** Bleeding in Pregnancy - Danger Signs & Action to Take.

**Session 2:** Diagnosis and Management of Bleeding in Pregnancy (Before 20 Weeks Gestation)

**Session 3:** Diagnosis and Management of Bleeding in Pregnancy (After 20 Weeks Gestation)

**Session 4:** Diagnosis and management of Bleeding in pregnancy

**Task:** Prevent, diagnose and manage bleeding in pregnancy:

Before 20 weeks gestation

- Abortion
- Ectopic pregnancy
- Molar pregnancy

After 20 weeks gestation

- Placental abruption
- Placenta previa

**Competency 1:** Communicate with client to clarify danger signs and action to take with bleeding in pregnancy

**Skills**

- 1.1 Explain the importance of regular ante-natal follow-up visits for **thirty (30)** cases in the outpatient clinic
- 1.2 Recognize the alarming (danger) signs associated with pregnancy and action to be taken

## **Skills**

with appearance of any alarming sign for **thirty (30)** cases in the outpatient clinic

**Competency 2:** Identify, assess and manage abortion (bleeding in pregnancy before 20 weeks gestation)

## **Skills**

- 2.1 Record the full history of the client for **fifty (50)** cases in outpatient clinic with bleeding in pregnancy before 20 weeks gestation
- 2.2 Assess the cases at risk of abortion for **fifteen (15)** cases with bleeding in pregnancy before 20 weeks gestation.
- 2.3 Differentiate the cases of abortion according to the status of the cervix for **fifteen (15)** cases recorded
- 2.4 Manage the cases of abortion for **fifteen (15)** cases recorded

**Competency 3:** Identify, assess and manage ante-partum hemorrhage (bleeding in pregnancy after 20 weeks gestation)

## **Skills**

- 3.1 Record the full history of the client with bleeding after 20 weeks gestation to reach the diagnosis for **thirty (30)** cases in emergency department
- 3.2 Assess the patients at risk of ante-partum hemorrhage for **fifteen (15)** cases with bleeding in pregnancy after 20 weeks gestation
- 3.3 Manage the case of ante-partum hemorrhage for **fifteen (15)** cases recorded with bleeding in pregnancy after 20 weeks gestation

## **OVERVIEW**

### **Purpose**

The purpose of this three month session is for participants to have the opportunity to practice for mastery session specific competencies and skills in a general and district hospital concerning

## Purpose

bleeding in pregnancy before 20 weeks gestation and after 20 weeks gestation.

## Story

It is important for the participants to have an adequate opportunity to “practice for mastery” the skills in this session. Since they “developed basic competency “ during **Session 4**, they are now prepared to practice these skills with less close supervision at their work site. They will receive periodic supervision. This will provide them with feedback on their performance. A drop in morbidity and mortality statistics concerning bleeding in obstetrics should be anticipated if participants have mastered the skills associated with this session.

## LEARNING OBJECTIVES

By the end of **three (3)** months of practical experience, each participant should be able to:

1. Explain the importance of regular ante-natal follow up visits for **thirty (30)** pregnant women as listed on a handout.
2. Recognize the alarming (danger) signs associated with bleeding in pregnancy and action to be taken with appearance of any alarming signs for **thirty (30)** pregnant women according to the protocol.
3. Record the full history of the client for **thirty (30)** cases in outpatient clinic with bleeding in pregnancy before 20 weeks gestation following the criteria in the Standard Obstetric Record Form and criteria mentioned in the protocol.
4. Assess the cases at risk of abortion for **fifteen (15)** cases with bleeding in pregnancy before 20 weeks of gestation following the criteria in the Skill Checklist, Physical Examination (Bleeding in Pregnancy before 20 weeks gestation) and according to the protocol.
5. Differentiate between the types of abortion following the Differential Diagnostic Flow Chart for **fifteen (15)** cases recorded according to the state of cervix.
6. Manage the cases of abortion following the criteria in the Management Flow Chart “Management of Abortion” and according to the protocol for **fifteen (15)** cases recorded as follow:
  - Conservative treatment for **five (5)** cases threatened abortion.
  - D&C for **five (5)** cases of inevitable abortion
  - Suction curettage for **two (2)** cases of molar pregnancy

**LEARNING OBJECTIVES**

- Laparotomy for **one (1)** case of ectopic pregnancy
  - Evacuation for **two (2)** cases of missed abortion
7. Record the full history of the client with bleeding in pregnancy after 20 weeks gestation to reach the diagnosis following the criteria in the Standard Obstetric Record Form for **thirty (30)** cases in emergency department.
  8. Assess the patients at risk of ante-partum hemorrhage for **fifteen (15)** cases with bleeding in pregnancy after 20 weeks gestation according to the protocol.
  9. Manage the cause of ante-partum hemorrhage for **fifteen (15)** cases recorded with bleeding in pregnancy after 20 weeks gestation according to the management scheme.

**LEARNING ACTIVITIES**

**Time**

- A. **Motivate Learning:** The supervisor reviews the purpose, story and learning objectives, learning activities and assessment strategies. The logistics for this **three (3)** months of practical experience are reviewed. **30 min.**
- Learning Objectives 1-9
- B. **Presentation:** The supervisor makes a presentation on the skills to practice during this session according to the objectives. Each participant is expected to diagnose and & manage **thirty (30)** cases of bleeding with pregnancy **fifteen (15)** cases before 20 weeks gestation & **fifteen (15)** after 20 weeks gestation **30 min.**
- Learning Objectives 1-9
- C. **Practical Experience:** Each participant should manage the above mentioned cases according to the criteria in the management flow chart “bleeding in pregnancy before 20 weeks gestation and management scheme of bleeding in pregnancy after 20 weeks gestation”. The **three (3)** months will be divided into **three (3)** week blocks, during each block, each participant should attempt to assess and manage at least **fifteen (15)** cases of bleeding in pregnancy before 20 weeks gestation and another **fifteen (15)** cases of bleeding in pregnancy after 20 weeks gestation.

**LEARNING  
ACTIVITIES**

**Time**

**Learning Objectives 1-9**

- D. **Clinical Conference:** The supervisor will explain to the participants that a visit every **three (3)** weeks will be scheduled. During the clinical conference, each participant must present detailed case studies concerning clinical activities performed during the previous **three (3)** weeks. The participant should prepare a case presentation for each of the (9) learning objectives.

The supervisor will present his/her observations of participants "Practice for Mastery" on-the-job against the criteria in the learning objectives and protocol concerning the diagnosis and management of bleeding in pregnancy.

Any logistical problems and proposed solutions are also discussed during the conference.

Individual and collective learning experiences during the **three (3)** weeks are discussed against the criteria in the learning objectives. Suggestions for strengthening the learning experience are noted and remedial action planned as required.

**2 hrs. per  
conference**

**Learning Objectives 1-9:**

- E. **Seminar & summary:** All obstetrical staff are invited to attend the end of the **three (3)** month seminar. Each participant has prepared **one (1)** or more cases on the diagnosis and management of obstetrical septic shock. Each presentation is critiqued against the criteria in the learning objectives, protocol and appropriate skill checklists.

Individual and collective learning experiences during the **three (3)** months are discussed against the criteria in the learning objectives. Suggestions for strengthening the learning experience are noted and remedial action planned as required.

One participant then summarizes the **three (3)** month "practice for mastery" practical learning experience against the criteria in the learning objectives.

## ASSESSMENT OF COMPETENCIES

To start developing “basic competency”, each participant will be assessed against the criteria in the learning objectives while learning activities are being conducted.

Learning Objectives	Assessment Strategy/Methods
1. Explain the importance of regular ante-natal follow-up visits for <b>thirty (30)</b> pregnant women as listed on a handout.	1. Direct supervision; fulfillment of the criteria according to skill checklist “Obstetric Communications & Recording” and protocol
2. Recognize the alarming (danger) signs associated with bleeding in pregnancy and action to be taken with appearance of any alarming sign for <b>thirty (30)</b> pregnant women according to the protocol.	2. Direct supervision; fulfillment of the criteria according to the protocol and Flow Chart
3. Record the full history of the client for <b>thirty (30)</b> cases in outpatient clinic with bleeding in pregnancy before 20 weeks gestation following the criteria in Standard Obstetric Record Form and criteria mentioned in the protocol.	3. Direct supervision; fulfillment of the criteria according to Standard Obstetric Record Form
4. Assess the cases at risk of abortion for <b>fifteen (15)</b> cases of bleeding in pregnancy before 20 weeks of gestation following the criteria in the Skill Checklist, Physical Examination (Bleeding in Pregnancy before 20 weeks gestation) and according to the protocol.	4. Direct supervision; fulfillment of the criteria according to checklist, Physical Examination “bleeding in pregnancy before 20 weeks”
5. Differentiate the <b>fifteen (15)</b> cases of abortion following the Differential Diagnostic Chart for <b>fifteen (15)</b> cases recorded according to state of cervix.	5. Direct supervision; fulfillment of the criteria according to Diagnostic Flow Chart
6. Manage the cases of abortion following the criteria in the Management Flow Chart “Management of Abortion” and according to the protocol for <b>fifteen (15)</b> cases recorded.	6. Direct supervision; fulfillment of the criteria according to management scheme
7. Record the full history of the client with bleeding in pregnancy after 20 weeks gestation to reach the diagnosis following the criteria in the Standard Obstetric Record	7. Direct supervision; fulfillment of the criteria according to Standard Obstetric Record Form

## ASSESSMENT OF COMPETENCIES

To start developing "basic competency", each participant will be assessed against the criteria in the learning objectives while learning activities are being conducted.

Learning Objectives	Assessment Strategy/Methods
Form for <b>thirty (30)</b> cases in emergency department.	
8. Assess the patients at risk of ante-partum hemorrhage for <b>fifteen (15)</b> patients with bleeding in pregnancy after 20 weeks gestation.	8. Direct supervision; fulfillment of the criteria according to Skill Checklist, Physical Examination "bleeding after 20 weeks"
9. Manage the cause of ante-partum hemorrhage for <b>fifteen (15)</b> cases recorded with bleeding in pregnancy after 20 weeks gestation according to the management scheme.	9. Direct supervision; fulfillment of the criteria according to management scheme

### PREPARATION (session specific)

Facilitator: The facilitator must prepare all of the material listed under the following resources

### RESOURCES

- Σ **Module: Recognize and Manage Labor**
- Σ **Essential Obstetric Care Resource Manual, Protocol: Bleeding in Pregnancy**
- Σ Overhead transparency: Session Purpose and Story
- Σ Flip chart: Session Learning Objectives
- Σ Any of the resources from **Sessions 1, 2, 3 & 4** should be used by the supervisor and participants as necessary.

**PRACTICE  
FOR  
MASTERY  
(Practical)**

**SESSION OUTLINE**

**MODULE: Bleeding in Pregnancy**

**Session 5: Diagnosis and Management of Bleeding in Pregnancy**

**Key:** K = Knowledge      S = Skill      A = Attitudes

Session Agenda	Learning Objectives	Assessment of Competencies	Learning Activities	Key Resources
<p>Months: 3</p>	<p>By the end of this <b>three (3)</b> month practical session, <u>each</u> participant should be able to:</p> <ol style="list-style-type: none"> <li>1. Explain the importance of regular ante-natal follow-up visits for <b>thirty (30)</b> pregnant women as listed on a handout.</li> <li>2. Recognize the alarming (danger) signs associated with bleeding in pregnancy and action to be taken with appearance of any alarming signs for <b>thirty (30)</b> pregnant women according to the protocol.</li> <li>3. Record the full history of the client for <b>fifty (50)</b> cases in outpatient clinic with bleeding in pregnancy before 20 weeks gestation following the criteria in the Standard Obstetric Record form and criteria mentioned in the protocol.</li> <li>4. Assess the cases at risk of abortion for <b>fifteen (15)</b> cases with bleeding in pregnancy before 20 weeks gestation following the criteria in the Skill Checklist, Physical Examination (Bleeding in Pregnancy before 20 weeks gestation) and according to the protocol.</li> </ol>	<p>1-9 KSA: Direct supervision in a practical setting; met criteria in skill checklist(s) and protocol</p>	<p><b>A. Motivate Learning:</b></p> <ul style="list-style-type: none"> <li>- Purpose of session</li> <li>- Story: A drop in maternal morbidity and mortality statistics concerning bleeding in pregnancy should be anticipated if participants have mastered the competencies and skills for this session</li> <li>- Review learning objectives, activities and assessment</li> </ul> <p><b>B. Presentation and Discussion:</b></p> <ul style="list-style-type: none"> <li>- Based on the learning objectives, the supervisors review the cases to be assessed and managed under his/her supervision over the next <b>three(3)</b> months</li> <li>- The logistical requirements for making the practical experience a success, i.e., the roles of the obstetrical services team, on-call schedule, facility readiness against the criteria in the Obstetrical Service</li> </ul>	<p><b>Preparation:</b></p> <ul style="list-style-type: none"> <li>- Obs Team: Competent</li> <li>- Supervisor: Readily available</li> <li>- Facility: Meets criteria in Obstetric Service Standards</li> <li>- HIS: Functional</li> </ul> <p><b>Motivate Learning:</b></p> <ul style="list-style-type: none"> <li>- Module</li> <li>- OHT: Purpose and Story</li> <li>- Flip Chart: Session Learning Objectives</li> </ul> <p><b>Demonstration And Practical Experience:</b></p>

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### Session 5: Diagnosis and Management of Bleeding in Pregnancy

**Key:**      **K = Knowledge**      **S = Skill**      **A = Attitudes**

Session Agenda	Learning Objectives	Assessment of Competencies	Learning Activities	Key Resources
	<p>5. Differentiate between the types of abortion following the Differential Diagnostic Flow Chart for <b>fifteen (15)</b> cases recorded according to the state of cervix.</p> <p>6. Manage the cases of abortion following the criteria in the management Flow Chart "Management of Abortion" and according to the protocol for <b>fifteen (15)</b> cases recorded</p> <ul style="list-style-type: none"> <li>- Conservative treatment for <b>five (5)</b> cases threatened abortion</li> <li>- D &amp; C for <b>five (5)</b> cases of inevitable abortion</li> <li>- Suction curettage for <b>two (2)</b> cases of molar pregnancy</li> <li>- Laparotomy for <b>one (1)</b> case of ectopic pregnancy</li> <li>- Evacuation for <b>two (2)</b> cases of missed abortion</li> </ul> <p>7. Record the full history of the client with bleeding in pregnancy after 20 weeks gestation to reach the diagnosis following the criteria in the Standard Obstetric Record Form for <b>thirty (30)</b> cases in emergency department.</p> <p>8. Assess the patients at risk of ante-partum hemorrhage for <b>fifteen (15)</b> cases with bleeding in pregnancy after 20 weeks gestation according to the protocol.</p> <p>9. Manage the cause of ante-partum hemorrhage for <b>fifteen (15)</b> cases recorded with bleeding in pregnancy after 20 weeks gestation according to the</p>		<p>Standards, etc, are discussed</p> <p><b>C. Practical Experience and Coaching:</b></p> <ul style="list-style-type: none"> <li>- Under periodic supervision, participants practice the skills for this module</li> </ul> <p><b>D. Clinical Conference:</b></p> <ul style="list-style-type: none"> <li>- Supervisors hold weekly clinical conferences with participants to review progress towards meeting learning objectives, any logistical or other issues which may have come up.</li> <li>- Remedial learning experiences are planned as required.</li> </ul> <p><b>Case Presentations:</b></p> <ul style="list-style-type: none"> <li>- <u>Each</u> participant presents a minimum of one (1) interesting case assessed and managed during the week</li> <li>- Group and supervisor critique of each presentation</li> </ul> <p><b>E. Seminar and Summary:</b></p> <ul style="list-style-type: none"> <li>- All obstetrical staff are invited to attend the end of three (3) month seminar</li> <li>- <u>Each</u> participant has prepared one (1) presentation on each of the following topics s/he was assessed and managed during each month:</li> </ul> <p>1) A pregnant woman who did not know that bleeding during pregnancy was a danger</p>	<ul style="list-style-type: none"> <li>- Handout: Obstetrical Service Standards</li> <li>- Protocol: Bleeding in Pregnancy</li> <li>- Handout: Obstetrical Record Form</li> <li>- Handouts: All Skill checklist from Session 1,2,3 and 4</li> <li>- Handout: DD Chart</li> <li>- Clients: of the 50 case:</li> <li>- 15 at risk of abortion</li> <li>- 5 threatened abortion</li> <li>- 5 inevitable abortion for D and C</li> <li>- 2 molar pregnancy requiring curettage</li> <li>- 1 ectopic pregnancy requiring pregnancy</li> <li>- 2 missed abortion</li> </ul>

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**Session 5: Diagnosis and Management of Bleeding in Pregnancy**

**Key:      K = Knowledge      S = Skill      A = Attitudes**

Session Agenda	Learning Objectives	Assessment of Competencies	Learning Activities	Key Resources
	management scheme.		<p>sign</p> <p>2) A client with bleeding in pregnancy after 20 weeks gestation</p> <p>3) A client with bleeding in pregnancy after 20 weeks gestation</p> <p>4) An assessment of obstetrical services against the criteria in the Obstetrical Service Standards</p> <ul style="list-style-type: none"> <li>- For each participant, one (1) of the four (4) prepared topics (cases) is selected and presented</li> <li>- Each presentation is critiqued against the relevant learning objective criteria associated with the presentation</li> <li>- The individual and collective learning experience during the three (3) months are discussed against the criteria in the learning objectives</li> <li>- Suggestions for strengthening the learning experience are noted and remedial action planned</li> <li>- Remedial learning experience is planned as necessary</li> <li>- One (1) participant then summarizes the three (3) practical learning experience against the session learning objectives. An overall summary is completed at the end of the third month</li> </ul>	<ul style="list-style-type: none"> <li>- 20 bleeding after 20 weeks gestation</li> </ul> <p><b>Case Presentations:</b></p> <ul style="list-style-type: none"> <li>- One (1) case study per participant per week</li> </ul> <p><b>Seminar and Summary:</b></p> <ul style="list-style-type: none"> <li>- Four (4) case studies topics per participant prepared</li> <li>- Wall graphic or OHT: Learning Objectives</li> </ul>

**MODULE**  
**RECOGNIZE AND MANAGE LABOR**

**February, 1998**

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**Cairo, Egypt**

**IN COOPERATION WITH**  
**USAID**

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- 5 Recognizing and Managing Normal Labor
- 6 Recognizing and Managing Abnormal Labor
- 7 Neonatal And Newborn Resuscitation

#### Practice for Mastery (practical)

- 8 Assessing and Managing Labor and Newborn

## MODULE OVERVIEW

### Purpose

The purpose of this module is to provide facilitators with a sound competency-based training (CBT) methodology. If implemented as designed, it will result in physicians reaching the level of "mastery" concerning the competencies and skills required to recognize and manage normal labor, abnormal labor and the newborn.

### Story

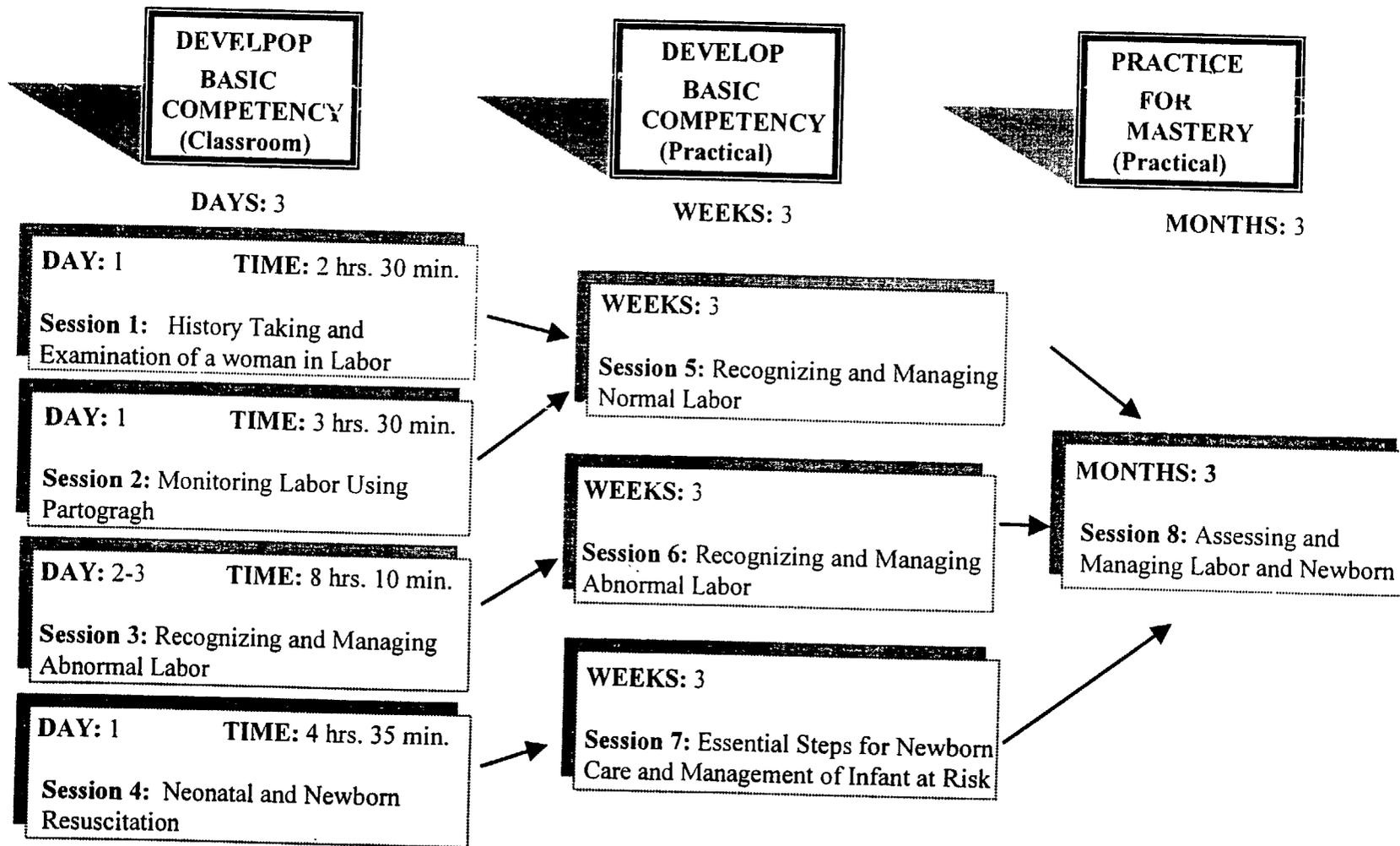
Pregnancy is one of the most common conditions which requires the attention of a physician. Of the ten leading causes of maternal mortality in Egypt, eight causes (79.2%) are directly related to complications of pregnancy and two (16.4%) are indirect causes of maternal mortality during pregnancy.

Too many of these women die in private and government health facilities due to incompetent performance of physicians either due to lack of clinical skills, inadequate equipment and supplies or a combination of both. The intent of this training is to rectify this problem and to reduce mortality of women due to complications associated with pregnancy. Also, the intent of this training is to assure that those women who have a normal pregnancy will have a safe delivery, so that both the mother and her newborn should survive. Competent use of the partograph to monitor labor will go a long way towards reaching these goals.

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**MODULE: RECOGNIZE AND MANAGE LABOR**

**AGENDA & SEQUENCE OF SESSIONS**



ab

**Task:** Recognize and manage normal labor, abnormal labor and the newborn

**Competency 1:** Complete a client history of pregnant woman

**Skills**

- 1.1 Demonstrate good interpersonal communications to include:
  - Active listening
  - Maintaining eye contact
  - Non-verbal communication skills
  - Asking and answering relevant questions
  
- 1.2 Complete the history, recognize and record the symptoms of labor to include the following:
  - Personal history
  - Family history
  - History of antenatal care (Rh.)
  - Medical history
  - Past pregnancy history
  - Present pregnancy history:
    - 1) When labor pains begun and its frequency, duration and strength
    - 2) If membranes have ruptured
    - 3) Any bloody show or bleeding
    - 4) Any medications taken to increase or decrease labor
    - 5) Any symptoms of headache, visual changes, or upper abdominal pain
    - 6) Last ate
    - 7) Last passed stool
    - 8) LMP - EDD - Post date

**Competency 2:** Complete a physical examination of a woman in labor

**Skills**

- 2.1 Complete and record the findings of the general examination to include the following:
  - Have woman empty bladder and collect urine sample
  - Monitor and record vital signs (blood pressure, pulse, temperature)
  - Assess general condition of woman (hydration, cleanliness, mental state, pain, edema, anemia)
  
- 2.2 Complete an abdominal examination
  
- 2.3 Complete vaginal examination every four hours ( if no other indications) under strict conditions of asepsis and hygiene and determine:
  - Any dryness, scarring and discharge

## **Skills**

- Dilatation of cervix
- Status of membranes
- Presenting part, position and molding of vertex presentation
- Descent of the presenting part

### **Competency 3: Manage labor using the partograph**

#### **Skills**

- 3.1 Use the partograph to monitor latent and active phases of labor to include:
  - 3.1.1 Fetal condition:
    - 1) Monitor and record fetal heart rate before, during and after a contraction every 30 minutes
    - 2) Evaluate fetal wellbeing and abnormalities in fetal heart rate
    - 3) Evaluate molding if present
    - 4) Observe the color of the amniotic fluid
  - 3.1.2 Progress of labor:
    - 1) Cervical dilatation
    - 2) Descent of fetal head
    - 3) Uterine contractions
  - 3.1.3 Maternal Condition:
    - 1) Drugs and fluids
    - 2) Urine protein and volume (encourage mother to pass urine every two hours, record intake and output every two hours)
    - 3) Blood pressure, pulse and temperature
  - 3.1.4 Record observations and action taken
- 3.2 Manage the mother during all stages of labor to include detection of any problem
- 3.3 Protect the perineum from injury during the 2<sup>nd</sup> stage of labor
- 3.4 Deliver and inspect the placenta

### **Competency 4: Manage abnormal labor**

#### **Skills**

- 4.1 Detect and manage prolonged labor:
  - Use the partograph to detect prolonged latent or active phases of labor as well as abnormal labor patterns

## Skills

- Timely decision making concerning management of prolonged labor
- 4.2 Assess need for and perform low forceps delivery:
  - Indications and contraindications
  - Procedures of forceps application
- 4.3 Assess need for and perform vacuum extraction:
  - Indications and contraindications
  - Procedures of vacuum extractor application
- 4.4 Assess need for and perform lower - segment cesarean delivery:
  - Indications and contraindications
  - Procedure of cesarean delivery
- 4.5 Determine presence of and manage malpresentation:
  - Recognize the five (5) different types of malpresentations
  - Manage breech presentation
  - Manage the remaining four (4) malpresentations by cesarean delivery
- 4.6 Determine presence of and manage twins pregnancy

## Competency 5: Perform neonatal resuscitation effectively and in the proper time

### Skills

- 5.1 Prepare the essential equipment needed for neonatal resuscitation (Resource):
  - Suction equipment
  - Bag & mask equipment
  - Intubation equipment
  - Medication
  - Radiant warmer
  - Stethoscope
  - Umbilical catheter 5F, 6F
- 5.2 Perform initial step of resuscitation in 20 sec.
- 5.3 **Evaluate** the infant, **decide** what action to take and then take **action**.
- 5.4 Assess the ABCs of resuscitation
- 5.5 Evaluate spontaneous breathing, perform positive pressure ventilation
- 5.6 Evaluate heart rate, perform chest compression if needed

**Skills**

- 5.7 Evaluate the color of the baby
- 5.8 Clamp and perform clean and safe umbilical cord care
- 5.9 Perform routine care after stabilization of the newborn
- 5.10 Explain the importance of early breast feeding

**Competency 6: Resuscitation of newborn with meconium**

**Skills**

- 6.1 Do suction of mouth, nose, oropharynx as soon as the head is delivered (before delivery of the shoulders)
- 6.2 Do suction of residual meconium in the hypopharynx under direct vision after delivery of the head
- 6.3 Intubate the trachea, meconium is suctioned from the lower airway
- 6.4 Re-evaluate → Decide → Take action
- 6.5 Perform initial steps of resuscitation in systematic way

**Authors:** Drs. Ali Abdel Megeid, Ahmed Metwali, Alaa Sultan and Mr. Tom Coles

## **Session 1: History Taking and Examination of a Woman in Labor**

**DEVELOP  
BASIC  
COMPETENCY  
(Classroom)**

**Facilitator-Led Session**

**Day:**

**Time:** 2hr. 45 min.

**Task:** Recognize and manage normal labor, abnormal labor and the newborn

**Competency 1:** Complete a client history of pregnant woman

### **Skills**

- 1.1 Demonstrate good interpersonal communications to include the following:
  - Active listening
  - Maintaining eye contact
  - Non-verbal communication skills
  - Asking and answering relevant questions
  
- 1.2 Complete the history, recognize and record the symptoms of labor to include the following:
  - Family History
  - Personal history
  - History of antenatal care (Rh.)
  - Medical history
  - Past pregnancy history
  - Present pregnancy history:
    - 1) When labor pains begun and its frequency, duration and strength
    - 2) If membranes have ruptured
    - 3) Any bloody show or bleeding
    - 4) Any medications taken to increase or decrease labor
    - 5) Any symptoms of headache, visual changes, or upper abdominal pain
    - 6) Last ate
    - 7) Last passed stool
    - 8) LMP - EDD - Post date

## Competency 2: Complete a physical examination of a woman in labor

### Skills

- 2.1 Complete and record the findings of the general examination and record the following:
  - Have woman empty bladder and collect urine sample
  - Monitor and record vital signs (blood pressure, pulse, temperature)
  - Assess general condition of woman (hydration, cleanliness, mental state, pain, edema, anemia)
- 2.2 Complete an abdominal examination
- 2.3 Complete vaginal examination every four hours (if no other indications) under strict conditions of asepsis and hygiene and determine:
  - Any dryness, scarring and discharge
  - Dilatation of cervix
  - Status of membranes, color of amniotic fluid
  - Presenting part, position and molding of the vertex presentation
  - Descent of the presenting part
  - Pelvic capacity

## OVERVIEW

### Purpose

The purpose of this session is to introduce participants to the competencies and skills for history taking and examination of the pregnant woman. For most physicians, this session will be a "revision". In Sessions 5 & 8, the skills addressed in this session will be practiced in a practical setting.

### Story

It is important for the mother and newborn to be cared for by a physician who can correctly take a full history and do a complete physical examination of the pregnant woman, so as to be able to give correct diagnosis and correct management.

## LEARNING OBJECTIVES

By the end of this classroom session, each participant should be able to:

1. Demonstrate good interpersonal communication skills during taking history and performing physical examination of a woman in labor according to the criteria in the Skill Checklist.
2. Complete history and recognize the symptoms of labor according to the Skill Checklist: Obstetric Communications and Recording.

## LEARNING OBJECTIVES

3. Complete and record the findings of the general examination according to the Skill Checklist: Physical Examination of a Woman in Labor .
4. Complete the abdominal examination and recognize the position of the fetus according to the criteria in the Skill Checklist: Physical Examination of a Woman in Labor.
5. Complete the vaginal examination and recognize the signs associated with the onset of labor according to the criteria in the Skill Checklist: Physical Examination of a Woman in Labor.

## LEARNING ACTIVITIES

Time

The following are suggested learning activities which if implemented, should enable participants to meet the criteria stated in the learning objectives and pass the assessment.

- A. **Motivate learning:** The facilitator reviews the session purpose, story, learning objectives, activities and assessment strategies. The learning objectives are illustrated on a wall graphic or on an overhead transparency. **5 min.**

### Learning Objective 1 & 2

- B. **Presentation:** The facilitator will present a short review, about the skills of good interpersonal communications and complete history taking using wall graphic or overhead transparency of the Skill Checklist, Obstetric Communications and Recording (History) **25 min.**

### Learning Objective 1 & 2

- C. **Role Play:** The facilitator will ask for 2 volunteers from the participants, to perform one role play to demonstrate good interpersonal communications while taking and recording a complete history on the points listed in the skill checklist. One represents the client, the other represents the health provider. The facilitator and the group will provide feedback as needed **40 min.**

### Learning Objective 2, 3 & 4

- D. **Presentation:** The facilitator makes a presentation on taking a full client history and doing a complete general and abdominal examination, using overhead transparencies as reference followed by open discussion. **30 min.**

### Learning Objective 4

- E. **Demonstration:** The facilitator will demonstrate the steps of abdominal examination following Skill Checklist and using the model (pelvis, doll)

**LEARNING  
ACTIVITIES**

**Time**

and model of abdomen).

**15 min.**

**Coaching:** The facilitator will coach the participants to perform abdominal examination individually.

**40 min.**

**Learning Objective 5**

**F. Presentation:** The facilitator makes a presentation on elements of vaginal examination following Skill Checklist. S/He should mention and stress on examiner's hygiene and sterile technique.

**Note:** Participants will continue to develop basic competency during the practical experience session.

**G. Summary:** At the end of this session, facilitator summarizes the session against the criteria in the learning objectives.

Wall graphics or overhead transparencies used during the session can also be used as a resource during the summary.

**10 min.**

**ASSESSMENT OF  
COMPETENCIES**

Learning Objectives	Assessment Strategy/Methods
1. Demonstrate good inter-personal communication skills during taking history and performing physical examination of a woman in labor according to the criteria in the Skill Checklist.	1. Outcome of role play
2. Complete history and recognize the symptoms of labor according to the Skill Checklist: Obstetric Communications and Recording.	2. Questions and answers
3. Complete and record the findings of the general examination according to the Skill Checklist: Physical Examination of a Woman in Labor.	3. Questions and answers
4. Complete the abdominal examination and recognize the position of the fetus according to the criteria in the Skill Checklist: Physical Examination of a Woman in Labor.	4. Questions and answers and practice using abdominal model
5. Complete the vaginal examination and recognize the signs associated with the onset of labor according to the criteria in the Skill	5. Questions, answers and practice using pelvic model & doll

**ASSESSMENT OF  
COMPETENCIES**

Learning Objectives	Assessment Strategy/Methods
Checklist: Physical Examination of a Woman in Labor .	

**PREPARATION (session specific)**

Facilitator: Preparation of model (pelvis, doll and model of abdomen)

**RESOURCES**

- **Module: Recognize and Manage Labor**
- **Essential Obstetric Care Resource Manual, Protocol: Recognize and Manage Labor**
- Wall graphic, overhead transparency or handout of the following:
  - Session Purpose and Story
  - Session Learning Objectives
  - Skill Checklist: Obstetric Communications and Recording (History)
  - Role play script: Physician With a Woman in Labor
  - Skill Checklist: Physical Examination of a Woman in Labor
- Model: Abdomen, pelvis, with doll

**RESOURCE (HANDOUT)**

**ROLE PLAY SCRIPT**

**Physician With a Woman in Labor**

**The Client:**

Amira is a primigravida, she visited her physician since 1 week and he told her still 2 weeks till the due date. But today while she was sleeping she felt sudden gush of vaginal watery fluid. She is so worried about this event.

**The Physician:**

According to the communications checklist the physician will take a complete history from the client.

**RESOURCE (OHT & HANDOUT)**

**SKILL CHECKLIST**

**Title: Obstetric Communications & Recording**

**Facilitator:** Use this skill checklist as a guide when demonstrating the skill and assessing participant performance.

**Participants:** Use the skill checklist as a guide when practicing this skill. Your performance will be assessed against the criteria in this checklist.

**Rating:** 1 = Needs Improvement  
2 = Satisfactory

STEPS	RATE	COMMENTS
1. Greeted and welcomed the client		
2. Introduced yourself		
3. Took & recorded correctly the client personal data: - Name, age, address - Profession, marital status (1 <sup>st</sup> or no. of yr.) - Consanguinity - Special habits		
4. Was patient with the client		
5. Took and recorded a complete reproductive history: - Menstrual: pattern /flow/ LMP - Obstetric: parity /pregnancy outcome (age, sex, live births, stillbirths) Date of last pregnancy Abortions (number, types)		
6. Took and recorded correctly the client medical history: - D.M., hypertension, T.B. - Rheumatic heart disease, anaemia - Pre- eclampsia & eclampsia - T.T. immunization - Genital tract infection - Schistosomiasis, UTI, APH - Allergies		
7. Took and recorded client complete surgical history.		

# SKILL CHECKLIST

## Title: Obstetric Communications & Recording

**Facilitator:** Use this skill checklist as a guide when demonstrating the skill and assessing participant performance.

**Participants:** Use the skill checklist as a guide when practicing this skill. Your performance will be assessed against the criteria in this checklist.

**Rating:** 1 = Needs Improvement  
2 = Satisfactory

STEPS	RATE	COMMENTS
8. Reviewed and recorded the client family history.		
9. Was respectful, listened actively, gave complete attention to the client.		
10. Explained clearly to the client: - The complete duration of pregnancy and her EDD.		
11. Used easy and understandable language.		
12. Identified the present patient complaint: - Labor pains - Vaginal discharge - Any medications taken - Any other complaint - Last ate and passed stool		
13. Explained and solved the patient complaint.		
14. Encouraged the client to ask questions.		

**NB** Each step must receive a rating of 2. Note corrective action to be taken under "comments" for any step receiving a rating of 1 (needs improvements).

**DEVELOP  
BASIC  
COMPETENCY  
(Classroom)**

**Skills Checklist**

**Physical Examination of a Woman in Labor**

The participant should use it as a guide for checking his own skills.

The facilitator should use it to evaluate the participants' performance.

The facilitator should comment on skills receiving a rating of (1 "needs improvement").

Key: 1 = needs improvement  
2 = satisfactory

Skills	Cases:	1	2	3	4	5	6	7	8	9	10	Comments
<b>I. Examination</b>												
1. General:												
1.1 Pulse												
1.2 Blood Pressure												
1.3 Temperature												
1.4 Chest & heart												
2. Abdominal:												
2.1 Fundal level												
2.2 Fundal Grip												
2.3 Umbilical Grip												
2.4 Pelvic Grip												
2.5 Determine Fetal Lie & Position												
2.6 Palpate fetal head in fifths												
2.7 Scars												
2.8 Fetal heart sound												

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Skills	Cases:											Comments	
		1	2	3	4	5	6	7	8	9	10		
3. Vaginal:													
3.1 Cervical dilatation and Effacement													
3.2 Descent of presenting Part station													
3.3 Molding													
3.4 Position of the presenting part													
3.5 Condition of membranes													
3.6 Color of Amniotic fluid													
3.7 Pelvic capacity (projecting ischial spines, jutting sacral promontory and narrow subpubic angle)													

**DEVELOP  
BASIC  
COMPETENCY  
(Classroom)**

**SESSION OUTLINE**

**MODULE: RECOGNIZE AND MANAGE LABOR**

**Session 1: History Taking and Examination of a Woman in Labor**

**Key: K = Knowledge S = Skill A = Attitudes**

Session Agenda	Learning Objectives	Assessment of Competencies	Learning Activities	Key Resources
<p><b>Day: 1</b> <b>Time: 2 hrs.</b> <b>30 min.</b></p>	<p>1. Demonstrate good interpersonal communication skills during the history and physical examination of a woman in labor according to the criteria in the Skill Checklist.</p>	<p>1. <b>KSA:</b> Outcomes of role play</p>	<p><b>A. Motivate Learning:</b></p> <ul style="list-style-type: none"> <li>- Purpose of session</li> <li>- Story: A full history and physical examination are keys to the diagnosis and management.</li> <li>- Review learning objectives, activities and assessment</li> </ul> <p><b>B. Presentation:</b></p> <ul style="list-style-type: none"> <li>- Good two-way communication and active listening skills during history taking</li> </ul> <p><b>C. Role Play:</b></p> <ul style="list-style-type: none"> <li>- Follow script</li> <li>- <u>All</u> participants must play <u>all</u> roles</li> <li>- Use criteria in skill checklist as a guide</li> </ul>	<ul style="list-style-type: none"> <li>- Module</li> <li>- Flip chart or OHT</li> </ul>

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### Session 1: History Taking and Examination of a Woman in Labor

**Key:**      **K = Knowledge**          **S = Skill**          **A = Attitudes**

Session Agenda	Learning Objectives	Assessment of Competencies	Learning Activities	Key Resources
	<p>2. Complete history and recognize the symptoms of labor according to the Skill Checklist: Obstetric Communications and Recording</p> <p>3. Complete and record the findings of the general examination according to the Skill Checklist: Physical Examination of a Woman in Labor</p> <p>4. Complete the abdominal examination and recognize the position of the fetus according to the criteria in the Skill Checklist: Physical Examination of a Woman in Labor</p>	<p>2. <b>K:</b> Questions and answers</p> <p>3. <b>K:</b> Questions and answers</p> <p>4. <b>K:</b> Questions and answers (model)</p> <p><b>S:</b> Practice using abdominal model</p>	<p><b>D. Presentation:</b></p> <ul style="list-style-type: none"> <li>- Elements of full history</li> <li>- Elements of complete general examination</li> <li>- Elements of abdominal examination</li> </ul> <p><b>E. Demonstration:</b></p> <ul style="list-style-type: none"> <li>- Follow skill checklist</li> </ul> <p><b>Coaching:</b></p> <ul style="list-style-type: none"> <li>- Participants require close supervision at this stage</li> </ul>	<ul style="list-style-type: none"> <li>- Protocol</li> <li>- O.H.T.</li> <li>- Skill checklist</li> <li>- Abdominal model</li> </ul>
	<p>5. Complete the vaginal examination and recognize the position of the fetus according to the criteria in the Skill Checklist: Physical Examination of a Woman in Labor</p>	<p>5. <b>K:</b> Questions and answers (model)</p> <p><b>S:</b> Practice using pelvic model and doll</p>	<p><b>F. Presentation:</b></p> <ul style="list-style-type: none"> <li>- Elements of vaginal examination</li> <li>- Follow skill checklist</li> <li>- Examiner's hygiene and sterile technique</li> </ul> <p><b>G. Summary:</b></p> <ul style="list-style-type: none"> <li>- Determine if <u>each</u> participant met the criteria in <u>all</u> of the learning objectives</li> </ul>	<ul style="list-style-type: none"> <li>- Skill checklist</li> <li>- OHT</li> <li>- Skill checklist</li> <li>- Pelvic model and doll</li> <li>- Wall graphic or OHT: Learning objectives</li> </ul>

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Authors: Drs. Ali Abdel Mageid, Ahmed Metwaly, Alaa Sultan and Mr. Tom Coles

## Session 2: Monitoring Labor Using the Partograph

**DEVELOP  
BASIC  
COMPETENCY  
(Classroom)**

**Facilitator-led Session**

**Day:**

**Time:** 3 hr. 30 min.

**Task:** Recognize and manage normal labor, abnormal labor and the newborn

**Competency 3:** Manage labor using the partograph

### Skills

3.1 Use the partograph to monitor latent and active phases of labor to include:

3.1.1 Fetal condition:

- 1) Monitor and record fetal heart rate before, during and after a contraction every 30 minutes
- 2) Evaluate fetal wellbeing and abnormalities in fetal heart rate
- 3) Evaluate molding if present
- 4) Observe the color of the amniotic fluid

3.1.2 Progress of labor:

- 1) Cervical dilatation
- 2) Descent of fetal head
- 3) Uterine contractions

3.1.3 Maternal Condition:

- 1) Drugs and fluids
- 2) Urine protein and volume (encourage mother to pass urine every two hours, record intake and output every two hours)
- 3) Blood pressure, pulse and temperature

3.1.4 Record observations and action taken

3.2 Manage the mother during all stages of labor to include detection of any problem

3.3 Protect the perineum from injury during the 2<sup>nd</sup> stage of labor

3.4 Deliver and inspect the placenta

## OVERVIEW

### Purpose

The purpose of this session is to include participants to the competencies and skills for managing labor and use of partograph. In Session 5 & 8, the skills addressed in this session will be practiced in a practical setting.

### Story

It is important for the mother and the newborn to be cared for by a physician who can correctly manage a in labor using the partograph to monitor latent and active phases of labor and detect any problem. Labor is clinically divided into (4) stages. These stages are usually preceded by pre-labor and latent phase of labor, where changes of cervical softening and effacement take place.

**First Stage of Labor:** It starts with true labor pains and ends with full dilatation of the cervix. In the area of active management of labor; this stage does not usually last more than 12 hours.

**Second Stage of Labor:** It starts with full dilatation of the cervix until delivery of the baby. Under normal circumstances it lasts for 1-2 hours.

**Third Stage of Labor:** This stage ends with delivery of the placenta and fetal membranes. It takes 15-30 minutes.

**Fourth Stage of Labor:** It is the first two (2) hours after completion of delivery of the fetus and placenta. That is when myometrial contractions and reaction take place along with blood vessel thrombosis to control postpartum hemorrhage, a major killer of young women.

## LEARNING OBJECTIVES

By the end of this classroom session each participant should be able to start strengthening their knowledge base so as to be able to start developing basic competency concerning the following:

1. Use the partograph to monitor latent and active phases of labor.
2. Evaluate fetal wellbeing and abnormalities in fetal heart rate according to the partograph findings.
3. Manage the mother during all stages of labor according to the Skill Checklist: Recognize and Manage Normal Labor.
4. Protect the perineum from injury during 2<sup>nd</sup> stage of labor according to the protocol.
5. Deliver and inspect the placenta according to the protocol.

**LEARNING  
ACTIVITIES**

**Time**

The following are suggested learning activities which if implemented, should enable participants to meet the criteria stated in the learning objectives and pass the assessment.

- A. **Motivate learning:** The facilitator reviews the session purpose, story, learning objectives, activities and assessment strategies. The learning objectives are illustrated on a wall graphic or on an overhead transparency. **5 min.**

**Learning Objectives 1&2**

- B. **Presentation:** The facilitator makes a presentation on managing a woman in labor using the partograph. Illustration of the different components of the partograph and how to plot the observations of fetal conditions, progress of labor and maternal conditions. **30 min.**

**Learning Objectives 1&2**

- C. **Case Studies:**

**Facilitator:** The facilitator explains the case studies (#1, 2 & 3) for this session, case study details should include:

- Partograph findings
- Problem identification
- Case management.

**15 min.**

**Participants:** Participants complete the case studies.

They are reviewed by the facilitator and discussed with the group.

Key answers on an OHT illustrated by the facilitator and key answers should be distributed for each participant.

**30 min.**

**Learning Objectives 3, 4 & 5**

- D. **Presentation:** The facilitator asks the participants about medical care given to woman in labor during all stages. Then the participant makes a presentation on medical care given to women in labor during all stages, using the model to demonstrate different skills specific for each stage of labor following the criteria in the protocol. **60 min.**

**Practice & Coaching:** The facilitator will coach the participants to practice the above skills using the protocol as a guide. **60 min.**

**LEARNING  
ACTIVITIES**

**Time**

**E. Summary:** At the end of this session facilitator summarizes the session against the criteria in the learning objectives.

Wall graphics or overhead transparencies used during the session can also be used as a resource during the summary.

**10 min.**

**ASSESSMENT OF  
COMPETENCIES**

<b>Learning Objectives</b>	<b>Assessment Strategy/Methods</b>
1. Use the partograph to monitor latent and active phases of labor.	1. Outcome of case studies
2. Evaluate fetal wellbeing and abnormalities in fetal heart rate according to the partograph findings.	2. Outcome of case studies
3. Manage the mother during all stages of labor according to the Skill Checklist: Recognize and Manage Normal Labor.	3. Questions and answers
4. Protect the perineum from injury during the 2 <sup>nd</sup> stage of labor according to the protocol.	4. Questions and answers ( model)
5. Deliver and inspect the placenta according to the protocol.	5. Questions and answers

**PREPARATION (session specific)**

**Facilitator:** Prepare transparencies, case studies, model and handouts

**RESOURCES**

- **Module: Recognize and Manage Labor**
- **Essential Obstetric Care Resource Manual, Protocol: Recognize and Manage Labor**
- Wall graphic, overhead transparency or handout:
  - Session Purpose and Story
  - Session Learning Objectives
  - Case Studies: 1, 2 & 3 and 3 copies of Partograph for each participant
  - Skill Checklist: Recognize and Manage Normal Labor
- Model: Abdomen, pelvis, with doll

**DEVELOP  
BASIC  
COMPETENCY  
(Classroom)**

**Skills Checklist  
Recognize and Manage Normal Labor**

The participant should use it as a guide for checking his own skills.  
 The facilitator should use it to evaluate the participants' performance.  
 The facilitator should comment on skills receiving a rating of (1) "needs improvement".

**Key: 1 = needs improvement  
 2 = satisfactory**

Skills	Cases:	1	2	3	4	5	6	7	8	9	10	Comments
<b>I. Use of partograph</b> Monitor latent and active phases of labor												
<b>II. Management of 2<sup>nd</sup> stage</b> 1. Recognize onset of 2 <sup>nd</sup> stage 1.1 Full dilation of the cervix 1.2 Bearing down												
2. Protect the perineum from Injury												
3. Do episiotomy when needed												
<b>III. Management of 3<sup>rd</sup> stage</b> 1. Prophylactic use of uterotonics												
2. Controlled cord traction technique in delivery of placenta												

**Skills Checklist**  
**Recognize and Manage Normal Labor**

**Key: 1 = needs improvement**  
**2 = satisfactory**

Skills	Cases:	1	2	3	4	5	6	7	8	9	10	Comments
3. Inspection: 3.1 placenta 3.2 perineum, vagina and cervix for any injury												
<b>IV. 4<sup>th</sup> stage</b> 1. Observation of the mother 1 <sup>st</sup> two hours for: 1.1 Bleeding 1.2 Fundal level 1.3 uterine contractility 1.4 vital signs												
2. Observation of the newborn												

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## RESOURCE (HANDOUT)

### Case Study 1

Name: Amal Ahmed Ali

G3 P2+0

Date of admission: 11.2.1998

Time of admission: 7:00 AM

Time observations	7:00 AM	11:00 AM	15:00 PM	18:00 PM
F.H.R.	130/min	140 b/min	140 b/min	150 b/min
Membranes	I	I	Spontaneous Rupture	Rupture
A.F	----	----	C	C
Molding	----	----	----	+
Cervical dil.	2cm	3cm	7cm	10cm
Head descent	5/5	3/5	2/5	0/5
Uterine cont.	2/10 min each lasting for 20 sec.	3/10 min each lasting for 30 sec.	5/10 min each lasting for 40 sec.	5/10 min each lasting for 50 sec.
Pulse	80/min	80/min	90/min	90/min
BP	120/80	120/80	120/80	130/80
Temp	36.9 C	37 C	37 C	37.2 C
Drugs, IV and fluids	500 Dex. 5%		Pethidine IM 100 mg	

- 1) Please record these findings on your partograph
- 2) What is your opinion and why?
- 3) How do you manage this case?

# PARTOGRAPH

Name _____	Gravida _____	Para _____	Hospital no. _____
Date of admission _____	Time of admission _____	Ruptured membranes _____	hours _____

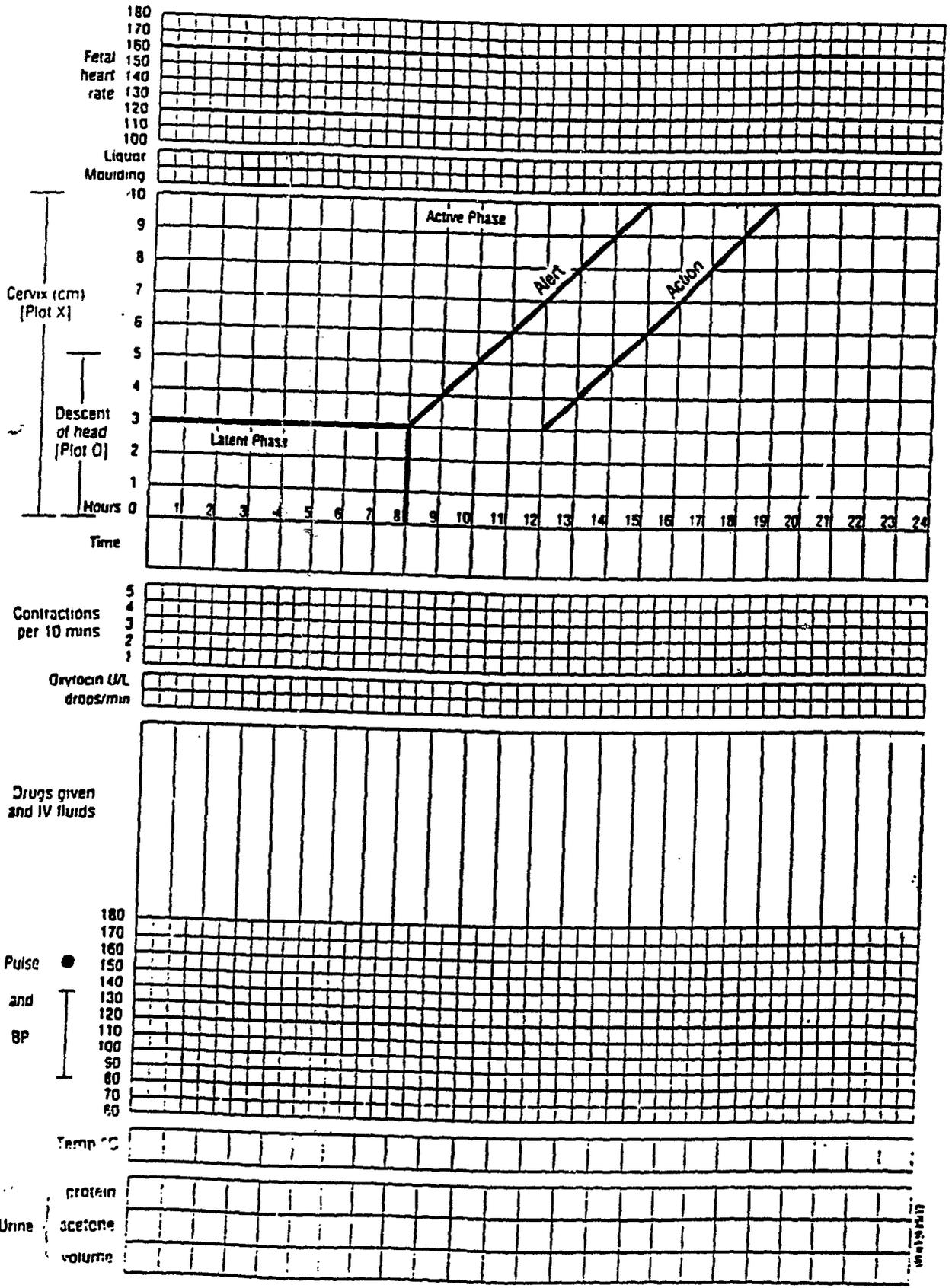


Fig. II.1

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**RESOURCE (HANDOUT)**

**Case Study 1**

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**RESOURCE (HANDOUT)**

**Case Study 2**

**Name:** Hala El Said Ahmed  
**Date of admission:** 3.2.1998

**G1 P0**  
**Time of admission:** 7:00 AM

<b>Time Observations</b>	<b>7:00 AM</b>	<b>11:00 AM</b>	<b>15:00 PM</b>	<b>19:00 PM</b>	<b>23:00 PM</b>
FHR	140b/min	130b/min	140b/min	150b/min	170b/min
Membranes	I	I	I	Spont Rupture	R
AF	----	----	----	M	M
Molding	----	----	----	----	----
Cervical dil	2cm	3cm	7cm	9cm	10cm
Head decent	5/5	4/5	4/5	3/5	3/5
Ut. Cont.	2/10 min each lasting for 20 sec.	2/10 min each lasting for 30 sec.	5/10 min each lasting for 40 sec.	2/10 min each lasting for 20 sec.	4/10 min each lasting for 40 sec.
Pulse	80/min	90/min	90/min	100/min	100/min
B.P.	110/70	110/70	120/80	120/80	120/80
Temp	36-8 C	36-8 C	37 C	37.5 C	37.7 C
Drugs & IV fluids	----	----	Pethidine 100 mg IM	Dex. 5% + 5U cyntocinon	----

- 1) Please record these findings on your partograph
- 2) What is your opinion and why?
- 3) How do you manage this case?

# PARTOGRAPH

Name \_\_\_\_\_ Gravida \_\_\_\_\_ Para \_\_\_\_\_ Hospital no. \_\_\_\_\_  
 Date of admission \_\_\_\_\_ Time of admission \_\_\_\_\_ Ruptured membranes \_\_\_\_\_ hours

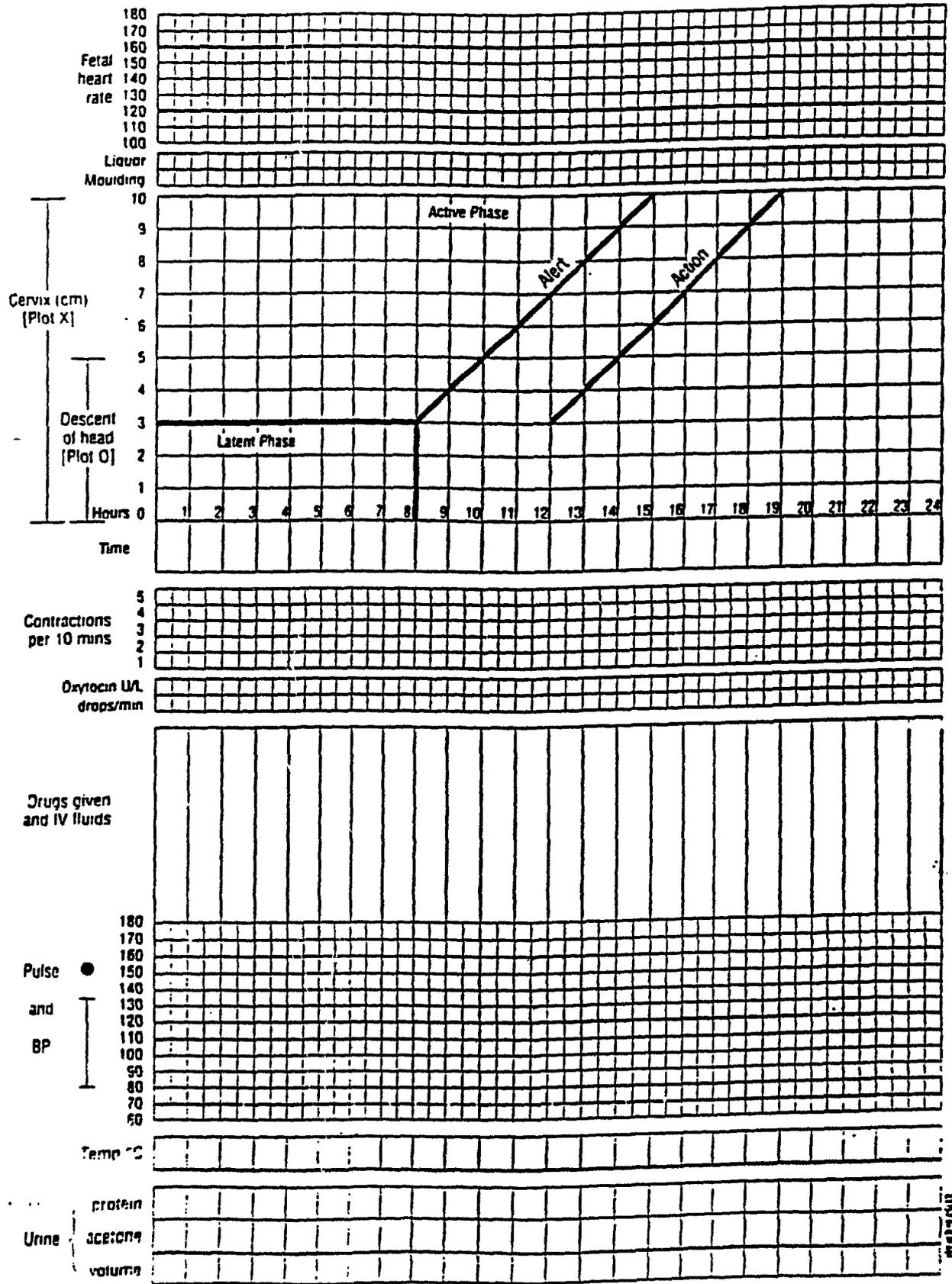


Fig. II.1

**RESOURCE (HANDOUT)**

**Case Study 2**

## RESOURCE (HANDOUT)

### Case Study 3

Name: Maha Gamal El-Din  
Date of admission: 19.2.1998

G8 P5 + 2  
Time of admission: 8:00 AM

Time observations	8:00 AM	12:00 AM	16:00 PM	20:00 PM	24:00 PM
F.H.R	140 b/min	140 b/min	150 b/min	160 b/min	180 b/min
Membranes	I	I	Spont. Rupture	R	R
A.F	----	----	C	M	M
Molding	----	----	----	+	++
Cervical dil.	2cm	3cm	5cm	6cm	6cm
Head descent	5/5	4/5	3/5	2/5	1/5
Uterine cont.	2/10 min each lasting for 20 sec.	3/10 min each lasting for 30 sec.	5/10 min each lasting for 40 sec.	5/10 min each lasting for 50 sec.	5/10 min each lasting for 60 sec.
Pulse	80/min	90/min	100/min	110/min	110/min
B.P	120/80	120/80	140/85	140/85	150/90
Temp	36.8 C	37 C	37.5 C	38 C	38 C
Drugs & IV fluids	----	----	Pethidine 100 mg IM	Dextrose 5% cyntocinon 10 U.	

- 1) Please record these findings on your partograph
- 2) What is your opinion and why?
- 3) How do you manage this case?

# PARTOGRAPH

Name \_\_\_\_\_ Gravida \_\_\_\_\_ Para \_\_\_\_\_ Hospital no. \_\_\_\_\_  
 Date of admission \_\_\_\_\_ Time of admission \_\_\_\_\_ Ruptured membranes \_\_\_\_\_ hours

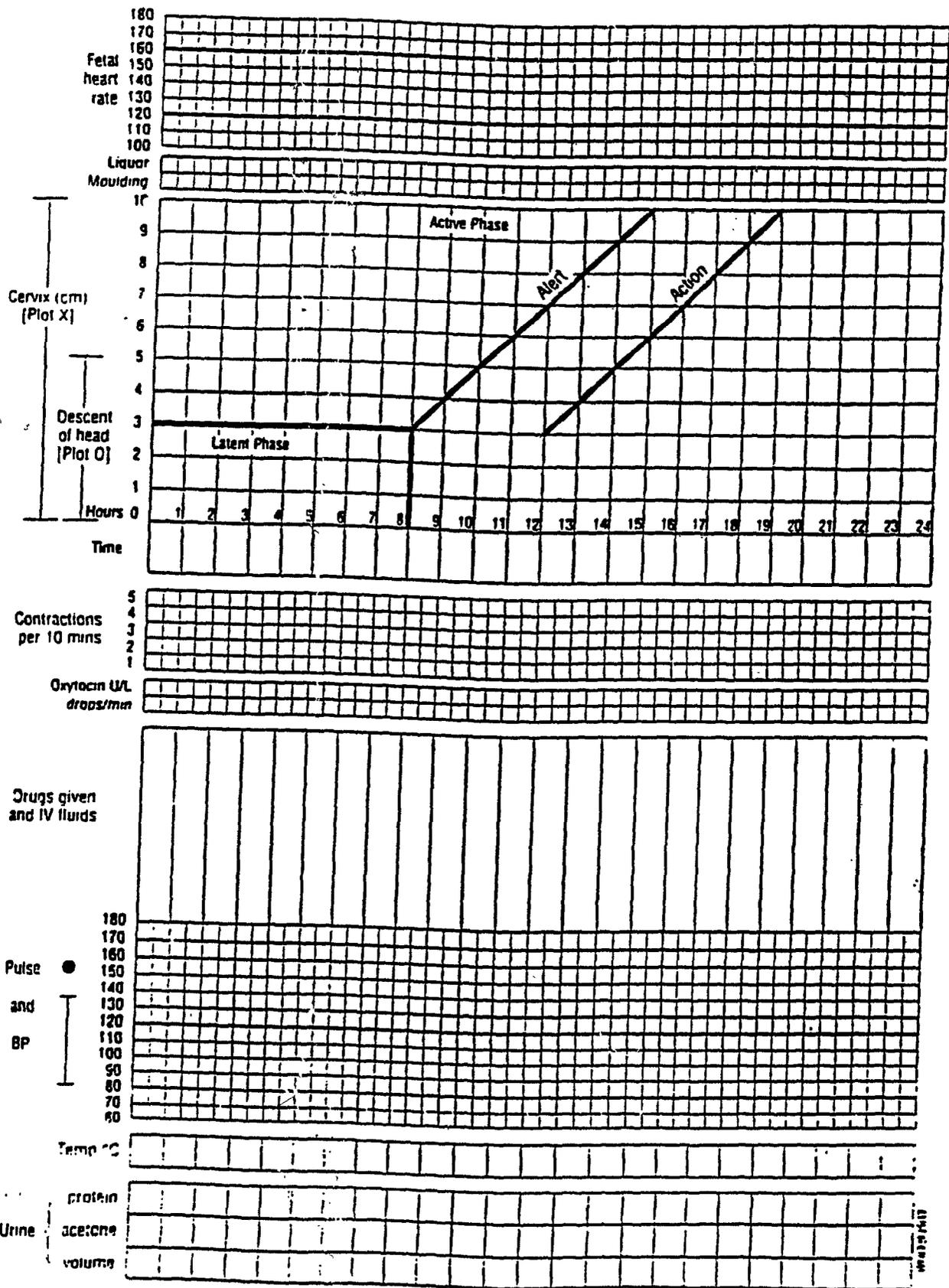


Fig. II.1

**RESOURCE (HANDOUT)**

**Case Study 3**

**DEVELOP  
BASIC  
COMPETENCY  
(Classroom)**

**SESSION OUTLINE**

**MODULE: RECOGNIZE AND MANAGE LABOR**

**Session 2: Monitoring Labor Using the Partograph**

**Key:** K = Knowledge      S = Skill      A = Attitudes

Session Agenda	Learning Objectives	Assessment of Competencies	Learning Activities	Key Resources
<p><b>Day: 1</b> <b>Time: 3 hrs.</b> <b>30 min.</b></p>	<p>1. Use the partograph to monitor latent and active phases of labor</p>	<p>1. KSA: Outcomes of group questions</p>	<p><b>A. Motivate Learning:</b></p> <ul style="list-style-type: none"> <li>- Purpose of session</li> <li>- Story: The importance of the partograph to monitor latent and active phases of labor</li> <li>- Review learning objectives, activities and assessment</li> </ul> <p><b>B. Presentation:</b></p> <ul style="list-style-type: none"> <li>- Managing normal labor using the partograph and how to plot observations</li> </ul> <p><b>C. Case Studies # 1, 2 &amp; 3:</b></p> <ul style="list-style-type: none"> <li>- Partograph findings</li> <li>- Problem identification</li> <li>- Case management</li> </ul>	<ul style="list-style-type: none"> <li>- Module</li> <li>- Flip chart of OHT</li> <li>- Protocol</li> <li>- Partograph</li> <li>- Case study</li> <li>- Partograph</li> </ul>

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**Authors:** Drs. Ali Abdel Megeid, Ahmed Metwaly, Alaa Sultan, and Mr. Tom Coles

### Session 3: Recognizing & Managing Abnormal Labor

**DEVELOP  
BASIC  
COMPETENCY  
(Classroom)**

**Facilitator - Led Session**

**Day:**

**Time: 8 hrs. 10 min.**

**Task:** Recognize and manage normal labor, abnormal labor and the newborn

#### Competency 4: Manage abnormal labor

##### Skills

- 4.1 Detect and manage prolonged labor:
  - Use the partograph to detect prolonged latent or active phases of labor as well as abnormal Labor patterns.
  - Timely decision making concerning management of prolonged labor
- 4.2 Assess need for and perform low forceps delivery:
  - Indications and contraindications
  - Procedure of forceps application
- 4.3 Assess need for and perform vacuum extraction:
  - Indications and contraindications
  - Procedure of vacuum extractor application
- 4.4 Assess need for and perform lower - segment cesarean delivery:  
Indications and contraindications
  - Procedure of cesarean delivery
- 4.5 Determine presence of and manage malpresentation:
  - Recognize the five (5) different types of malpresentations
  - Manage breech presentation
  - Manage the remaining four (4) malpresentations by c-section
- 4.6 Determine presence of and manage twins pregnancy

## OVERVIEW

### Purpose

The purpose of this session is to introduce participants to the competencies and skills for timely detecting and managing prolonged labor, assessing and performing low forceps, vacuum extraction and lower-segment cesarean section as well as managing a pregnant woman with malpresentation or twin pregnancy. In Sessions 7 & 8, the skills addressed in this session will be practiced in a practical setting.

### Story

It is important for the mother and newborn to be cared for by a physician who can correctly detect and manage prolonged labor, assess the need and perform instrumental vaginal delivery and cesarean section as well as manage malpresentation and twin pregnancy. Use one of the case studies.

**Aswan Governorate:** Mrs. (x) was G4 P3 +0,3 normal deliveries. By date she was F.Ton admission, her examination (at 6 AM) revealed Os 2 fingers, Cx 60% effaced, intact membranes, and presentation was breach. At 10:45 PM, Os was 4 fingers dilated, 80% effaced cervix. After one (1) hour more, delivery of the baby's body was smooth without interference, but a sterile towel for coverage of the baby was not available. The baby was hanging and the OBG asked for a forceps which was not available on the prepared tray. Failed trial of forceps delivery for after coming head. This is followed by delivery of the baby by "jaw flexion shoulder traction". This case showed a major complication of 1 PPH both atonic and traumatic due to cervical tear extending to lower segment. Patient received four (4) units of blood which arrived two (2) hours later. Vaginal repair of cervical tear was inadequate due to extension to lower segment. Laparotomy followed after another two (2) hours during which blood was transfused but the patient died.

## LEARNING OBJECTIVES

By the end of this class-room session, each participant should be able to start strengthening their knowledge base so as to be able to start developing basic competency concerning the following according to the criteria in the protocol and the Skill Checklist: Recognize and Manage Abnormal Labor: In Sessions 7 & 8 these skills will be addressed in a practical setting

1. Use the partograph to detect prolonged latent or active phases of labor as well as abnormal labor patterns.
2. Detect and manage prolonged labor according to the protocol.
3. Assess and perform low forceps delivery according to the protocol.

**LEARNING OBJECTIVES**

4. Assess and perform vacuum extraction according to the protocol.
5. Assess and perform cesarean delivery according to the protocol.
6. Detect and manage malpresentation according to the protocol.
7. Recognize the important steps in managing twin pregnancy according to the protocol.

**LEARNING ACTIVITIES**

**Time**

The following are suggested learning activities which if implemented, should enable learners to meet the criteria stated in the learning objectives and pass the assessment.

- A. Motivate Learning:** The facilitator reviews the session purpose, story, learning objectives, learning activities and assignment strategies. The learning objectives are illustrated on a wall graphic or on an overhead transparency. The Skill Checklist, Recognize and Manage Abnormal Labor is reviewed since it should be used as a reference, with the protocol, for the following activities. **20 min.**

**Learning Objectives 1 & 2**

- B. Case Study:** The facilitator distributes and introduces one or more prepared case studies (# 4 & 5) for using the partograph to monitor labor and detect abnormalities associated with prolonged labor. The case study(ies) should include the following elements:

- Partograph findings
- Problem identification
- Case management

In small groups, participants complete the case study(ies).

The facilitator rotates between the groups to provide coaching as necessary. **20 min.**

**Group Discussion & Critique:** In the large group, a representative from each small group presents:

- Partograph findings,
- Differential diagnosis and problem identification, and
- Case management

Based on their case study, the above is critiqued by their colleagues. **45 min.**

**LEARNING  
ACTIVITIES**

**Time**

**Presentation:** The facilitator then makes a presentation concerning the above case study(ies) highlighting points concerning the diagnosis and management of prolonged labor.

**10 min.**

**Learning Objective 4**

**C. Presentation:** The facilitator makes a presentation on the identification of a women in prolonged labor requiring vacuum extraction. A video tape or film is used to demonstrate the skills required for performing vacuum extraction. This is followed by participant questions and group discussion.

**45 min.**

**Demonstration & Practice:** The facilitator utilizes a model and vacuum extractor (VE) to demonstrate the correct procedure. Then participants practice the procedure.

**90 min.**

**Learning Objectives 3 & 5**

**D. Case Study:** The facilitator distributes and introduces one or more prepared case studies (# 7 & 8) on the indications for low forceps delivery and lower-segment cesarean section (L.S.C.S) respectively as revealed by partograph findings. The case studies should included the following elements:

- partograph findings
- problem identification
- case management

In small groups, participants complete the case studies.

The facilitator rotates between the groups to provide coaching as necessary.

**20 min.**

**Group Discussion & Critique:** In the large group, a representative from each small group presents:

- partograph findings,
- differential diagnosis and problem identification, and
- case management

Based on their case study, the above is critiqued by their colleagues.

**30 min.**

**Presentation:** The facilitator presents a video tape or film illustrating the skills required for low forceps delivery and cesarean delivery. This is followed by a presentation concerning the above case study(ies) highlighting points concerning indications for low forceps delivery and cesarean delivery, as well as the procedure to follow concerning both as outlined in the protocol.

**40 min.**

**LEARNING  
ACTIVITIES**

**Time**

**Learning Objective 6**

**E. Presentation & Demonstration:** The facilitator makes a presentation on how to determine and manage malpresentation using overhead transparencies. This is followed by a demonstration of how to manage breech presentations using a pelvic model and doll.

**30 min.**

**Group Discussion:** The facilitator's presentation is followed by group discussion, questions and answers.

**15 min.**

**Practice & Return Demonstration:** Using the pelvic model and doll, pairs of participants practice the management of malpresentation as demonstrated by the facilitator and following the criteria in the protocol. Each participant's performance is critiqued by their colleagues against the criteria in the protocol. Pairs of participants then switch roles. The facilitator rotates through the pairs providing coaching and feedback.

**60 min.**

**Learning Objective 7**

**F. Brain Storming, Discussion, Presentation:** Participants first brain storm how to manage a twin pregnancy. Their ideas are discussed and critiqued against the criteria in the protocol. The facilitator then makes a presentation on managing a twin pregnancy (delivery) following the criteria in the protocol. This is followed by discussion, questions and answers.

**45 min.**

**G. Summary:** By the end of the session, the facilitator asks one of the participants to summarize the session against the criteria in the learning objectives. Then facilitator then completes the session summary using the flip chart graphics and overhead transparencies presented during the session.

**20 min.**

**ASSESSMENT OF  
COMPETENCIES**

To start developing "basic competency", each participant will be assessed against the criteria in the learning objectives while learning activities are being conducted.

Learning Objectives	Assessment Strategy/Methods
According to the criteria in the protocol and the Skill Checklist, Recognize and Manage Abnormal Labor: 1. Use the partograph to detect prolonged or active phases of labor as well as abnormal	1. Outcome of case studies

## ASSESSMENT OF COMPETENCIES

To start developing "basic competency", each participant will be assessed against the criteria in the learning objectives while learning activities are being conducted.

Learning Objectives	Assessment Strategy/Methods
labor patterns	
2. Detect and manage prolonged labor.	2. Outcome of case studies
3. Assess and perform low forceps delivery.	3. Outcome of case studies
4. Assess and perform vacuum extraction.	4. Questions and discussion
5. Assess and perform cesarean delivery	5. Outcome of case studies
6. Determine and manage malpresentation	6. Simulated return demonstration
7. Recognize and manage twins pregnancy	7. Questions and answers

### PREPARATION (specific)

**Facilitator:** The facilitator prepares case studies attached to this session

**Participants:** Participants review Essential Obstetric Care Resource Manual: Protocol - Recognize and Manage Labor, before the beginning of the session.

### RESOURCES

- **Module: Recognize and Manage Labor**
- **Essential Obstetric Care Resource Manual: Protocol - Recognize and Manage Labor**
- Wall graphic, overhead transparency or handout:
  - Session purpose, story and learning objectives
  - Case studies (# 4 & 5): Using the partograph to monitor labor and detect abnormalities associated with prolonged labor and decision making
  - Partograph (3 copies) one for each Case Study
  - Case studies (# 6 & 7): Low forceps delivery and lower-segment cesarean delivery
  - Partograph (2 copies) one for each Case Study
  - OHT: Malpresentation
  - Skill Checklist, Recognize and Manage Abnormal Labor
- Video tape or film:
  - Skills required for performing vacuum extraction, low forceps delivery and cesarean delivery
- Model: Pelvis with doll

**RESOURCE (HANDOUT)**

**Case Study 4**

Name: Nadia Sultan

G7 P2 + 4

Date of admission: 7. 3. 98

Time of admission: 7:00 AM

Time Observations	7:00 AM	11:00 AM	15:00 PM	18:00 PM
FHR	140/min.	140/min.	130/min.	170/min.
Membranes	I	I	R	R
Aminiotic fluid	-----	-----	C	M
Molding	-----	-----	+	++
Cervix Dilatation	2 cm	4 cm	7 cm	10 cm
Head descend	4/5	3/5	3/5	2/5
Uterine contraction	2/10 min. each lasting for 20 sec.	2/10 min. each lasting for 30 sec.	3/10 min. each lasting for 40 sec.	5/10 min. each lasting for 50 sec.
Pulse	76/min.	80/min.	90/min.	100/min.
Blood Pressure	110/70	120/80	115/70	120/85
Temperature	36.8° C	37.5° C	37.2° C	37.5° C
Drugs & I.V. Fluids	-----	Dextrose 5% + 5cc Syntocinon	Dextrose 5% + 5 cc Syntocinon	-----

Please record these findings on your partograph

What is your opinion?

What is your management & why?

# PARTOGRAPH

Name	Gravida	Para	Hospital no.
Date of admission	Time of admission	Ruptured membranes	hours

Fetal heart rate  
 180  
170  
160  
150  
140  
130  
120  
110  
100

Liquor Moulding  
 10  
9  
8  
7  
6  
5  
4  
3  
2  
1  
0

Cervix (cm) [Plot X]  
  
 Descent of head [Plot O]  
  
 Hours 0  
Time

Active Phase  
 Latent Phase  
 Alert  
 Action

Contractions per 10 mins  
 5  
4  
3  
2  
1

Oxytocin U/L drops/min

Drugs given and IV fluids

Pulse and BP  
 180  
170  
160  
150  
140  
130  
120  
110  
100  
90  
80  
70  
60

Temp °C

Urine  
 protein  
 acetone  
 volume

Fig. II.1

**RESOURCE (HANDOUT)**

**Case Study 4**

2018/12/13

**RESOURCE (HANDOUT)**

**Case Study 5**

Name: Mona Ragab

G4 P3 + 0

Date of admission: 7.3.98

Time of admission: 7: 00 AM

Time Observations	7:00 AM	11:00 AM	15:00 PM	18:00 PM	19:00 PM
FHR	140/min.	140/min.	130/min.	170/min.	120/min.
Membranes	I	I	R	R	R
Aminiotic fluid	-----	-----	C	C	C
Molding	-----	-----	-----	+	+
Cervix dilatation	3 cm	5 cm	8 cm	10 cm	10 cm
Head descend	4/5	3/5	2/5	0/5	0/5
Uterine contraction	2/10 min. each lasting for 20 sec.	3/10 min. each lasting for 30 sec.	4/10 min. each lasting for 40 sec.	4/10 min. each lasting for 20 sec.	4/10 min. each lasting for 30 sec.
Pulse	85/min.	90/min.	93/min.	100/min.	100/min.
Blood Pressure	115/75	115/75	120/80	120/85	125/80
Temperature	36.8° C	37.2° C	37.2° C	37.2° C	37.3° C
Drugs & I.V. Fluids	-----	500 Dextrose 5%	-----	Dextrose 5% + 5cc Syntocinon	-----

Please record these findings on your partograph

What is your opinion?

What is your management & why?

**BEST AVAILABLE COPY**

# PARTOGRAPH

Name \_\_\_\_\_ Gravida \_\_\_\_\_ Para \_\_\_\_\_ Hospital no. \_\_\_\_\_  
 Date of admission \_\_\_\_\_ Time of admission \_\_\_\_\_ Ruptured membranes \_\_\_\_\_ hours

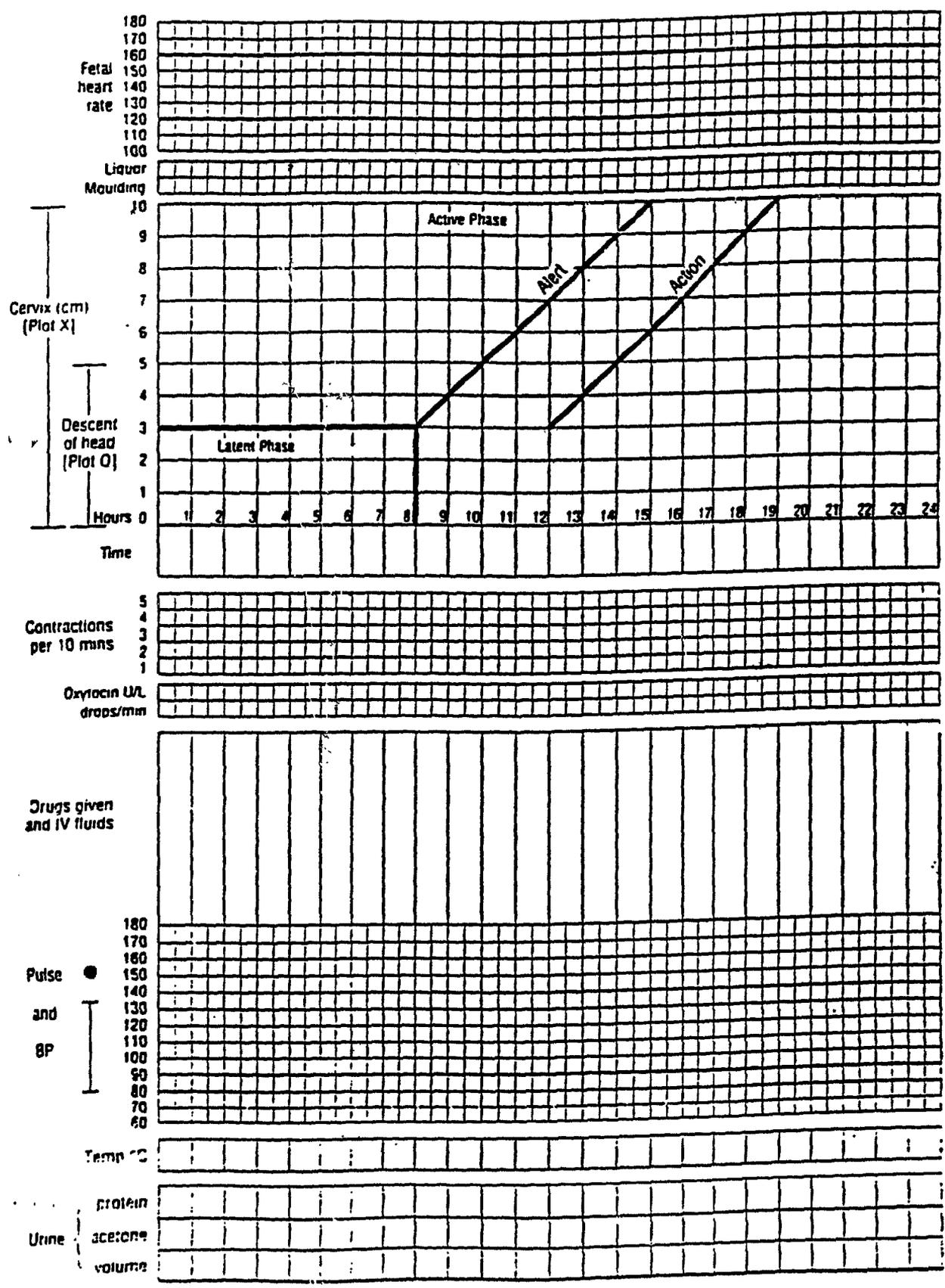


Fig. II.1

BEST AVAILABLE COPY

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**RESOURCE (HANDOUT)**

**Case Study 5**

P

**RESOURCE (HANDOUT)**

**Case Study 6**

Name: Sanaa Abou Gabal G2R + 0  
 Date of admission: 7.3.98 Time of admission:

Time Observations	7:00 AM	11:00 AM	15:00 PM	18:00 PM
FHR	140/min.	140/min.	160/min.	180/min.
Membranes	I	I	R	R
Aminiotic fluid	-----	-----	C	M
Molding	-----	-----	-----	+
Cervix Dilatation	2 cm	3 cm	7 cm	10 cm
Head descend	3/5	2/5	2/5	0/5
Uterine Contraction	2/10 min. each lasting for 20 sec.	3/10 min. each lasting for 30 sec.	4/10 min. each lasting for 30 sec.	4/10 min. each lasting for 40 sec.
Pulse	80/min.	80/min.	90/min.	100/min.
Blood Pressure	110/70	110/70	120/80	130/80
Temperature	36.8°C	37° C	37° C	37° C
Drugs & I.V. Fluids	-----	-----	Dextrose 5% 500 cc	-----

Please record these findings on your partograph  
 What is your opinion?  
 What is your management & why?

# PARTOGRAPH

Name	Gravida	Para	Hospital no.
Date of admission	Time of admission	Ruptured membranes	hours

Fetal heart rate

Liquor Moulding

Cervix (cm) [Plot X]

Descent of head [Plot O]

Hours

Time

Contractions per 10 mins

Oxytocin U/L drops/mm

Drugs given and IV fluids

Pulse and BP

Temp °C

Urine protein acetone volume

180																								
170																								
160																								
150																								
140																								
130																								
120																								
110																								
100																								
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Fig. II.1

**RESOURCE (HANDOUT)**

**Case Study 6**

RESOURCE (HANDOUT)

Case Study 7

Name: Dalal El-Sayed      G2P1 + 0 Previous forceps delivery  
 Date of admission: 7.3.98      Time of admission: 7:00 AM

Time Observations	7:00 AM	11:00 AM	15:00 PM	18:00 PM
FHR	140/min.	150/min.	120/min.	90/min.
Membranes	I	I	I	I
Aminiotic fluid	-----	-----	-----	-----
Molding	-----	-----	-----	-----
Cervix Dilatation	1 cm	3 cm	5 cm	7 cm
Head descend	5/5	5/5	5/5	4/5
Uterine Contraction	2/10 min. each lasting for 15 sec.	3/10 min. each lasting for 30 sec.	4/10 min. each lasting for 40 sec.	5/10 min. each lasting for 45 sec.
Pulse	80/min.	90/min.	90/min.	100/min.
Blood Pressure	115/70	115/70	120/75	125/80
Temperature	36.8° C			37° C
Drugs & I.V. Fluids	-----	Dextrose 5% 500 cc	Pethedine 100mg I.M.	-----

Please record these findings on your partograph  
 What is your opinion?  
 What is your management & why?

# PARTOGRAPH

Name \_\_\_\_\_ Gravida \_\_\_\_\_ Para \_\_\_\_\_ Hospital no. \_\_\_\_\_  
 Date of admission \_\_\_\_\_ Time of admission \_\_\_\_\_ Ruptured membranes \_\_\_\_\_ hours

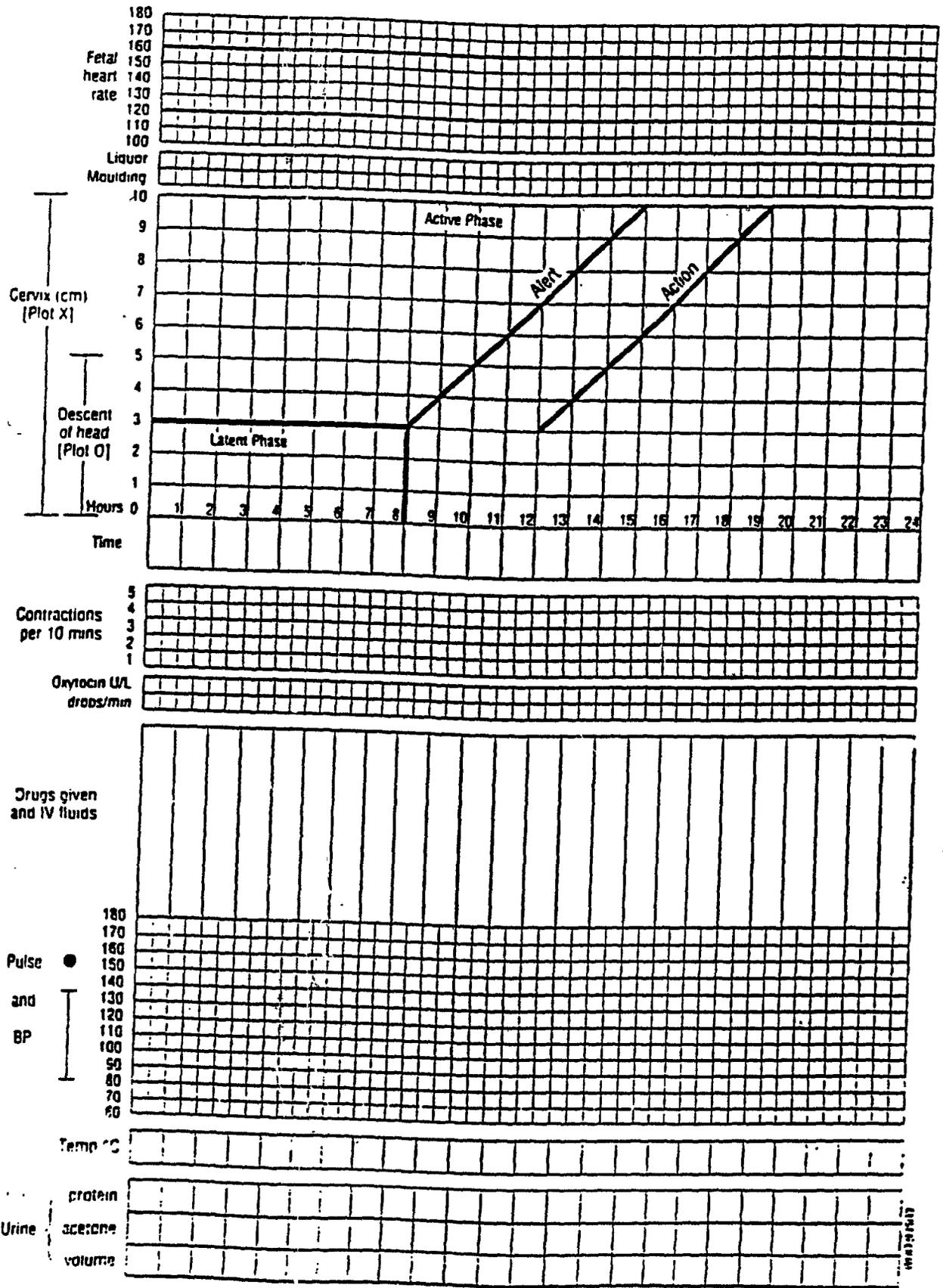


Fig. II.1

**RESOURCE (HANDOUT)**

**Case Study 7**

**DEVELOP  
BASIC  
COMPETENCY  
(Classroom)**

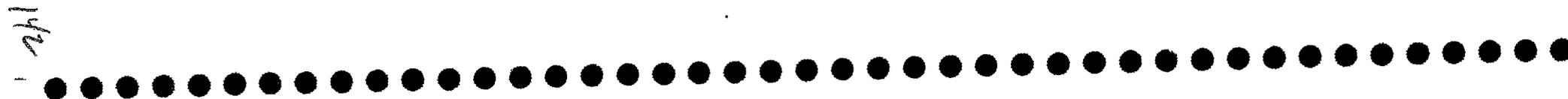
**SKILLS CHECKLIST**

**Recognize and Manage Abnormal Labor**

The participant should use it as a guide for checking his own skills.  
The facilitator should use it to evaluate the participants performance.  
Comment on skills.

**Key: 1 = needs improvement  
2 = satisfactory**

Skills	Cases:	1	2	3	4	5	6	7	8	9	10	Comments
<b>I. Examination</b>												
<b><u>1. General:</u></b>												
1.1 Pulse												
1.2 Blood Pressure												
1.3 Temperature												
1.4 Chest and heart												
<b><u>2. Abdominal:</u></b>												
2.1 Fundal level												
2.2 Fundal Grip												
2.3 Umbical Grip												
2.4 Pelvic Grip												
2.5 Determine fetal lie & Position												
2.6 Rule of fifths												
2.7 Scars												
2.8 Fetal heart sound												



**Skills Checklist**  
**Recognize and Manged Abnormal Labor**

Skills	Cases:	1	2	3	4	5	6	7	8	9	10	Comments
<b>3. Vaginal:</b> 3.1 Cervical dilation and effacement 3.2 Descend of presenting part station Position/Pelvis 3.3 Molding 3.4 Position of the presenting part 3.5 Condition of membrane 3.6 Color of Amniotic fluid 3.7 Pelvic capacity (projecting ischial spines, jutting sacral promontory and narrow subpubic angle)												
<b>II. Use of Partograph Monitor:</b> 1. Latent and active phases of labor 2. Detect and manage abnormal labor patterns												
<b>II. Management of 2<sup>nd</sup> Stage</b> Recognize onset of 2 <sup>nd</sup> stage [Full dilatation of the cervix]												
<b>IV. Instrumental or Operative Delivery</b> <b>1. Vacuum</b> 1.1 Indications a) Prolonged 2 <sup>nd</sup> stage b) Maternal or fetal Distress when cervix is fully dilated, head engaged												

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**Skills Checklist**  
**Recognize and Manage Abnormal Labor**

**Key: 1 = needs improvement**  
**2 = satisfactory**

Skills	Cases:	1	2	3	4	5	6	7	8	9	10	Comments
1.2 Preparation and application												
a) Catheterization												
b) Cup applied on post Fontanelle												
c) Traction in the right direction												
d) Episiotomy when needed												
e) Examination of cervix, vagina and Perineum for lacerations												
<b>2. Low Forceps</b>												
2.1 Indications												
a) Prolonged 2 <sup>nd</sup> stage												
b) Maternal or fetal distress when cervix is fully dilated and head engaged												
2.2 Preparation and application												
a) Empty bladder, rectum												
b) Detection of head position												
c) Anaesthesia												
d) Generous episiotomy												
e) Examination of cervix												

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**Skills Checklist**  
**Recognize and Manage Abnormal Labor**

Key: 1 = need improvement  
 2 = satisfactory

Skills	Cases:	1	2	3	4	5	6	7	8	9	10	Comments
<b>3. Cesarean delivery</b>												
3.1 Indications												
a) Fetal distress												
b) Cephalo pelvic disproportion												
c) Previous cesarean delivery												
d) Antepartum hemorrhage												
e) Malpresentations												
f) Prolapsed pulsating cord												
g) Toxaemia of pregnancy												
h) Failed induction of labor												
i) Old primigravida												
3.2 Preparation and Maneuver												
a) steps as in the protocol												
<b>4. Twins</b>												
4.1 Detection												
4.2 Management depending on presenting parts and protocols												
<b>5. Breech</b>												
5.1 Detection												
5.2 Vaginal delivery according to the protocol												

*MS*

**DEVELOP  
BASIC  
COMPETENCY  
(Classroom)**

**SESSION OUTLINE**

**MODULE: RECOGNIZE AND MANAGE LABOR**

**Session 3: Recognizing & Managing Abnormal Labor**

**Key: K = Knowledge S = Skill A = Attitudes**

Session Agenda	Learning Objectives	Assessment of Competencies	Learning Activities	Key Resources
<p>Day: 2-3 Time: 6 hrs. 50 min.</p>	<p>According to the partograph findings, criteria in the protocol and Skill Checklist: Recognize and Manage Abnormal Labor:</p> <ol style="list-style-type: none"> <li>Use the partograph to detect prolonged latent or active phases of labor as well as abnormal labor patterns</li> <li>Detect and manage prolonged labor</li> </ol>	<ol style="list-style-type: none"> <li> <p><b>K:</b> Outcomes of case studies <b>S:</b> Plotting the findings of the partograph and detection of prolonged labor</p> </li> <li> <p><b>K:</b> As above <b>S:</b> As above</p> </li> </ol>	<p><b>A. Motivate Learning:</b></p> <ul style="list-style-type: none"> <li>Purpose of session</li> <li>Story: The importance of partograph to detect abnormal labor patterns as well as correct diagnosis and correct management of abnormal labor</li> <li>Review learning objectives, activities and assessment</li> </ul> <p><b>B. Case Studies # 4 &amp; 5:</b></p> <ul style="list-style-type: none"> <li>Case studies on detecting abnormal labor pattern by use of partograph</li> </ul> <p><b>Group Discussion &amp; Critique</b></p> <ul style="list-style-type: none"> <li>Critique of case study findings</li> </ul>	<ul style="list-style-type: none"> <li>Module</li> <li>Flip chart or OHT</li> <li>Partograph findings</li> <li>Protocol</li> <li>Case studies # 4 &amp; 5</li> </ul>





**Authors :** Based on Textbook of Neonatal Resuscitation American Academy of Pediatrics – American Heart Association – Egyptian Manual of Neonatal Care

### Session 4: Neonatal And Newborn Resuscitation

<p><b>DEVELOP BASIC COMPETENCY (Classroom)</b></p>
--

**Facilitator - Led Session**

**Day:**

**Time:** 4hrs. 35 min.

**Task:**

**Competency 5:** Perform neonatal resuscitation effectively and in the proper time

#### **Skills**

- 5.1 Prepare the essential equipment needed for neonatal resuscitation (Resource):
  - Suction equipment
  - Bag & mask equipment
  - Intubation equipment
  - Medication
  - Radiant warmer
  - Stethoscope
  - Umbilical catheter 5F, 6F
- 5.2 Perform initial step of resuscitation in 20 sec.
- 5.3 **Evaluate** the infant, **decide** what action to take and then take **action**.
- 5.4 Assess the ABCs of resuscitation
- 5.5 Evaluate spontaneous breathing, perform positive pressure ventilation
- 5.6 Evaluate heart rate, perform chest compression if needed
- 5.7 Evaluate the color of the baby
- 5.8 Clamp and perform clean and safe umbilical cord care
- 5.9 Perform routine care after stabilization of the newborn
- 5.10 Explain the importance of early breast feeding

## Competency 6: Resuscitation of newborn with meconium

### Skills

- 6.1 Do suction of mouth, nose, oropharynx as soon as the head is delivered (before delivery of the shoulders)
- 6.2 Do suction of residual meconium in the hypopharynx under direct vision after delivery of the head
- 6.3 Intubate the trachea, meconium is suctioned from the lower airway
- 6.4 Re-evaluate → Decide → Take action
- 6.5 Perform initial steps of resuscitation in systematic way

## OVERVIEW

### Purpose

The purpose of this session is to introduce the participant.

- To initial steps of resuscitation of the newborn, as well the importance of evaluation, decision action cycle, to resuscitate a baby with meconium, and
- Provide participants the skills needed for resuscitation.

### Story

The process of delivery may take long hours, but at the end the loud clear cry of the newborn gives a joy hard to describe. Care for the newborn is the responsibility of the physician assisting the delivery. Helping and keeping the newly delivered baby's nose and mouth clear, lungs breathing and the heart beating so that the blood can carry oxygen all around the baby's body is a life saving skill that must be practiced professionally by the delivery attendant. The emergency situation causes different reactions. Panic has no place right away. The newborn at risk needs emergency steps to be carried out. A prepared and skilled (delivery attendant) always remembers the life saving steps of helping a newborn in trouble starting in the first 20 seconds! The crucial care given at the right time will end the event of this delivery with a happy mother going home with a healthy baby.

## LEARNING OBJECTIVES

By the end of this session each participant should be able to:

1. Recognize the equipment needed for resuscitation

**LEARNING  
OBJECTIVES**

2. Identify the initial steps of resuscitation
3. Use the cycle evaluation, action, decision to perform resuscitation
4. Do tactile stimulation properly
5. Perform positive pressure ventilation by using umbo bag.
6. Perform chest compression with PPV
7. Use endotracheal tube for suction of meconium.
8. Use of medication: indication, doses, precaution
9. Provide the baby with routine care after stabilization
10. List requirement for umbilical cord care
11. Explain advantages of early breast feeding
12. Don't use apgar score to initiate resuscitation Why? (resource), but use it for evaluation of effectiveness of resuscitation after 1"min and assessment of neurological sequelae after 5"min.
13. Define resuscitation process as series of evaluation, decision, action
14. Describe and perform correctly the neonatal resuscitation steps by using checklist in the proper time recommended

**LEARNING  
ACTIVITIES**

**Time**

The following are suggested learning activities which if implemented, should enable participants to meet the criteria stated in the learning objectives and pass the assessment.

- A. Motivate learning:** The instructor reviews the session purpose, learning objectives, activities and assessment strategies. The learning objectives are illustrated by overhead transparency, video tape, infant resuscitation manikin.

**20min.**

**LEARNING  
ACTIVITIES**

**Time**

**Learning Objective 1**

**B. Brain Storming:** Instructor will use the brain storming activity to initiate participation of the group to identify the appropriated equipment requirements, the initial steps of resuscitation in 20 sec. Then record the participant suggestion on the flip chart with group discussion.

**10 min.**

**Presentation:** The instructor will present OHT or video tape to show the list of equipment, clarify the initial steps of resuscitation, the information is then distributed to participants as handouts.

**15 min.**

**Performance:** Each participant should perform initial steps in 20 sec. by using infant manikin.

1. Dry the baby and remove wet linen
2. Positioning: on the back with the neck slightly extended
3. Suction: mouth first then nose
4. Tactile stimulation (once)

Instructor judge the performance and timing

**15 min.**

**Learning Objective 2:**

**C. Brain Storming:** Instructor use brain storming to identify the umbo bag and it's part, different size of masks, position of the masks. Ask the participant to perform the cycle of evaluations → decisions → actions → evaluation based on breathing → heart rate → color

**10 min.**

**Discussion:** Instructor and participant discuss the procedure of providing the baby by positive pressure ventilation using umbo bag and mask in 15 - 30 sec.

Instructor explain the role of orogastric tube in prolonged ventilation

**10 min.**

**Performance:** Each two participant in the group will perform the steps of steps of PPV then evaluate and make correct decisions then action.

Instructor will judge the performance and the time

**30 min.**

**LEARNING  
ACTIVITIES**

**Time**

**Learning Objective 3:**

- C. **Case Study (1):** Each two participant perform initial steps, evaluate, decide then do proper action then they perform PPV.  
Instructor judge their selection of equipment, their performance and the time taken for each step.

**15 min.**

**Learning Objective 4:**

**Case study (2):**

**Discussion:** Instructor discuss with participant a case with meconium. Explain management when the head is delivered before delivery of the shoulder. Explain management after delivery.  
Instructor demonstrate intubation on intubation manikin.

**15 min.**

**Performance:** Each participant perform intubation on the manikin in 20 sec. to practice suction under vision

**10 min.**

**Learning Objective 5:**

- D. **Brain Storming:** Instructor should identify indication of chest compression., site of compression (position of finger on the chest). Demonstrate chest compression by thumb technique and 2 finger technique with the instructor.

**10 min.**

**Performance:** After 30 sec. of PPV participant checks the heart rate evaluate and decide if chest compression is needed. Two participants will perform this situation, one perform chest compression, the other ventilate during pause after every third compression. Instructor check heart rate in 6 seconds Then participant evaluate if chest compression is needed.

**15 min.**

**Learning Objective 6:**

- E. **Discussion:** Instructor with participant identify indication for endotracheal intubation.

**10 min.**

**Demonstration:** Instructor demonstrates how to intubate on manikin by anatomical landmark and demonstrate use of umbo bag and ET tube.

**10 min.**

**LEARNING  
ACTIVITIES**

**Time**

**Learning Objective 7:**

- F. Brain Storming:** Participant should identify indication of medication. Then group discussion on each medication: dose, route of administration, precaution which should be fulfilled by using this drug.

**Discussion:** Every participant should be familiar with available route of medication administration **15 min.**

1. Umbilical vein: by using 5 FU. catheter
2. ET tube
3. Peripheral vein: difficult to assess in resuscitation

**Learning Objective 8:**

- G. Case Study:** Each 2 participant will perform complete steps of neonatal resuscitation. Instructor should give different megacode. Instructor judge the performance of each step and check the participant ability to make correct decision and take appropriate action based on those decision. Instructor should check time taken for each step. **30 min.**

**Learning Objective 9:**

- H. Brain Storming:** The instructor use this activity to encourage participation of the group to state the step of cord care. Answers are recorded on flip chart

**Learning Objective 10:**

- I. Group Discussion:** Instructor will ask participants an open ended question about their knowledge concerning the advantages of early breast feeding to mother and infant. Participants answer back and their responses are listed on flip chart discussed then distributed as a handout. **15 min.**

**Learning Objective 11:**

- K. Brain Storming:** Participant should state the routine care of normal newborn after stabilization. **15 min.**

**Learning Objective 12:**

- L. Discussion:** Participants should answer Apgar Score is not used to initiate resuscitation, why? Answers are listed on the flip chart discussed with instructor, discuss the importance of Apgar Score. **15 min.**

- M. Summary:**

The instructor or participant summarizes the session against the learning objectives.

**ASSESSMENT OF  
COMPETENCIES**

<b>Learning Objectives</b>	<b>Assessment Strategies/Methods</b>
1. Recognize the equipment needed for resuscitation	1 Brain storm
2. Identify the initial steps of resuscitation	2. Brain storm
3. Use the cycle evaluation, action, decision to perform resuscitation	3. Case study & Practice
4. Do tactile stimulation properly	4. Case study & Practice
5. Perform positive pressure ventilation by using umbo bag.	5 Brain Storm & Practice
6. Perform chest compression with PPV	6. Discussion
7. Use endotracheal tube for suction of meconium.	7 Brain storm
8. Use of medication: indication, doses, precaution	8 Case study
9. Provide the baby with routine care after stabilization	9. Brain storm
10. List requirements for umbilical cord care	10. Discussion
11. Explain advantages of early breast feeding	11. Brain storm
12. Don't use apgar score to initiate resuscitation. Why? (resource), but use it for evaluation of effectiveness of resuscitation after 1"min and assessment of neurological sequelae after 5"min.	12. Discussion
13. Define resuscitation process as series of evaluation, decision, action	13. Discussion
14. Describe and perform correctly the neonatal resuscitation steps by using checklist in the proper time recommended	14. Discussion

**PREPARATION (session specific)**

**Instructor:** The instructor prepares flip chart, video tape, handouts and infant resuscitation manikin, and the needed equipment for the session.

## RESOURCES

- **Module: Recognize and Manage neonatal resuscitation**
- Overhead transparencies (OHT) handouts
- Session Purpose and Learning Objectives
- List of Essential Equipment for Newborn Care
- Initial steps of resuscitation
- ABCs of resuscitation
- Series of evaluations → decisions → actions → evaluations
- Resuscitation of baby with meconium
  - At delivery of the head
  - After delivery of the head
- Primary apnea vs secondary apnea
- Being prepared for neonatal resuscitation
- Case studies: (different megacode)
- Cord care
- Early baby – Mother bonding
- Advantages of early breast feeding
- Routine care after stabilization of newborn
- Apgar score: When to use
- Skill Checklist
- Model infant manikin for demonstration and practice
- Megacode

**RESOURCE (OHT)**

**PROGRAM OF NEONATAL RESUSCITATION**

On basis of: American Academy of Pediatrics  
American Heart Association  
Dr. Wafaa Ahmed Abou Rabie, El Monira G. Hospital

**A. Introduction**

1. Being prepared for resuscitation
  - a- Anticipation
  - b- Preparation
2. Physiology of ashyxia – Apnea primary vs sec NDARY
3. Apgar Score: is not a basis for decision making at the beginning of resuscitation. Why?

**B. Resuscitation in delivery room:**

1. Action/Evaluation/Decision cycle
2. Initial steps
  - ABCs
  - Tactile stimulation
3. Positive pressure ventilation (PPV)
4. Chest compression
5. Endo tracheal tube
6. Medication: Indication, doses

## RESOURCE (Handout)

### 1. Being Prepared for Resuscitation

#### a- Anticipation:

Asphyxiation in a newborn at birth may come as a surprise. However, most newborn asphyxia can be anticipated. When unanticipated, resuscitation can be promptly and effectively initiated only if the proper equipment is readily available and a well-trained team is on hand.

This does not mean that asphyxia in a neonate will occur every time it is anticipated. Some infants, in spite of being at risk for asphyxia, will do well following delivery and will require no resuscitative assistance. If, however, every time asphyxia is anticipated the infant actually requires resuscitation, then it is clear that the cases are not being screened thoroughly. The delivery room staff should be prepared to handle more problems than they actually encounter.

#### Antepartum/Intrapartum History:

Delivery of a depressed or asphyxiated infant can be anticipated in many cases on the basis of information found in both the antepartum and the intrapartum histories.

#### Antepartum Factors

Maternal diabetes	Post-term gestation
Pregnancy-induced hypertension	Multiple gestation
Chronic hypertension	Size-dates discrepancy
Previous Rh sensitization	Drug therapy, e.g.
Previous stillbirth	Reserpine
Bleeding in second or third trimester	Lithium carbonate
Maternal infection	Magnesium
Hydramnios	Adrenergic – blocking drugs
Oligohydramnios	Maternal drug abuse

#### Intrapartum Factors

Elective or emergency cesarean section	Non-reassuring fetal heart rate patterns
Abnormal presentation	Use of general anesthesia
Premature labor	Uterine tetany
Rupture of membranes more than 24 hours prior to delivery	Narcotics administered to mother within 4 hours of delivery
Foul-smelling amniotic fluid	Meconium-stained amniotic fluid
Precipitous labor	Prolapsed cord
Prolonged labor (greater than 24 hours)	Abruptio placenta
Prolonged second stage of labor (greater than 2 hours)	Placenta previa

It should be obvious that some of these factors may present during a delivery. Thus, you must have the factors well in mind so that if they occur, you will recognize that asphyxia is a potential problem.

**b- Adequate Preparation:**

In spite of the screening of cases through review of the antepartum and intrapartum histories, there will be occasions when the birth of an asphyxiated infant has not been anticipated. To allow for such situations, the minimum preparation for any delivery should include:

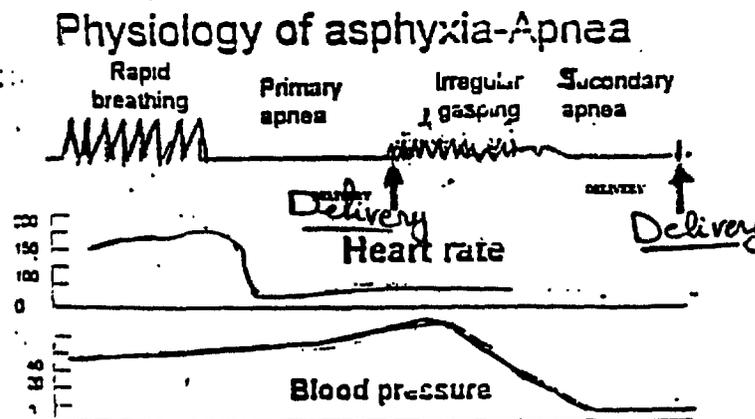
- A radiant warmer, heated and ready for use.
- All resuscitation equipment immediately available and in working order.
- At least one person skilled in neonatal resuscitation should be present in the delivery room: one or two other persons should be available to assist with an emergency resuscitation.

## RESOURCE (Handout)

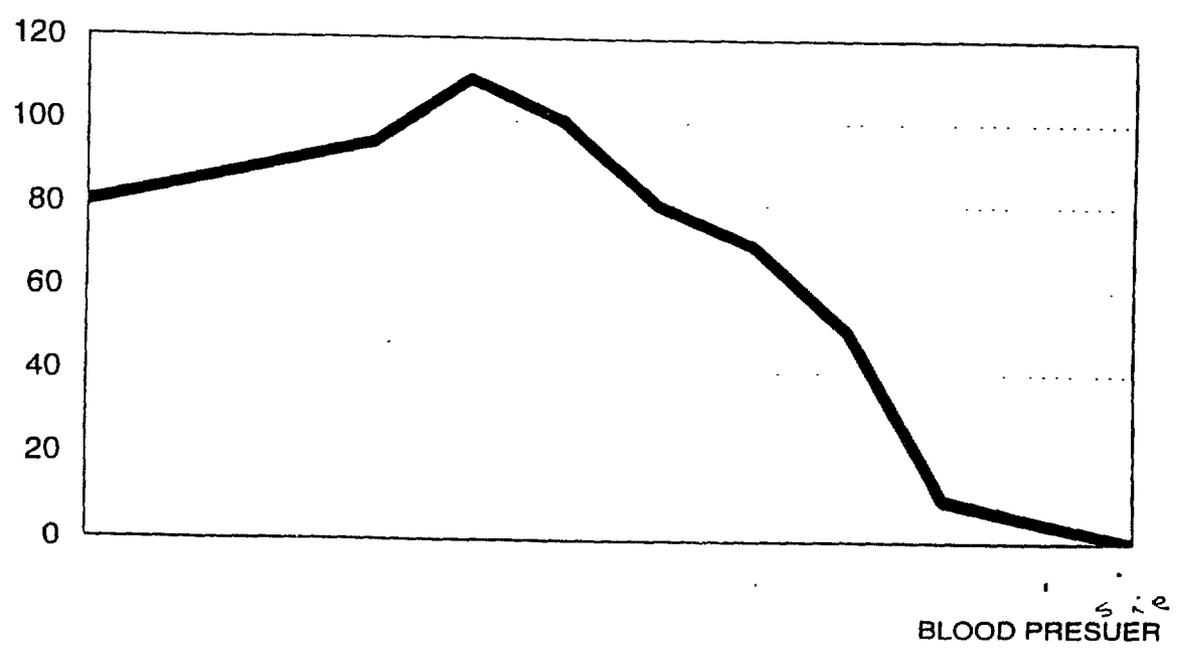
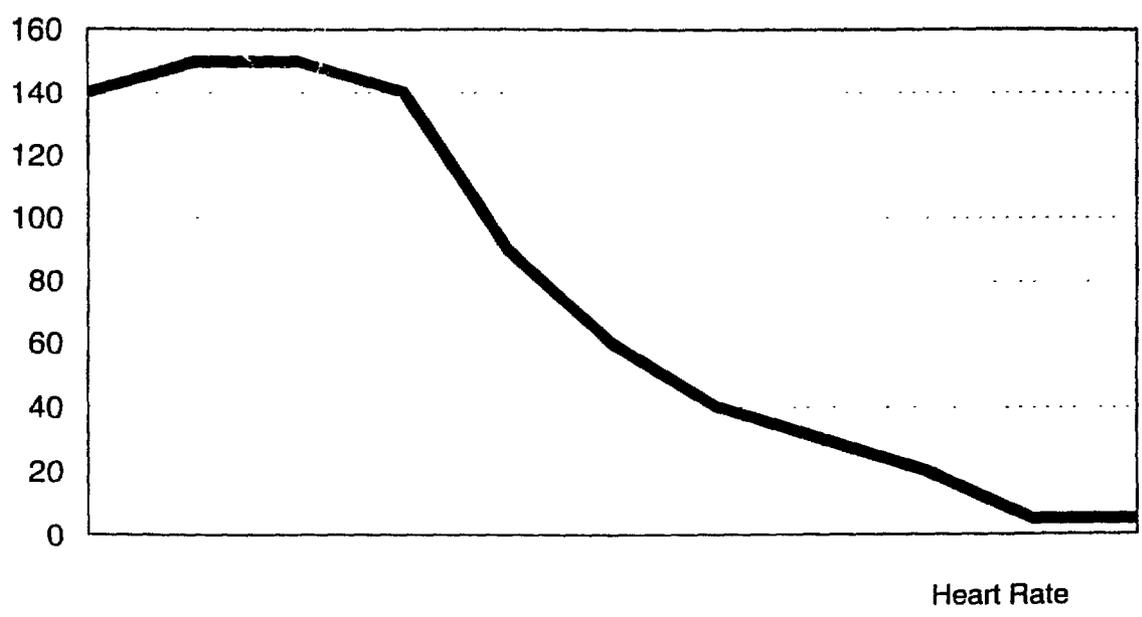
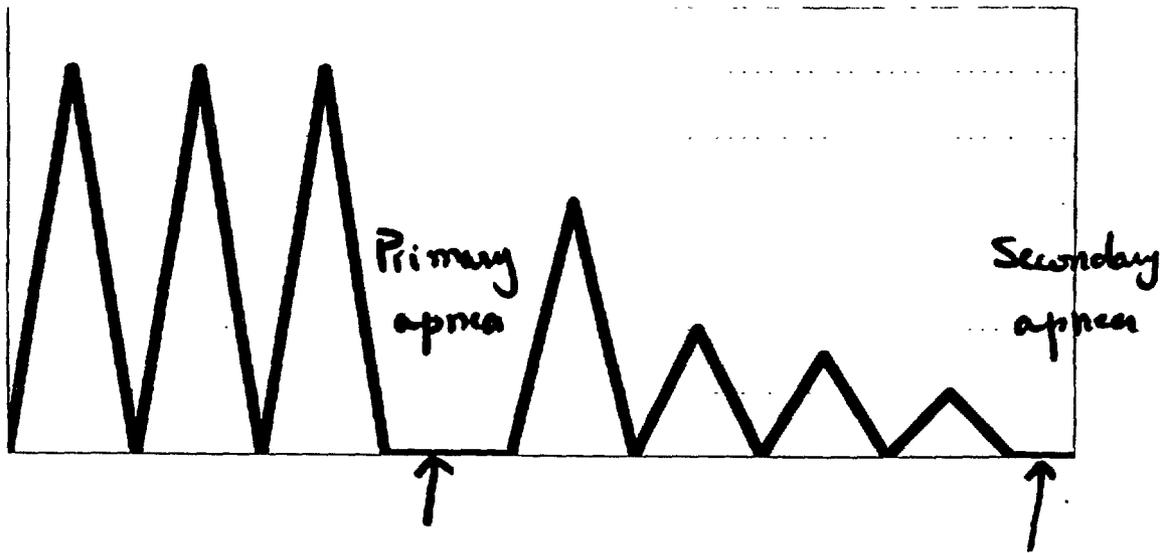
### 2. Physiology of asphyxia Pathophysiology of Asphyxia Apnea

When infants become asphyxiated (either in utero or following delivery, they undergo a well-defined sequence of events. When a fetus or infant is deprived of oxygen, an initial period of rapid breathing occurs. If the asphyxia continues, the respiratory movements cease, the heart rate begins to fall, and the infant enters a period of apnea known as **primary apnea**. Exposure to oxygen and stimulation during the period of primary apnea in most instances will induce respiration.

If the asphyxia continues, the infant develops deep gasping respiration, the heart rate continues to decrease, and the blood pressure begins to fall. The respiration becomes weaker and weaker until the infant takes a last gasp and enters a period of apnea call **secondary apnea**. During secondary apnea the heart rate, blood pressure, and oxygen in the blood (PaO<sub>2</sub>) continue to fall farther and farther. The infant now is unresponsive to stimulation, and artificial ventilation with oxygen (PPV) must be initiated at once.



When we are faced with an apneic infant at delivery, we must assume that we are dealing with secondary apnea, and resuscitation should begin immediately. To assume, incorrectly, that an infant has primary apnea and provide stimulation that is ineffective will only lead to delayed oxygenation and increased risk of brain damage.



**RESOURCE (HANDOUT, Sessions 3, 6 & 8)**

**3. APGAR Scoring Chart**

Apgar Score is not a basis for decision making at the beginning of resuscitation. Why?

Apgar Score: **is not used** in determining when to initiate a resuscitation or in making decisions about the course of resuscitation.

It is used for:

After 1" min.: evaluate effectiveness of resuscitation

After 5" min.: assess neurological sequelae

Resuscitation = seconds and not minute

The APGAR Scoring Chart is a simple test done by looking at the baby :

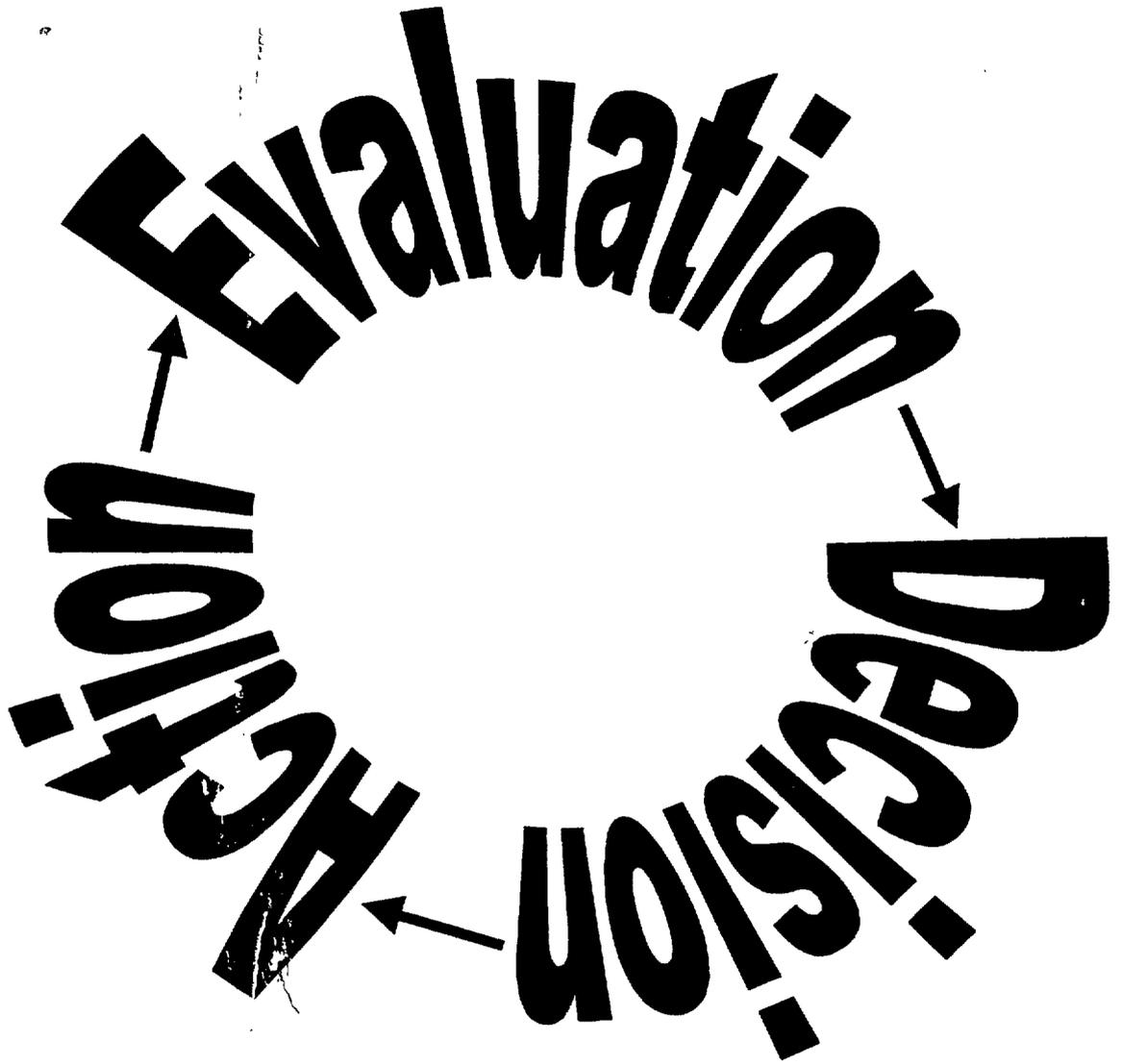
- a. after 1 minute
- b. after 5 minutes

Score \ Item	2	1	0
Color	Completely pink body and face	Pink body, blue arms and legs, pale body and face	Pale or blue body and face
Heart beats	> 100 heart beats per/min. strong heart beat	< 100 heart beats/min. or less weak beats	No heart beats
Grimace	Crying, coughing and sneezing	Grimace or pucker of face	No response
Movement and tone	Active movement waving arms and legs	Some movements in response to stimulation	Limp arms and legs . No movement in response to stimulation
Cry and breathing	- Strong cry - Regular breathing	- Weak cry - Slow irregular breathing retraction of chest wall, grunting, weak cry	- No cry - No breathing

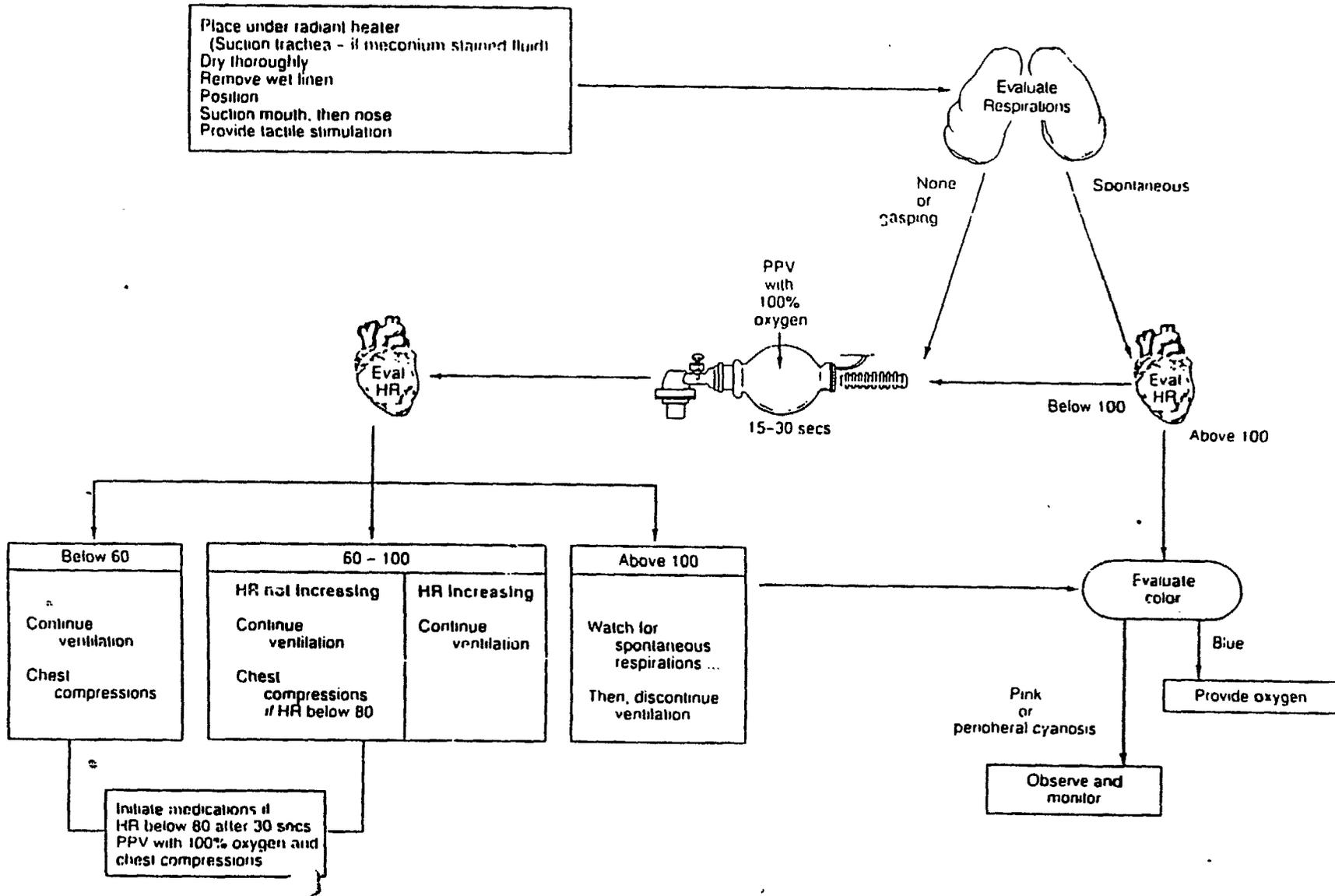
Normal signs score: 7 - 10

Abnormal signs score: 0 - 6

RESOURCE (OHT)



# B. Overview of Resuscitation in the Delivery Room



## RESOURCE (Handout)

### Initial steps of Neonatal Resuscitation

This summary of the initial steps in resuscitation and some guidelines for practice are presented for your review and reference.

#### Preventing Heat Loss

The first step in caring for a newborn is to prevent heat loss. Heat loss is prevented by:

- Placing the infant under a heated radiant warmer
- Quickly drying the infant and removing the wet linen

#### Open Airway

##### Positioning

Next, the infant should be positioned properly to ensure an open airway. For correct positioning:

- Neonate is placed on his or her back or side, with the neck slightly extended.

##### Suctioning:

As soon as the infant is properly positioned, he or she should be suctioned:

- Suction the mouth first
- Then suction the nose

##### Evaluation:

After you have dried, positioned, and suctioned the infant, you should monitor and evaluate the following three vital signs:

- Respiratory effort
- Heart rate
- Color

You should follow these steps:

##### Respirations:

Observe and evaluate the infant's respirations. If normal, go to the next sign. If not, begin PPV.

##### Heart Rate:

Check the baby's heart rate. If above 100 beats per minute, go on. If not, initiate PPV.

##### Color:

Observe and evaluate infant's color. If central cyanosis is present, administer free-flow oxygen.

## **Tactile Stimulation to stimulate Breathing**

If an infant doesn't breathe immediately, tactile stimulation may be used briefly in an attempt to initiate respirations. There are two correct methods of tactile stimulation:

- Slapping or flicking the soles of the feet
- Rubbing the back

Harmful actions such as the following should be avoided:

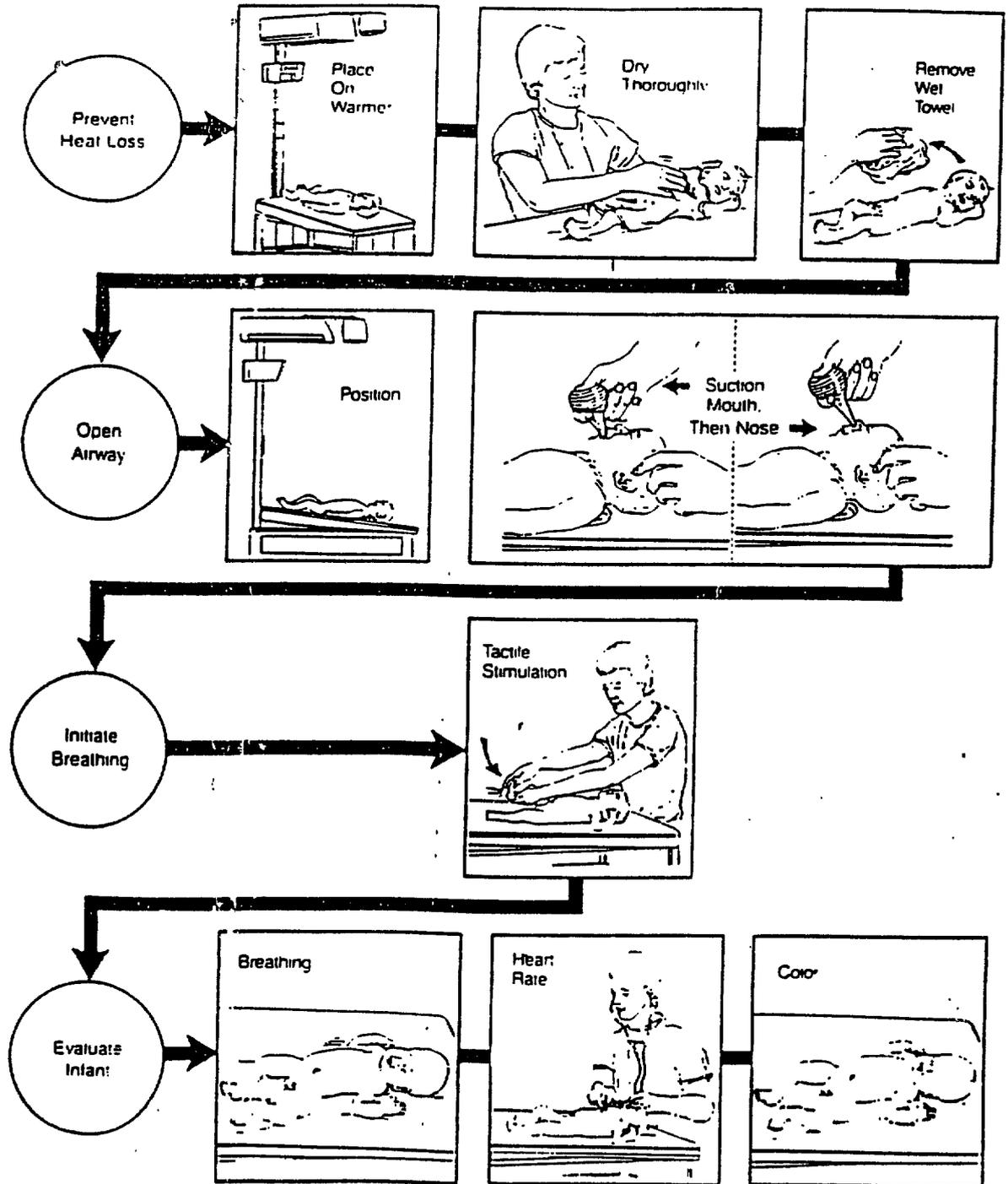
- Slapping the back
- Squeezing the rib cage
- Forcing the thighs onto the abdomen
- Dilating the anal sphincter
- Using hot or cold compresses or baths
- Blowing cold oxygen or air on the face or body

Gentle rubbing of the trunk, extremities, or head can be used to increase respiratory effort in a baby who is breathing.

RESOURCE (OHT)

Initial Steps

Now let's take a look at these steps.



Let's begin our discussion by looking at the prevention of heat loss in a newborn infant. Then we will go into the actual resuscitation

## RESOURCES (Handout & OHT)

### Providing Tactile Stimulation

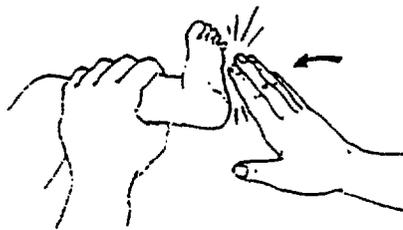
Both drying and suctioning the infant produce stimulation, which for many infants is enough to induce respiration. If, however, an infant doesn't immediately breathe, additional tactile stimulation can be provided in an attempt to initiate respirations. There are two safe and appropriate methods of doing this:

- Slapping or flicking the soles of the feet, and
- Rubbing the infant's back

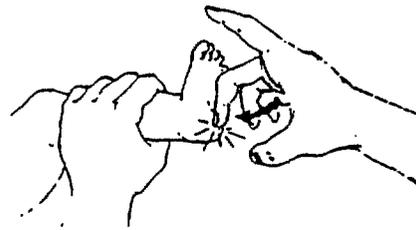
#### Appropriate Actions

##### Foot Slap or Flick

Stimulating the soles of the feet, either by slapping or flicking the feet, often initiates respirations in the mildly depressed infant.



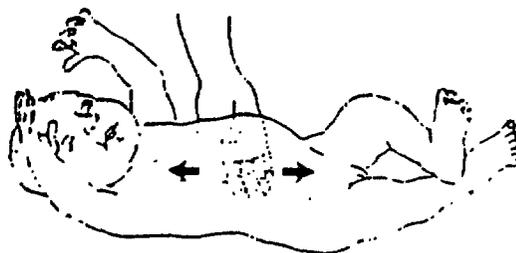
Slapping the Sole of the Foot



Flicking the Heel

##### Back Rub

Quickly and firmly rubbing the infant's back is another safe method of attempting to initiate respirations.



Rubbing the Infant's Back

## **Harmful Actions**

There are certain actions, which have been used in the past to provide tactile stimulation to apneic neonates, that can harm a baby and should never be used.

### **Harmful Actions**

- Slapping the back
- Squeezing the rib cage
  
- Forcing thighs onto abdomen
- Dilating anal sphincter
- Using hot or cold compresses or baths
- Blowing cold oxygen or air onto face or body

### **Potential Consequences**

Bruising  
Fractures, pneumothorax, respiratory distress, death

Rupture of liver or spleen , hemorrhage  
Tearing of anal sphincter  
Hypothermia, hyperthermia, burns  
Hypothermia

## P.P.V.

### Ventilation Rate and Pressure

Up to this point, you have learned how to select and assemble a resuscitation bag and mask and how to check to be sure they are functioning properly. In addition, you have learned how to position the mask on the infant's face and how to test for an effective seal. Here you will learn how rapidly to squeeze the bag and what pressures should be used with various infants. In order for positive-pressure ventilation to be effective, it must be delivered at a proper rate and a proper pressure.

#### Ventilation Rate

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Ventilation of the infant should be performed at a rate of 40 – 60 per minute

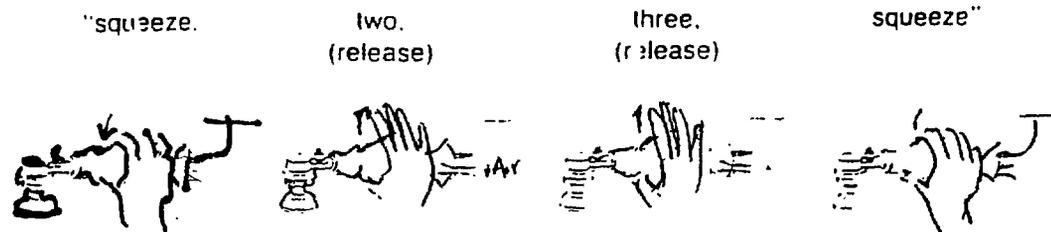
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#### Practice

Practice squeezing the bag at a rate of 40 – 60. You can do this with or without a manikin. But you need a resuscitation bag and a clock with a second hand to time yourself.

Rate of 40 – 60 = 10 – 15 breaths in 15 seconds

If you had trouble maintaining a rate of 40 – 60, it may help for you to say to yourself as you ventilate an infant:



If you squeeze the bag on "squeeze", and release while you say "two, three", you will probably find you are ventilating at a proper rate.

#### Ventilation pressure

The pressure needed to inflate the lungs will vary, depending on the infant's size, condition of the lungs, and whether the infant has previously taken a breath.

First breath	The initial lung inflation following delivery may require 30–40 cm H <sub>2</sub> O pressure
Succeeding breaths	Pressure of 15–20 is often adequate after the first breath
Pulmonary disease*	Infants with respiratory conditions that decrease lung compliance may require 20–40 cm H <sub>2</sub> O pressure

\* The result of respiratory diseases in which some of the alveoli are collapsed making the lungs difficult to expand (e.g. hyaline membrane disease, meconium aspiration)

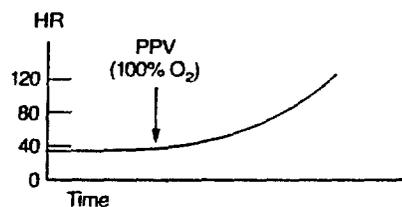
## RESOURCE (Handout)

### Indications for Chest Compressions

An adequate heart rate is necessary for effective cardiac output. Most of the time, ventilation alone with 100% oxygen will be sufficient to raise the infant's heart rate to an adequate level. If an infant fails to achieve an adequate heart rate despite being ventilated with 100% oxygen, chest compressions must be performed.

#### Initial Period of PPV

In a newborn, bradycardia usually results from a lack of proper oxygenation. In most infants with bradycardia, the heart rate (HR) begins to improve as soon as adequate ventilation with 100% oxygen is established.



Therefore, the decision to begin chest compressions should be based on the heart rate obtained after 15 to 30 seconds of PPV with 100% oxygen, not on a heart rate obtained at the time of delivery.

#### When to Begin

Current recommendations include two indications for initiating chest compressions.

Chest compressions are indicated if after 15 to 30 seconds of PPV with 100% oxygen the heart rate is

- Below 60 beats per minute
- or
- Between 60 and 80 beats per minute and not increasing

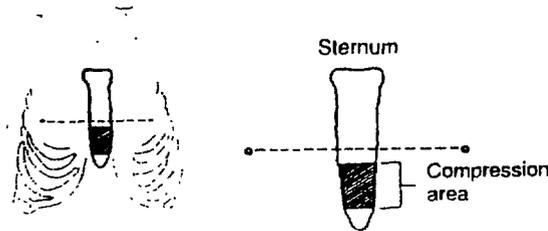
#### When to Stop

Once the heart rate is 80 beats per minute or more, chest compressions should be discontinued.

**Note:**

Some experienced persons prefer to intubate an infant before or shortly after initiating chest compressions. However, chest compressions can be performed on an infant who is being ventilated with a bag and mask. A person who is inexperienced with intubation should not take the time to attempt to intubate an asphyxiated infant who is in need of chest compressions.

**Location of Compression**



## RESOURCE (Handout)

### Placing the Endotracheal Tube

Once the vocal cords and trachea are visualized, insert the endotracheal tube.

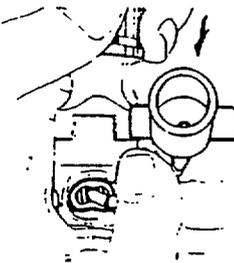
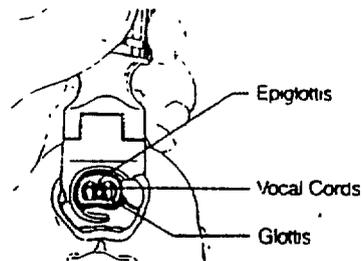
#### Inserting Tube

When you are able to visualize the glottis and vocal cords, follow these steps for inserting the endotracheal tube:

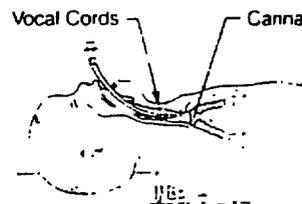
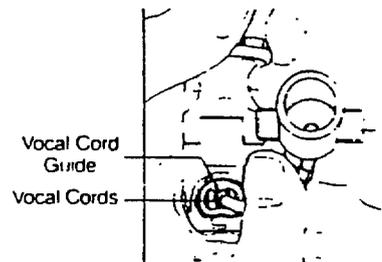
1. Holding the tube in your right hand, introduce it into the right side of the infant's mouth. This will prevent the tube from blocking your view of the glottis.
2. Keep the glottis in view, and when the vocal cords are apart, insert the tip of the ET tube until the vocal cord guide is at the level of the cords.

This will position the tube in the trachea – approximately half way between the vocal cords and canna.

(if the cords are together, wait for them to open. Do not touch the closed cords with the tip of the tube as it may cause spasm of the cords. If the cords do not open before the 20-second limit has expired, stop and ventilate with a bag and mask)



Insertion of ET Tube Between Cords



## RESOURCE (Handout)

### Endotracheal Suctioning Under Direct Vision

When an infant shows signs of having aspirated meconium, the trachea must be suctioned under direct vision. This involves using a laryngoscope to view the trachea and one of the following for suctioning the trachea:

- ET tube
- Suction catheter, 10Fr. or larger

The procedures for using each of these two pieces of equipment are given below.

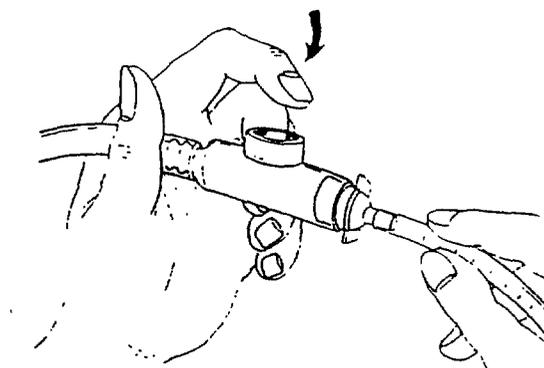
#### Equipment and Supplies

The equipment and supplies needed for tracheal suctioning are as follows:

- Laryngoscope with appropriate blade (fullterm or premature size)
- ET tube or 10-12 Fr. suction catheter
- Suction setup with tubing

#### Suctioning Via ET Tube

Suctioning the trachea under direct vision using the ET tube is the preferred method for suctioning meconium and may be used for suctioning other material from the trachea as well. This consists of inserting the tube approximately 3 cm below the vocal cords and then applying continuous suction as you withdraw the tube. Suction can be applied to the ET tube by use of an adaptor and a regulated wall suction device. Reintubation followed by suctioning may be repeated until the trachea is cleared. The suction pressure should not exceed 100 mm Hg or 4 in Hg.



Wall Suction Device

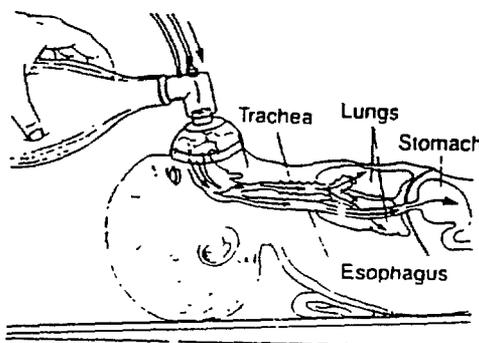
## RESOURCE (OHT)

### Orogastric Catheter

Infants requiring positive-pressure ventilation with a bag and mask for longer than 2 minutes should have an orogastric tube inserted and left in place during ventilation. Here you will learn the importance of an orogastric tube in preventing distention of the stomach and intestines and preventing aspiration of gastric contents.

#### Effect of Ventilation

During bag-and-mask ventilation, air is forced into the oropharynx, where it is free to enter both the trachea and the esophagus. Proper positioning of the infant will force most of the air into the trachea and the lungs. However, some air may enter the esophagus and be forced into the stomach.



#### Distention

Air forced into the stomach interferes with ventilation in the following ways:

- Air in the stomach puts pressure on the diaphragm, preventing full expansion of the lungs.
- Air in the stomach may cause regurgitation of gastric contents, which can then be aspirated during bag-and-mask resuscitation.
- Air in the stomach travels into the bowel, producing abdominal distention for several hours. This puts pressure on the diaphragm and makes it more difficult for the infant to breath.



The problems related to gastric/abdominal distention and aspiration of gastric contents can be prevented by inserting an orogastric tube, suctioning gastric contents, and leaving the gastric tube in place to act as a vent for air throughout the remainder of the resuscitation.

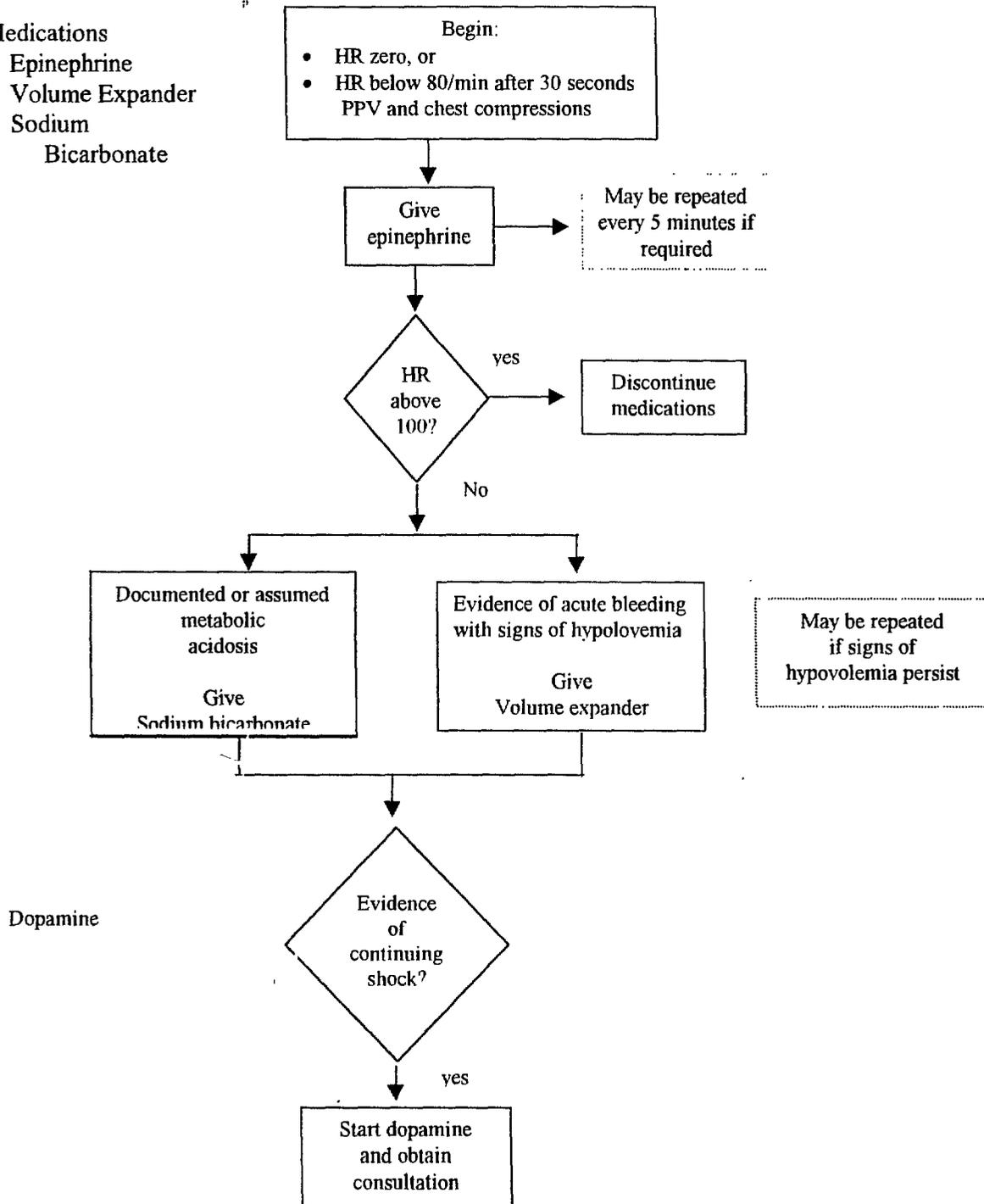
## RESOURCES (OHT & Handout)

### Medications

This summary contains key points related to the use of medications during neonatal resuscitation.

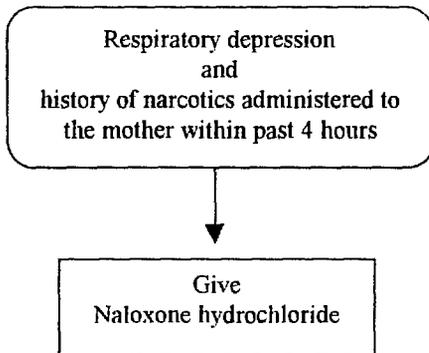
#### Medications

Epinephrine  
Volume Expander  
Sodium  
Bicarbonate



Dopamine

Naloxone  
Hydrochloride



RESOURCE (Handout)

Appendix C: Medications for Neonatal Resuscitation

Medication	Concentration to Administer	Preparation	Dosage/Route *	Total Dose/Infant			Rate/Precautions
Epinephrine	1:10,000	1mL	0.1-0.3 mL/kg I.V. or E.T.	weight	total mL's		Give rapidly
				1 kg	0.1 - 0.3 mL		
				2 kg	0.2 - 0.6 mL		
				3 kg	0.3 - 0.9 mL		
Volume Expanders	Whole Blood 5% Albumin Normal Saline Ringer's Lactate	40 mL	10 mL/kg  I.V.	weight	total mL's		Give over 5 - 10 min.
				1 kg	10 mL		
				2 kg	20 mL		
				3 kg	30 mL		
Sodium Bicarbonate	0.5 mEq/mL (4.2% solution)	20 mL or two 10 mL prefilled syringes	2mEq/kg  I.V.	weight	total dose	total mL's	Give slowly, over at least 2 min.  Give only if infant being effectively ventilated
				1 kg	2 mEq	4 mL	
				2 kg	4 mEq	8 mL	
				3 kg	6 mEq	12 mL	
Naloxone	0.4 mg/mL	1 mL	0.1 mg/kg (0.25 mL/kg)  I.V. E.T. I.M. S.Q.	weight	total dose	total mL's	Give rapidly  I.V., E.T. preferred
				1 kg	0.1 mg	0.25 mL	
				2 kg	0.2 mg	0.50 mL	
				3 kg	0.3 mg	0.75 mL	
	1.0 mg/mL	1 mL	0.1 mg/kg (0.1 mL/kg)  I.V. E.T. I.M. S.Q.	weight	total dose	total mL's	I.M., S.Q. acceptable
				1 kg	0.1 mg	0.1 mL	
				2 kg	0.2 mg	0.2 mL	
				3 kg	0.3 mg	0.3 mL	
Dopamine	Weight desired dose mg of dopamine 6 x (kg) (mcg/kg/min) per 100 ml of ----- solution desired fluid (mL/hr)	Begin at 5 mcg/kg/min (may increase to 20 mcg/kg/min if necessary) I.V.	weight	total mcg/min		Give as a continuous infusion using an infusion pump  Monitor HR and BP closely  Seek consultation	
			1 kg	5 - 20 mcg/min			
			2 kg	10 - 40 mcg/min			
			3 kg	15 - 60 mcg/min			
4 kg	20 - 80 mcg/min						

From Textbook of Neonatal Resuscitation  
1987, 1990 American Heart Association

\* I.M. – Intramuscular

E.T. Endotracheal

I.V. Intravenous

S.Q. Subcutaneous

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## RESOURCES (Handout & OHT)

### Appendix: Neonatal Resuscitation Supplies and Equipment

#### Suction Equipment

- Bulb syringe
- Mechanical suction
- Suction catheters, 5F or 6F, 8F, 10F
- 8F feeding tube and 20-ml syringe
- Meconium aspirator

#### Bag-and-Mask Equipment

- Neonatal resuscitation bag with a pressure-release valve or pressure gauge. The bag must be capable of delivering 90% to 100% oxygen
- Face masks, newborn and premature sizes (cushioned rim masks preferred)
- Oral airways, newborn and premature sizes
- Oxygen with flowmeter and tubing

#### Intubation Equipment

- Laryngoscope with straight blades, No. 0 (preterm) and No 1 (term)
- Extra bulbs and batteries for laryngoscope
- Endotracheal tubes, 2.5, 3.0, 3.5, 4.0 mm
- Stylet
- Scissors
- Gloves

#### Medications

- Epinephrine 1:10,000 – 3mL or 10mL ampules
- Naloxone hydrochloride 0.4mg/mL – 1 mL ampules, or 1.0 mL/mL – 2 mL ampules
- Volume expander, one or more of these:
  - ◀ 5% Albumin-saline solution
  - ◀ Normal saline
  - ◀ Ringer's lactate
- Sodium bicarbonate 4.2% (5mEq/10mL) – 10mL ampules
- Dextrose 10%, 250 mL
- Sterile water, 30 mL
- Normal saline, 30 mL

### Miscellaneous

- Radiant warmer
- Stethoscope
- Cardiometer with ECG (oscilloscope desirable)
- Adhesive tape, ½ or ¾ inch
- Syringes, 1, 3, 5, 10, 20, 50mL
- Needles, 25, 21, 18 gauge
- Alcohol sponges
- Umbilical artery catheterization tray
- Umbilical tape
- Umbilical catheters, 3.5F, 5F
- Three-way stopcocks
- Feeding tube, 5F

## **RESOURCES (OHT & Handout)**

### **Routine care after stabilization of newborn**

- 1- Cut the cord 2.5 cm from the abdomen, apply alcohol 70% to the umbilicus.
- 2- Start antibiotic eye drops
- 3- Vit K1 1mg IM
- 4- No bath immediately after birth for their more regulation: baby is kept warm, wrapped with dry cloths.
- 5- Start breast feeding after few minute of delivery
- 6- Take care of rooming – in, keeping mother and baby together.

**RESOURCES (OHT, Sessions 3, 6 & 8)**

**Cord Care**

1. Fix the cord clamp 2 inches away from the umbilicus (or tying the cord with sterile thread or silk)
2. Cut the umbilical cord using clean and sterile scissor or scalpel
3. Wipe the umbilical stump with antiseptic solution

**RESOURCES (OHT, Sessions 3, 6 & 8)**

**"Early Baby-Mother Bonding"**

Early skin to skin contact between mother and baby is important for several reasons:

1. A fall in infant temperature (which may occur in newly born) can be reduced by skin to skin contact between baby and mother.
2. Psychologically it stimulates mother and baby to get acquainted with each other.
3. After birth babies are colonized by bacteria, it is advantageous that they come into contact with their mother's skin bacteria, and that they are not colonized by bacteria from care-givers or from a hospital.

**RESOURCES (OHT, Sessions 3, 6 & 8)**

**Advantages of Early Breast Feeding**

<b>Mother</b>	<b>Infant</b>
1. Nipple sucking stimulate uterine contraction that lead to minimize postpartum hemorrhage	1. Importance of colostrum to the infant
2. Early and frequent feeding may bring-in the mother's milk more quickly	2. Early passage of Meconium
3. Early breast feeding helps to enhance emotional bonding between mother and infant	3. Prevent infection from prelacteal feeding such as Diarrhea
4. Avoid breast engorgement	4. Prevent development of protein intolerance in the artificial feeding and allergies such as Eczema

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**SKILL CHECKLIST**

**Newborn Care – Resuscitation**

**Instructor:** Use this skill checklist as a guide when demonstrating the skill and assessing participants' performance.

**Participants:** Use the skill checklist as a guide when practicing this skill. Your performance will be assessed against the criteria in this checklist.

**Rating:** 1 = Needs Improvement  
2 = Satisfactory

STEPS	RATE	COMMENTS
1. Prepared equipment needed: - Suction equipment - Bag & mask equipment - Intubation equipment - Medication - Stethoscope		
2. Found assistant to help		
3 Perform initial steps in 20 sec - Thermoregulation - Positioning - Suctioning - Tactile stimulation		
4. Dealing with baby with meconium		
5. Evaluation – decision – action ABCs Evaluate spontaneous breathing Perform bag and mask ventilation Evaluate Heart rate in 6 sec. Perform chest compression with PPV		
6. Intubation is performed on an intubating manikin. Intubation performed in 20 sec.		
7. Medication: Indication Doses Route of administration		

# SKILL CHECKLIST

## Newborn Care – Resuscitation

**Instructor:** Use this skill checklist as a guide when demonstrating the skill and assessing participants' performance. „

**Participants:** Use the skill checklist as a guide when practicing this skill Your performance will be assessed against the criteria in this checklist.

**Rating:** 1 = Needs Improvement  
2 = Satisfactory

STEPS	RATE	COMMENTS
8. Care for the cord - Fixed cord clamp - Cut umbilical cord - Use antiseptic solution for umbilical stump		
9. Promote baby mother bonding - Had baby sleep with mother - Covered the baby - Positioned the baby to sleep on side		
10. Routine Vit K1 1mg IM Start eye drops antibiotics		

**NB** Each step must receive a rating of 2. Note corrective action to be taken under "comments" for any step receiving a rating of 1 (needs improvements).

**RESOURCES (OHT & Handout)**

**Case study**

**Appendix G  
Megacode**

**Instructor:** Provides participant with initial situation

If there is evidence of thick, meconium-stained amniotic fluid, participant indicates he or she would request presence of someone in delivery room capable of tracheal

**Instructor:** Hands newly delivered infant to participant

Places infant on preheated radiant warmer  
Dries amniotic fluid from body and head.  
Removes wet linen from contact with infant  
Positions infant with neck slightly extended  
Suctions mouth, then nose

Is thick meconium in amniotic fluid?

yes

Indicates he or she would perform or request tracheal suctioning

Evaluates respirations

No

Breathing

Apneic

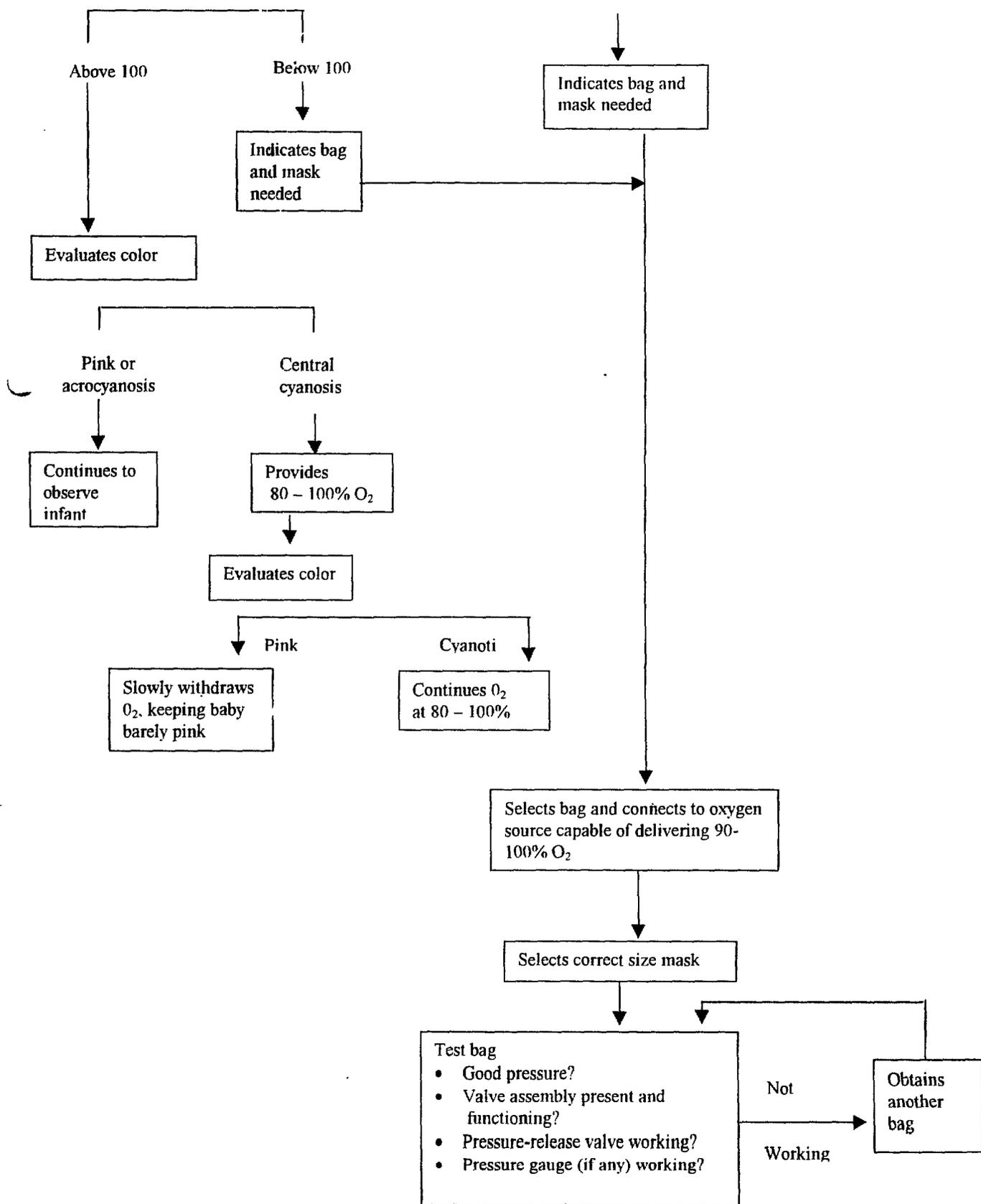
Slaps foot, flicks heel, or rubs back 1-2 times only

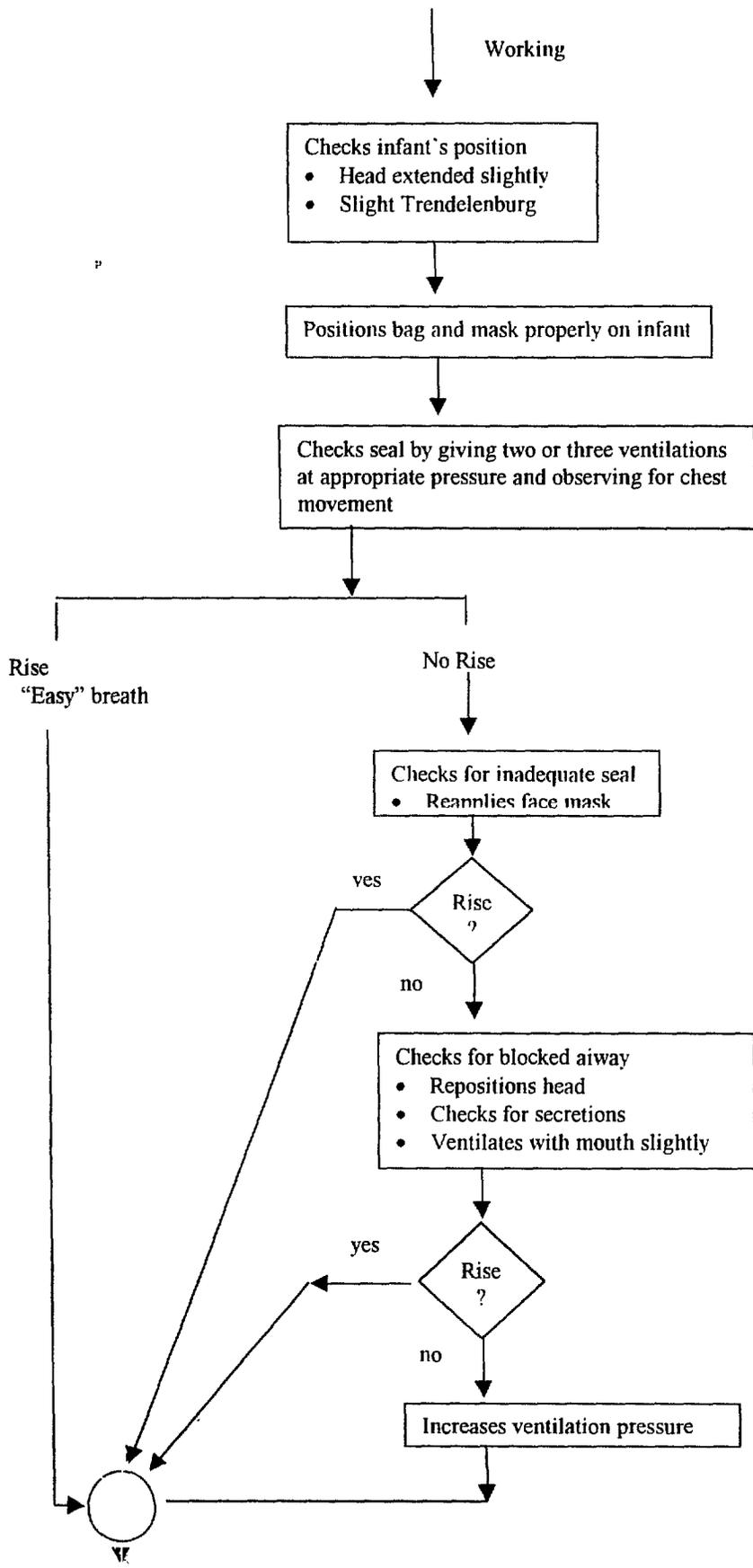
Evaluates respirations

Breathing

Apneic

Evaluates heart rate





↓

Ventilates for 15-30 seconds

- Rate: 40 times/minute
- Pressure: 15-20 cm H<sub>2</sub>O for normal lungs

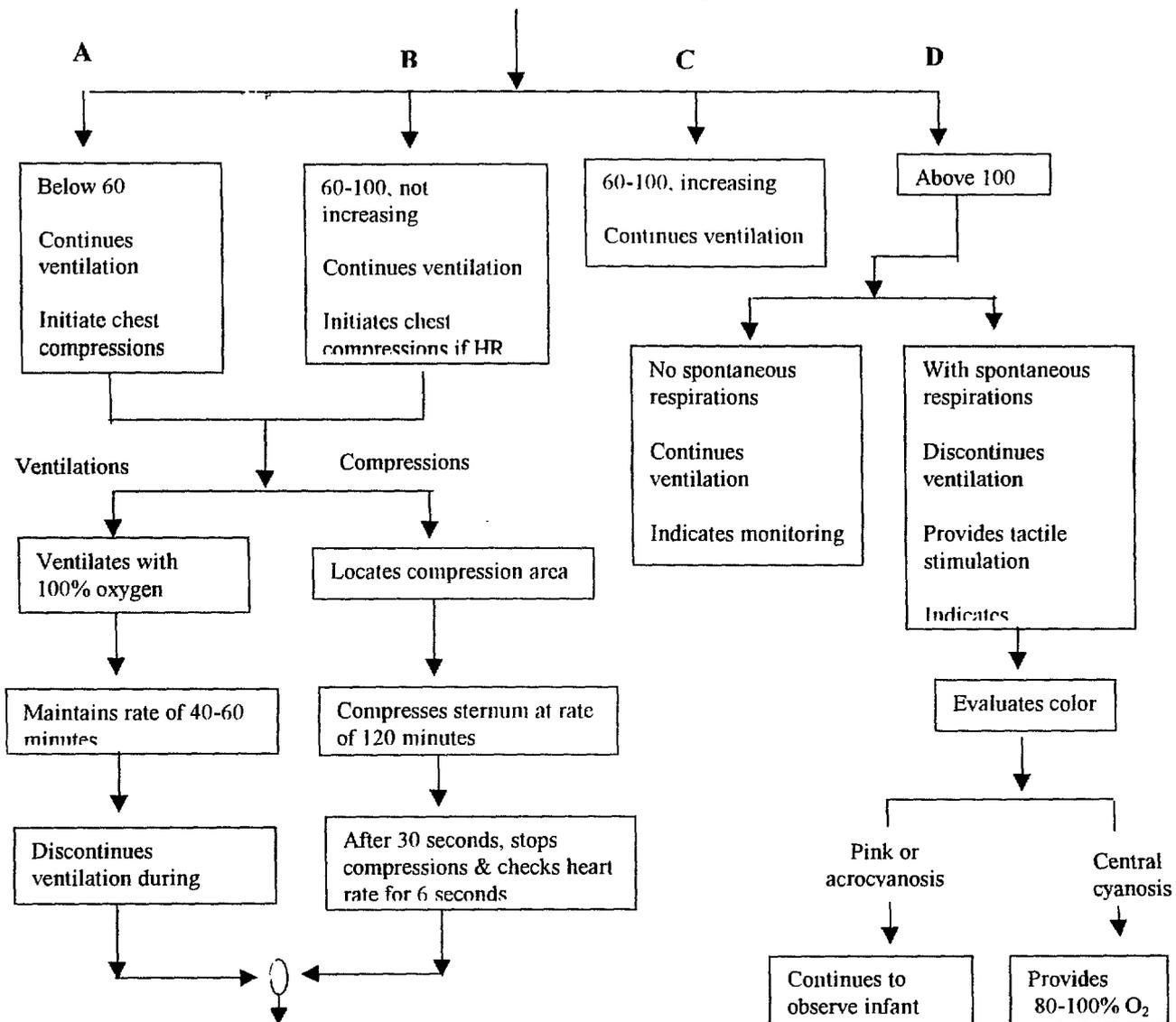
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Checks heart rate with stethoscope for 6 seconds

↓

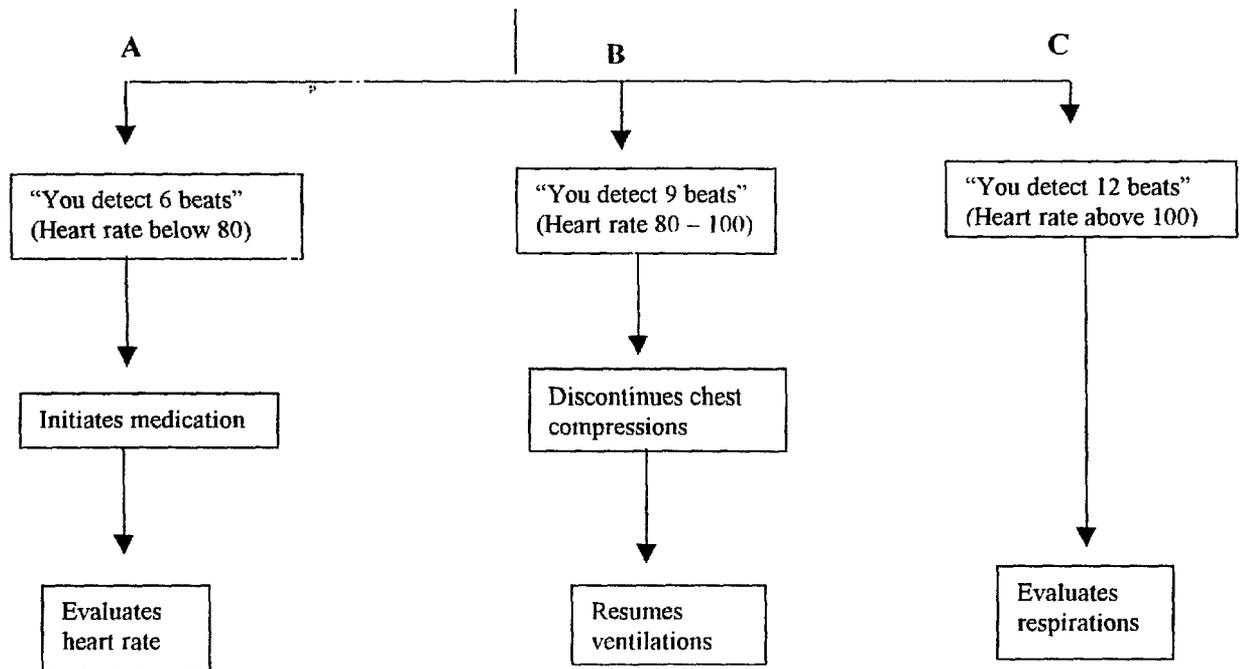
**RESOURCE (OHT & Handout)**

**Instructor: Choose one of the following situations**



**RESOURCE (OHT & Handout)**

**Instructor: Choose one of the following situations**



**Authors:** Drs. Ali Abdel Megied, Ahmed Metwaly, Alaa Sultan, Sameh Hosny, Amin Helmy, George Sanad and Mr. Tom Coles

### Session 5: Recognizing and Managing Normal Labor

**DEVELOP  
BASIC  
COMPETENCY  
(Practical)**

**Supervisor-Led Session**

**Day:**

**Time:** Three weeks

**Task:** Recognize and manage normal labor, abnormal labor and the newborn

**Competency 1:** Complete a client history of pregnant woman

#### Skills

- 1.1 Demonstrate good interpersonal communications to include the following:
  - Active listening
  - Maintaining eye contact
  - Non-verbal communication skills
  - Asking and answering relevant questions
  
- 1.2 Complete the history, recognize and record the symptoms of labor to include the following:
  - Personal history
  - Family history
  - History of antenatal care (Rh.)
  - Medical history
  - Past obstetric history
  - Present obstetric history:
    - 1) When labor pains begun and its frequency, duration and strength
    - 2) If membranes have ruptured
    - 3) Any bloody show or bleeding
    - 4) Any medications taken to increase or decrease labor
    - 5) Any symptoms of headache, visual changes, or upper abdominal pain
    - 6) Last ate
    - 7) Last passed stool
    - 8) LMP - EDD - Post date

**Competency 2: Complete a physical examination of a woman in labor**

**Skills**

- 2.1 Complete and record the findings of the general examination to include the following:
  - Have woman empty bladder and collect urine sample
  - Monitor and record vital signs (blood pressure, pulse, temperature)
  - Assess general condition of woman (hydration, cleanliness, mental state, pain, edema, anemia)
- 2.2 Complete an abdominal examination
- 2.3 Complete vaginal examination every four hours (if no other indications) under strict conditions of asepsis and hygiene and determine:
  - Any dryness, scarring and discharge
  - Dilatation of cervix
  - Status of membranes, color of amniotic fluid
  - Presenting part, position and molding of vertex presentation
  - Descent of the presenting part
  - Pelvic capacity

**Competency 3: Manage labor using the partograph**

**Skills**

- 3.1 Use the partograph to monitor latent and active phases of labor to include:
  - 3.1.1 Fetal condition:
    - 1) Monitor and record fetal heart rate before, during and after a contraction every 30 minutes
    - 2) Evaluate fetal wellbeing and abnormalities in fetal heart rate
    - 3) Evaluate molding if present
    - 4) Observe the color of the amniotic fluid
  - 3.1.2 Progress of labor:
    - 1) Cervical dilatation
    - 2) Descent of fetal head
    - 3) Uterine contractions
  - 3.1.3 Maternal Condition:
    - 1) Drugs and fluids
    - 2) Urine protein and volume (encourage mother to pass urine every two hours, record intake and output every two hours)
    - 3) Blood pressure, pulse and temperature
  - 3.1.4 Record observations and action taken

## **Skills**

- 3.2 Manage the mother during all stages of labor to include detection of any problem
- 3.3 Protect the perineum from injury during the 2<sup>nd</sup> stage of labor
- 3.4 Deliver and inspect the placenta

## **OVERVIEW**

### **Purpose**

The purpose of this session is to introduce participants to the competencies and skills for history taking, physical examination and use of the partograph, practically in the hospital. The skills in this session were first introduced in **Sessions 1 & 2**. "Practice for Mastery" of these skills is addressed in **Session 8**.

### **Story**

It is important for the mother and the new born to be cared by the physician who can correctly take a full history, perform an examination and use a partograph to monitor and manage all stages of labor. It is important to recognize the stages of labor:

**First Stage Labor:** It starts with true labor pains and ends with full dilatation of the cervix. In the era of active management of labor; this stage doesn't usually last more than 12 hours.

**Second Stage of Labor:** It starts with full dilatation of the cervix until delivery of the baby. Under normal circumstances it lasts for 1-2 hours.

**Third Stage of Labor:** This stage ends with delivery of the placenta and fetal membranes, it takes 15-30 minutes.

**Fourth stage of labor:** It is the first two (2) hours after completion of the delivery of the fetus and the placenta. That is when myometrial contractions and retraction take place along with blood vessel thrombosis to control post-partum hemorrhage, a major killer of young women.

## LEARNING OBJECTIVES

By the end of this session, each participant should be able to correctly do the following with **ten (10)** pregnant women in labor within three weeks.

1. Demonstrate good interpersonal communication skills during taking history and performing examination of a woman in labor according to criteria in the Skill Checklist: Obstetric Communications and Recording.
2. Complete history and recognize symptoms of labor according to the Skill Checklist: Obstetric Communications and Recording.
3. Complete the general examination, abdominal examination and vaginal examination according to the Skill Checklist: Physical Examination of a Woman in Labor.
4. Recognize symptoms and signs of labor according to the protocol.
5. Use the partograph to monitor latent and active phases of labor.
6. Evaluate fetal wellbeing and abnormalities in fetal heart rate according to the partograph findings.
7. Manage the mother during all stages of labor according to the protocol.
8. Protect the perineum from injury during 2<sup>nd</sup> stage of labor according to the protocol.
9. Deliver and inspect the placenta according to the protocol.

## LEARNING ACTIVITIES

**Time**

The following are suggested learning activities which if implemented, should enable participant to meet the criteria stated in the learning objectives and pass the assessment.

- A. Motivate Learning:** The supervisor reviews the session purpose, story, learning objectives, learning activities and assessment strategies. The learning objectives are illustrated on a wall graphic or on an overhead transparency. Logistics for the practical experience are reviewed.

**20 min.**

**LEARNING  
ACTIVITIES**

**Time**

**Learning Objective 1-9:**

- B. Demonstration:** The supervisor demonstrates taking a complete history and performing a complete examination (according to the criteria in the protocol and skill checklist), records the findings on the partograph and manages the case until delivery, to include newborn evaluation using the APGAR Score Chart as well as delivery and inspection of the placenta. **4 hrs.**

**Practice & Coaching:** The supervisor will coach each participant in taking a complete history and performing a complete physical examination (according to the criteria in the protocol and skill checklist), records the findings on the partograph and manages the case until delivery, to include newborn evaluation using the APGAR Score Chart as well as delivery and inspection of the placenta.

**Learning Objectives 1-9:**

- C. Practical Experience & Coaching:** During the **three (3)** weeks the supervisor will coach each participant to deliver **ten (10)** cases of normal vaginal delivery to include taking a complete history and performing a complete physical examination (according to the criteria in the protocol and skill checklist), recording to the findings on the partograph and managing the case until delivery, to include newborn evaluation using the APGAR Score Chart as well as delivery and inspection of the placenta. **2 weeks**

**Learning Objectives 1-9:**

- D. Weekly Clinical Conference:** The supervisor will hold a weekly clinical conference with the participants for individual case presentations (against the criteria in the learning objectives) and review any issues which have come up during training. Remedial learning experiences are planned as required. **2hrs. per conference**

**LEARNING  
ACTIVITIES**

**Time**

**Learning Objectives 1-9:**

- E. Seminar & Summary:** All obstetrical staff are invited to attend the end of **three (3)** week seminar. Each participant has prepared **one (1)** case presentation on a normal vaginal delivery. Each presentation is critiqued against the criteria in the learning objectives (as well as protocol and skill checklist).

Individual and collective learning experiences during the **three (3)** weeks are discussed against the criteria in the learning objectives. Suggestions for strengthening the learning experience are noted and remedial action planned as required.

One participant then summarizes the **three (3)** week practical learning experience against the criteria in the learning objectives.

**2hrs.**

**ASSESSMENT OF  
COMPETENCIES**

Learning Objectives	Assessment Strategy/Methods
1. Demonstrate good interpersonal communication skills during taking history and performing examination of a Woman in labor according to the Skill Checklist: Obstetric Communications and Recording.	1. Observation of performance according to the criteria in the Skill Checklist
2. Complete the client full history and recognize symptoms of labor according to the Skill Checklist: Obstetric Communications and Recording.	2. Observation of performance according to the criteria in the Skill Checklist
3. Complete the general examination, abdominal examination and vaginal examination according to the Skill Checklist: physical Examination of a Woman in Labor.	3. Observation of performance according to the criteria in the Skill Checklist
4. Recognize symptoms and signs of labor according to the protocol.	4. Observation of performance according to the criteria in the protocol
5. Use the partograph to monitor latent and active phases of labor.	5. Observation of recorded data on partograph; outcome of case presentations
6. Evaluate fetal wellbeing and abnormalities in fetal heart rate according to partograph findings.	6. Observations of performance according to the criteria in the partograph findings
7. Manage the mother during all stages of labor according to the protocol.	7. Observation of performance according to the criteria in the protocol
8. Protect the perineum from injury during 2 <sup>nd</sup> stage of labor according to the criteria in the Skill Checklist.	8. Observation of performance according to the criteria in the Skill Checklist
9. Deliver and inspect the placenta according to the protocol.	9. Observation of performance according to the criteria in the protocol

**NB:** By the end of these **three (3)** week practical experience, each participant should have delivered **ten (10)** mothers and infants which survived the delivery in good health!

## PREPARATION (session specific)

**Supervisor:** The supervisor must make sure that the facility meets all of the criteria in the Obstetrics Services Standards. S/he has oriented the obstetrics team to their role during this practical learning experience for the participants. The supervisor is prepared to supervise each participant during each normal delivery.

**Participant:** Each participant must have met all of the criteria in the learning objectives for Sessions 1 & 2 as a prerequisite to starting this session.

## RESOURCES

- **Module: Recognize and Manage Labor**
- **Essential Obstetric Care Resource Manual, Protocol: Recognize and Manage Labor**
- Overhead transparency, flip chart or handouts of the following:
  - Session Purpose and Story
  - Session Learning Objectives
  - Skill Checklist: Obstetric Communication & Recording "History" (attached to Session 1)
  - Skill Checklist: Physical Examination of a Woman in labor (attached to Session 1)
  - Skill Checklist: Recognize and Manage Normal Labor (attached to Session 2)
  - Partograph
- Competent and oriented obstetrical team
- Supervisor readily available to supervise each participant
- **Ten (10)** women in normal labor for each participant
- Clean, well stock delivery room (according to the criteria in the Obstetrics Service Standards)

**DEVELOP  
BASIC  
COMPETENCY  
(Practical)**

**SESSION OUTLINE**

**MODULE: RECOGNIZE AND MANAGE LABOR**

**Session 5: Recognizing & Managing Normal Labor**

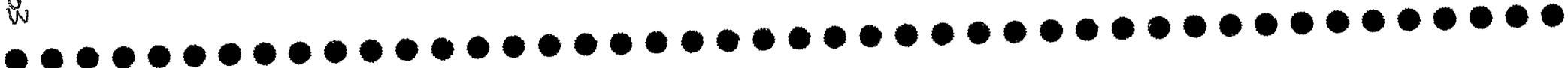
**Key: K = Knowledge S = Skill A = Attitudes**

Session Agenda	Learning Objectives	Assessment of Competencies	Learning Activities	Key Resources
Weeks: 3	<ol style="list-style-type: none"> <li>1. Demonstrate good interpersonal communication skills during history taking and performing examination of a Woman in labor according to the Skill Checklist: Obstetric Communications and Recording.</li> <li>2. Complete history and recognize the symptoms of labor according to the Skill Checklist: Obstetric Communications and Recording.</li> <li>3. Complete the general examination, abdominal examination and vaginal examination according to the Skill Checklist: Physical Examination of a Woman in labor.</li> <li>4. Recognize symptoms and signs of labor according to the protocol.</li> <li>5. Use the partograph to monitor latent and active phases of labor.</li> <li>6. Evaluate fetal wellbeing and abnormalities in fetal heart rate according to the partograph findings.</li> <li>7. Manage the mother during all stages of labor</li> </ol>	1-9 S: Observation of performance	<p><b>A. Motivate Learning:</b></p> <ul style="list-style-type: none"> <li>- Purpose of session</li> <li>- Story: It is important for the mother and the new born to be cared by the physician who can correctly take a full history, perform a examination and use a partograph to monitor and manage all stages of labor. It is important to recognize the stages of labor</li> <li>- Review learning objectives, activities and assessment</li> </ul> <p><b>B. Demonstration:</b></p> <ul style="list-style-type: none"> <li>- Demonstration of all skills by supervisor</li> </ul> <p><b>Practice &amp; Coaching:</b></p> <ul style="list-style-type: none"> <li>- Practice of all skills by participants with close supervision and coaching from supervisor</li> </ul>	<ul style="list-style-type: none"> <li>- Module</li> <li>- Protocol</li> <li>- All resources used from Sessions 1, 2 &amp; 3</li> <li>- Competent and oriented obstetrical team</li> <li>- <b>Ten (10)</b> women in normal labor for each participant</li> <li>- Clean, well stocked delivery room (according to the criteria in the Obstetrics Service Standards)</li> </ul>

**Session 5: Recognizing & Managing Normal Labor**

**Key:**      **K = Knowledge**          **S = Skill**          **A = Attitudes**

Session Agenda	Learning Objectives	Assessment of Competencies	Learning Activities	Key Resources
	<p>according to the protocol.</p> <p>8. Protect the perineum from injury during 2<sup>nd</sup> stage of labor according to the protocol.</p> <p>9. Deliver and inspect the placenta according to the protocol.</p>	<p align="center">-</p> <p align="center">1</p>	<p><b>C. Practical Experience &amp; Coaching:</b></p> <ul style="list-style-type: none"> <li>- During three (3) weeks the supervisor provides close supervision and coaching to <u>each</u> participant</li> </ul> <p><b>D. Weekly Clinical Conference:</b></p> <ul style="list-style-type: none"> <li>- Supervisor holds weekly clinical conference where cases are presented by participants and logistics discussed</li> </ul> <p><b>E. Seminar &amp; Summary:</b></p> <ul style="list-style-type: none"> <li>- All obstetrical staff are invited</li> <li>- Case presentations by participants, critiqued by supervisor</li> <li>- One participant critiques the three (3) week practical experience against the criteria in the learning objectives</li> </ul>	<ul style="list-style-type: none"> <li>- Cases for presentation</li> <li>- Wall graphic or OHT: Learning objectives</li> </ul>



**Authors:** Drs. Ali Abdel Megied, Ahmed Metwaly, Alaa Sultan, Sameh Hosny, Amin Helmy, George Sanad and Mr. Tom Coles

### Session 6: Recognizing and Managing Abnormal Labor

**DEVELOP  
BASIC  
COMPETENCY  
(Practical)**

**Supervisor-Led Session**

**Day:**

**Time:** Three weeks

**Task:** Recognize and manage normal labor, abnormal labor and the newborn

**Competency 1:** Complete a client history of pregnant women.

**Skills:**

- 1.1 Demonstrate good interpersonal communications
- 1.2 Complete history taking, recognize and record the symptoms of labor

**Competency 2:** Complete a physical examination of a woman in labor

**Skills:**

- 2.1 Complete and record the findings of the general examination
- 2.2 Complete an abdominal examination
- 2.3 Complete vaginal examination

**Competency 3:** Manage labor using the partograph

**Skills**

- 3.1 Use the partograph to monitor latent and active phases of labor
- 3.2 Manage the mother during all stages of labor to include detection of any problem
- 3.3 Protect the perineum from injury during the 2<sup>nd</sup> stage of labor
- 3.4 Deliver and inspect the placenta

## Competency 4: Manage abnormal labor

### Skills

- 4.1 Detect and manage prolonged labor:
  - Use the partograph to detect prolonged latent or active phases of labor as well as abnormal labor patterns
  - Timely decision making concerning management of prolonged labor
- 4.2 Assess need for and perform low forceps delivery:
  - Indications and contraindications
  - Procedure of forceps application
- 4.3 Assess need for and perform vaccum extraction:
  - Indications and contraindications
  - Procedure of vaccum extractor application
- 4.4 Assess need for and perform cesarean delivery:
  - Indications and contraindications
  - Procedure of cesarean delivery
- 4.5 Determine presence of and manage malpresentation:
  - Recognize the five (5) different types of malpresentations
  - Manage breech presentation
  - Manage the remaining four (4) malpresentations by cesarean delivery
- 4.6 Determine presence of and manage twin pregnancy.

## OVERVIEW

### Purpose

The purpose of this session is to introduce participants to the competencies and skills for timely detection and management of prolong labor, assessing and performing low forceps, vaccum extraction and lower-segment cesarean section as well as managing a woman in labor with malpresentation or twin pregnancy, in the practical, hospital, setting.

Obstetric communications, history taking, physical examination and use of partograph in this session were first introduced in **Sessions 1 & 2**. The skills associated with managing abnormal labor were introduced in **Session 3**. "Practice for Mastery" of these skills is addressed in **Session 8**.

## Story

It is important for the mother and newborn to be cared for by a physician who can correctly detect and manage prolonged labor, assess the need and perform instrumental vaginal delivery and cesarean delivery as well as manage malpresentation and twin pregnancy.

## LEARNING OBJECTIVES

By the end of this **three (3)** week session, each participant should be able to start strengthening their knowledge, and most importantly their skills, so as to be able to start to “Develop Basic Competency” in assessing and managing women in abnormal labor. Each participant will assess and manage **ten (10)** women in the status of having an abnormal labor:

- **Two (2)** requiring low forceps delivery,
- **Three (3)** requiring vacuum extraction,
- **Three (3)** requiring cesarean delivery
- **One (1)** with a malpresentation (breech) delivery, and
- **One (1)** with a twin pregnancy.

Basic competency for the following will be assessed against partograph findings, the criteria in the protocol and appropriate Skill Checklists. For each case, each participant should be able to do the following under close supervision:

1. Use the partograph to detect prolonged latent or active phases of labor as well as abnormal labor patterns.
2. Detect and manage prolonged labor.
3. Assess and perform vacuum extraction.
4. Assess and perform low forceps delivery.
5. Assess and perform cesarean delivery
6. Determine and manage malpresentation (breech) delivery.
7. Determine and manage a twin pregnancy.

**LEARNING  
ACTIVITIES**

**Time**

The following are suggested learning activities which if implemented, should enable the participant to meet the criteria stated in the learning objectives and pass the assessment.

- A. **Motivate Learning:** The supervisor reviews the session purpose, story, learning objectives, learning activities and assignment strategies. The learning objectives are illustrated on a wall graphic or on an overhead transparency. Logistics for the practical experience are reviewed. **15 min.**
- Learning Objectives 1-8:**
- B. **Presentation & Discussion:** The supervisor makes a presentation concerning the differential diagnosis and management of a women in abnormal labor based on the obstetric history and partograph findings. This presentation is followed by group discussion of participants' experience in making a differential diagnosis and management of women in abnormal labor. **60 min.**
- Learning Objectives 1-8:**
- C. **Demonstration:** Depending on case availability, the supervisor demonstrates the differential diagnosis and management of women in abnormal labor. In particular the following needs to be correctly demonstrated against the criteria in the protocol and the Skill Checklist, Recognize & Manage Abnormal Labor:
- Vacuum extraction
  - Low forceps delivery, and
  - Cesarean delivery
- 4-6 hrs.**
- Learning Objectives 1-8:**
- D. **Practical Experience & Coaching:** During the **three (3)** weeks the supervisor will coach each participant to deliver **ten (10)** cases of abnormal labor and delivery to include taking a complete history and performing a complete physical examination (according to the criteria in the protocol and skill checklist), recording the findings on the partograph and managing the case until delivery, to include newborn evaluation using the APGAR Score Chart as well as delivery and inspection of the placenta. **3 weeks**
- Learning Objectives 1-8:**
- E. **Weekly Clinical Conference:** The supervisor will hold a weekly clinical conference with the participants for individual case presentations (against the criteria in the learning objectives) and review any issues which have come up during training. Remedial learning experiences are planned as required. **2 hrs. per conference**

**LEARNING  
ACTIVITIES**

**Time**

**Learning Objectives 1-8:**

- F. **Seminar & Summary:** All obstetrical staff are invited to attend a daily Seminar held during the 3<sup>rd</sup> week. Each participant has prepared **one (1)** case presentation on a abnormal labor and delivery. Each presentation is critiqued against the criteria in the learning objectives (as well as protocol and Skill Checklist).

Individual and collective learning experiences during the **three (3)** weeks are discussed against the criteria in the learning objectives. Suggestions for strengthening the learning experience are noted and remedial action planned as required.

One participant then summarizes the **three (3)** week practical learning experiences against the criteria in the learning objectives.

**2 hrs.**

**ASSESSMENT OF  
COMPETENCIES**

To start developing "basic competency", each participant will be assessed against the criteria in the learning objectives while learning activities are being conducted.

<b>Learning Objectives</b>	<b>Assessment Strategy/Methods</b>
1. Use the partograph to detect prolonged latent or active phases of labor as well as abnormal labor patterns.	1. Observation of performance according to the criteria in the protocol and Skill Checklist "Recognize & Manage Abnormal Labor"
2. Detect and manage prolonged labor according to the protocol.	2. Observation of performance according to the criteria in the protocol and Skill Checklist "Recognize & Manage Abnormal Labor"
3. Assess and perform vacuum extraction according to the protocol.	3. Observation of performance according to the criteria in the protocol and Skill Checklist "Recognize & Manage Abnormal Labor"

**ASSESSMENT OF  
COMPETENCIES**

To start developing “basic competency”, each participant will be assessed against the criteria in the learning objectives while learning activities are being conducted.

Learning Objectives	Assessment Strategy/Methods
4. Assess and perform low forceps delivery according to the protocol.	4. Observation of performance according to the criteria in the protocol and Skill Checklist “Recognize & Manage Abnormal Labor”
5. Assess and perform cesarean delivery according to the protocol.	5. Observation of performance according to the criteria in the protocol and Skill Checklist “Recognize & Manage Abnormal Labor”
6. Determine and manage malpresentation (breech) delivery according to the protocol.	6. Observation of performance according to the criteria in the protocol and Skill Checklist “Recognize & Manage Abnormal Labor”
7. Determine and manage a twin pregnancy according to the protocol.	7. Observation of performance according to the criteria in the protocol and Skill Checklist “Recognize & Manage Abnormal Labor”

**NB:** By the end of this **three (3)** week practical experience, each participant should have delivered **ten (10)** mothers with abnormal labor which survived the delivery in good health!

**PREPARATION (session specific)**

**Supervisor:** The supervisor must make sure that the facility meets all of the criteria in the Obstetrics Services Standards. S/he has oriented the obstetrics team to their role during this practical learning experience for the participants. The supervisor is prepared to supervise each participant during each abnormal delivery.

**Participant:** Each participant must have met all of the criteria in the learning objectives for **Sessions 1, 2 & 3** as a prerequisite to starting this session.

## RESOURCES

- **Module: Recognize and Manage Labor**
- **Essential Obstetric Care Resource Manual, Protocol: Recognize and Manage Labor**
- Overhead transparency, flip chart or handouts of the following:
  - Session Purpose and Story
  - Session Learning Objectives
  - Skill Checklist: Recognize and Manage Abnormal Labor
  - Partograph
  - Any resources from S 1, 2 & 3
- Competent and oriented obstetrical team
- Supervisor readily available to supervise each participant
- **Ten (10)** women in abnormal labor for each participant
- Clean and well stock delivery room (according to the criteria in the Obstetrics Service Standards)

**DEVELOP  
BASIC  
COMPETENCY  
(Practical)**

**SESSION OUTLINE**

**MODULE: RECOGNIZE AND MANAGE LABOR**

**Session 6: Recognizing and Managing Abnormal Labor**

**Key:** K = Knowledge      S = Skill      A = Attitudes

Session Agenda	Learning Objectives	Assessment of Competencies	Learning Activities	Key Resources
<p><b>Weeks: 3</b></p>	<ol style="list-style-type: none"> <li>1. Use the partograph to detect prolonged latent or active phases of labor as well as abnormal labor patterns.</li> <li>2. Detect and manage prolonged labor according to the protocol.</li> <li>3. Assess and perform vacuum extraction according to the protocol.</li> <li>4. Assess and perform low forceps delivery according to the protocol.</li> <li>5. Assess and perform cesarean delivery according to the protocol.</li> <li>6. Determine and manage malpresentation (breech) delivery according to the protocol.</li> <li>7. Determine and manage twin pregnancy according to the protocol.</li> </ol>	<p>1-8 S: Observation of performance</p>	<p><b>A. Motivate Learning:</b></p> <ul style="list-style-type: none"> <li>- Purpose of session</li> <li>- Story: It is important for the mother and newborn to be cared for by a physician who can correctly detect and manage prolonged labor, assess the need and perform instrumental vaginal delivery and cesarean delivery as well as manage malpresentation and twin pregnancy.</li> <li>- Review learning objectives, activities and assessment</li> </ul> <p><b>B. Presentation &amp; Discussion:</b></p> <ul style="list-style-type: none"> <li>- Differential diagnosis and management of a woman in abnormal labor</li> </ul> <p><b>C. Demonstration:</b></p> <ul style="list-style-type: none"> <li>- Demonstration of all skills associated</li> </ul>	<ul style="list-style-type: none"> <li>- Module</li> <li>- Protocol</li> <li>- All resources used from Sessions 1, 2 &amp; 3</li> <li>- Competent and oriented obstetrical team</li> <li>- <b>Ten (10) women in abnormal labor for each participant</b></li> <li>2 low forceps delivery</li> <li>2 vacuum extraction.</li> <li>3 Cesarean delivery</li> <li>1 Malpresentation (breech)</li> <li>1 twin</li> <li>- Clean, well stocked</li> </ul>

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**Session 6: Recognizing and Managing Abnormal Labor**

**Key:**      **K = Knowledge**      **S = Skill**      **A = Attitudes**

Session Agenda	Learning Objectives	Assessment of Competencies	Learning Activities	Key Resources
			<p>with abnormal labor by the supervisor</p> <p><b>D. Practice Experience &amp; Coaching:</b></p> <ul style="list-style-type: none"> <li>- Practice of all skills by participants with <u>close</u> supervision and coaching from supervisor</li> </ul> <p><b>E. Weekly Clinical Conference:</b></p> <ul style="list-style-type: none"> <li>- Supervisor holds weekly clinical conference where cases are presented by participants and logistics discussed</li> </ul> <p><b>F. Seminar &amp; Summary:</b></p> <ul style="list-style-type: none"> <li>- All obstetrical staff are invited</li> <li>- Case presentations by participants, critiqued by supervisor</li> <li>- <b>Three (3)</b> week learning experience discussed</li> <li>- One participant critiques to two week practical experience against the criteria in the learning objectives</li> </ul>	<p>delivery room (according to the criteria in the Obstetrics Service Standards)</p> <ul style="list-style-type: none"> <li>- Cases for presentation</li> <li>- Wall graphic or OHT: Learning objectives</li> </ul>

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### Session 7: Neonatal And Newborn Resuscitation

**DEVELOP  
BASIC  
COMPETENCY  
(Practical)**

**Supervisor-Led Session**

**Day:**

**Time:** Three weeks

**Task:** Recognize and manage normal labor, abnormal labor and the newborn

**Competency 5:** Perform neonatal resuscitation effectively and in the proper time

#### Skills

- 5.1 Prepare the essential equipment needed for neonatal resuscitation (Resource):
  - Suction equipment
  - Bag & mask equipment
  - Intubation equipment
  - Medication
  - Radiant warmer
  - Stethoscope
  - Umbilical catheter 5F, 6F
- 5.2 Perform initial step of resuscitation in 20 sec.
- 5.3 **Evaluate** the infant, **decide** what action to take and then take **action**.
- 5.4 Assess the ABCs of resuscitation
- 5.5 Evaluate spontaneous breathing, perform positive pressure ventilation
- 5.6 Evaluate heart rate, perform chest compression if needed
- 5.7 Evaluate the color of the baby
- 5.8 Clamp and perform clean and safe umbilical cord care
- 5.9 Perform routine care after stabilization of the newborn
- 5.10 Explain the importance of early breast feeding

## **Competency 6: Resuscitation of newborn with meconium**

### **Skills**

- 6.1 Do suction of mouth, nose, oropharynx as soon as the head is delivered (before delivery of the shoulders)
- 6.2 Do suction of residual meconium in the hypopharynx under direct vision after delivery of the head
- 6.3 Intubate the trachea, meconium is suctioned from the lower airway
- 6.4 Re-evaluate → Decide → Take action
- 6.5 Perform initial steps of resuscitation in systematic way

### **OVERVIEW**

#### **Purpose**

The purpose of this session is to introduce participants to the competencies and skills for essential care of newborn and correctly recognize when a baby needs resuscitation as well as competently take the appropriate action while in a practical work setting. The skills in this session were first introduced in **Session 3**. "Practice for Mastery" of these skills is addressed in **Session 8**.

#### **Story**

The process of delivery may take several hours, at the end, the loud clear cry of the newborn gives a joy hard to describe. Care of the newborn is the responsibility of the physician. It is a life saving skill to make sure that blood carrying oxygen reaches all around the baby's body.

## LEARNING OBJECTIVES

By the end of this three (3) week practical session, each participant should be able to recognize and perform essential care for ten (10) different newborns and manage the baby at risk, by correctly:

1. Organize the appropriate equipment needed for newborn care as listed in a handout.
2. Apply the ABCS (Airway, Breathing, Cardiac, and Shock) and the three (3) senses, "look, listen, feel" to newborn care according to the Skill Checklist, Newborn Care Resuscitation.
3. Apply the eight (8) Essential Steps of Newborn Care at birth, both during the delivery of the head and after delivery of the newborn as listed on a handout and according to the skill checklist.
4. Apply the five (5) criteria of the APGAR Scoring Chart as a simple test for newborn evaluation as listed on a handout.
5. Plot and interpret the identified normal signs (7-10 score) and abnormal signs (0-6 score) according to APGAR scoring criteria.
6. Explain the three (3) important elements of early mother-baby bonding to each of the ten (10) mothers as illustrated on a handout and as stated in the protocol.
7. Prepare requirements for umbilical cord care according to criteria illustrated on a handout and as stated in the protocol.
8. Explain the eight (8) advantages of early breast feeding to the mother and the infant to each of the ten (10) mothers as illustrated on a handout and as stated in the protocol.
9. Use the APGAR Score Chart to identify a newborn at risk according to APGAR Scoring Chart.
10. Perform cardiopulmonary resuscitation following the twelve (12) steps in the Checklist, Cardiopulmonary Resuscitation (CPR) and Skill Checklist, Newborn Care Resuscitation.
11. Diagnose emergencies that require immediate attention or referral to a neonatologist according to the criteria outlined in Step 10 of the Skill Checklist: Newborn Care Resuscitation.

**LEARNING  
ACTIVITIES**

**Time**

The following are suggested learning activities, which if implemented, should enable participants to meet the criteria stated in the learning objectives and pass the assessment.

- A. Motivate Learning:** The supervisor reviews the session purpose, story, learning objectives, learning activities and assignment strategies. The importance of early and correct management of the newborn are emphasized. The learning objectives are illustrated on a wall graphic or on an overhead transparency. Logistics for the practical experience are reviewed. **10 min.**

**Learning Objective 1-8:**

- B. Presentation:** Using an OHT, the supervisor reviews the first two steps after delivery of the head, following the six (6) steps sequence followed during the delivery of a baby. Calculating the APGAR score, early mother-baby bonding, cord care, the advantages of immediate breast feeding are reviewed. **30 min.**

**Demonstration:** The supervisor demonstrates the management and care of a newborn according to the protocol. **20 min.**

**Practice & Coaching:** The supervisor will coach each participant during management of the newborns (10) cases against the criteria in the distributed APGAR Score Charts and Skill Checklist, Essential Steps for Newborn Care.

**Learning Objectives 9-11:**

- C. Demonstration:** The supervisor will demonstrate how to perform cardiopulmonary resuscitation (CPR) to an infant who has an APGAR Score of less than six (6) points as well as any infant with an emergency requiring referral to a neonatologist according to the criteria in checklists and the protocol. **30 min.**

**Coaching:** The supervisor will coach the participants during their performance of cardiopulmonary resuscitation (CPR) for at least three (3) cases and how to diagnose infants with emergencies requiring referral to a neonatologist according to the criteria in checklists and the protocol.

**LEARNING  
ACTIVITIES**

**Time**

**Learning Objectives 1-10:**

- D. **Weekly Clinical Conference:** The supervisor will hold a weekly clinical conference with the participants for individual case presentations (against the criteria in the learning objectives) and review any issues which have come up during training. Remedial learning experiences are planned as required. **2 hrs. per conference**

**Learning Objectives 1-10:**

- E. **Seminar & Summary:** All obstetrical staff are invited to attend the end of three (3) week seminar. Each participant has prepared one (1) case presentation on newborn assessment and care. Each presentation is critiqued against the criteria in the learning objectives (as well as protocol and skill checklist).

Individual and collective learning experiences during the three (3) weeks are discussed against the criteria in the learning objectives. Suggestions for strengthening the learning experience are noted and remedial action planned as required.

- One participant then summarizes the three (3) week practical learning experience against the criteria in the learning objectives. **2 hrs.**

**ASSESSMENT OF  
COMPETENCIES**

To start developing "basic competency", each participant will be assessed against the criteria in the learning objection while learning activities are being conducted.

<b>Learning Objectives</b>	<b>Assessment Strategy/Methods</b>
1. Organize equipment needed for newborn care as listed in a handout.	1. Observation of performance according to the handout
2. Apply the ABCS (Airway, Breathing, Cardiac, Shock) and the three (3) senses, "look, listen, feel" to newborn care according to the Skill Checklist, Newborn Care Resuscitation.	2. Observation of performance according to the Skill Check-list "Newborn Care Resuscitation"
3. Apply the eight (8) Essential Steps of Newborn Care at birth, both during the delivery of the head and after delivery of the newborn as listed on a handout and according to the Skill Checklist.	3. Observation of performance according to the skill checklist.

## ASSESSMENT OF COMPETENCIES

To start developing “basic competency”, each participant will be assessed against the criteria in the learning objection while learning activities are being conducted.

Learning Objectives	Assessment Strategy/Methods
4. Apply the five (5) criteria of the APGAR Scoring Chart as a simple test for newborn evaluation as listed on a handout.	4. Observation of performance according to the handout.
5. Plott and interpret the identified normal signs (7-10 score) and abnormal signs (0-6 score) according to APGAR scoring criteria.	5. Observation of performance according to the APGAR Scoring Chart.
6. Explain the three (3) important elements of early mother-baby bonding to each of the ten (10) mothers as illustrated on a handout and as stated in the protocol.	6. Observation of performance according to the protocol
7. Prepare requirements for umbilical cord care according to criteria illustrated on a handout and as stated in the protocol.	7. Observation of performance according to the protocol
8. Explain the eight (8) advantages of early breast feeding to the mother and the infant to each of the ten (10) mothers as illustrated on a handout and as stated in the protocol.	8. Observation of performance according to the protocol
9. Use the APGAR Score Chart to identify a newborn at risk according to the APGAR Scoring Chart.	9. Observation of performance according to the APGAR Scoring Chart.
10. Perform cardiopulmonary resuscitation following the twelve (12) steps in the Checklist, Cardiopulmonary Resuscitation (CPR) and Skill Checklist, Newborn Care Resuscitation.	10. Observation of performance according to Skill Checklist of the Newborn Care Resuscitation & Skill Checklist of Cardio Pulmonary Resuscitation.
11. Diagnose emergencies that require the immediate attention or referral to a neonatologist according to the criteria outlined in <u>Step 10</u> of the Skill Checklist: Newborn Care Resuscitation.	11. Observation of performance according to Skill Checklist of the New Resuscitation.

**N.B.:** By the end of this three (3) week practical experience, each participant should have assessed, cared and resuscitate ten (10) newborns after delivery.

## PREPARATION (session specific)

**Supervisor:** The supervisor must make sure that the facility meets all of the criteria in the Obstetrics Services Standards. S/he has oriented the obstetrics team to their role during this practical learning experience for the participants. The supervisor is prepared to supervise each participant during each normal delivery, observing the performance and participate by coaching when needed.

**Participant:** Each participant must have met all of the criteria in the learning objectives for **Session 3** as a prerequisite to starting this session.

## RESOURCES

- **Module: Recognize and Manage Labor**
- **Essential Obstetric Care Resource Manual, Protocol: Recognize and Manage Labor**
- Overhead transparency: Session Purpose and Story
- Flip chart: Session Learning Objectives

Any of the following resources from Session 3 should be used by the supervisor and participants as necessary:

- Overhead transparencies (OHT), handouts or flip charts:
- List of Essential Equipment for Newborn Care
- ABCS of Newborn Care
- Relating the Three (3) Senses "Look, Listen, Feel" to the Components of ABCS for Newborn Care
- Checklist: Essential Steps for Newborn Care
  - At Delivery of the Head
  - After Delivery of the Baby
- APGAR Scoring Chart
- Case Studies (1, 2 & 3): To Use With APGAR Scoring Chart
- Guidelines: Clamping the Umbilical Cord
- Cord Care
- Early Baby-Mother Bonding
- Advantages of Early Breast Feeding
- Definitions: Resuscitation, Emergency, Meconium
- Case Study: Neonatal CPR
- Checklist: Cardiopulmonary Resuscitation (CPR)
- Newborn Emergencies Needing Referral to a Neonatologist
- Skill Checklist: Newborn Care - Resuscitation
- Model: Baby model for CPR demonstration and practice

**DEVELOP  
BASIC  
COMPETENCY  
(Practical)**

**SESSION OUTLINE**

**MODULE: RECOGNIZE AND MANAGE LABOR**

**Session 7: Neonatal And Newborn Resuscitation**

**Key: K = Knowledge S = Skill A = Attitudes**

Session Agenda	Learning Objectives	Assessment of Competencies	Learning Activities	Key Resources
<p><b>Weeks: 3</b></p>	<ol style="list-style-type: none"> <li>1. Organize the appropriate equipment needed for newborn care as listed on a handout.</li> <li>2. Apply the ABCS (Airway, Breathing, Cardiac, Shock) and the three (3) senses, "look, listen, feel" to newborn care according to the Skill Checklist, Newborn Care Resuscitation.</li> <li>3. Apply the eight (8) Essential Steps of Newborn Care at birth, both during the delivery of the head and after delivery of the newborn as listed on a handout and according to the Skill Checklist.</li> <li>4. Apply the five (5) criteria of the APGAR Scoring Chart as a simple test for newborn evaluation as listed on a handout.</li> <li>5. Plott and interpret the identified normal signs (7-10 score) and abnormal signs (0-6 score) according to APGAR scoring criteria.</li> <li>6. Explain the three (3) important elements of early mother-baby bonding to each of the ten (10) mothers as illustrated on a handout and as stated in the protocol.</li> </ol>	<p>1-10 S: Observation of performance</p>	<p><b>A. Motivate Learning:</b></p> <ul style="list-style-type: none"> <li>- Purpose of session</li> <li>- Story: Proper care of the newborn is important during delivery</li> <li>- Review learning objectives, activities and assessment</li> </ul> <p><b>B. Presentation:</b></p> <ul style="list-style-type: none"> <li>- First steps in newborn delivery, calculating the APGAR score, early mother-baby bonding, cord care, advantages of immediate breast feeding.</li> </ul> <p><b>Demonstration:</b></p> <ul style="list-style-type: none"> <li>- Management and care of newborn according to the protocol</li> </ul> <p><b>Practice &amp; Coaching:</b></p> <ul style="list-style-type: none"> <li>- Practice of all skills by participants with close supervision and coaching</li> </ul>	<ul style="list-style-type: none"> <li>- Module</li> <li>- Protocol</li> <li>- All resources used for Sessions 3</li> <li>- Competent and oriented obstetrical team</li> <li>- Ten women in labor and their newborns for <u>each</u> participant</li> <li>- Clean, well stocked delivery room (according to the criteria in the Obstetrics Service Standards)</li> </ul>

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**Session 7: Neonatal And Newborn Resuscitation**

**Key: K = Knowledge S = Skill A = Attitudes**

<b>Session Agenda</b>	<b>Learning Objectives</b>	<b>Assessment of Competencies</b>	<b>Learning Activities</b>	<b>Key Resources</b>
	<p>7. Prepare requirements for umbilical cord care according to criteria illustrated on a handout and as stated in the protocol.</p> <p>8. Explain the eight (8) advantages of early breast feeding to the mother and the infant to each of the ten (10) mothers as illustrated on a handout and as stated in the protocol.</p> <p>9. Used the APGAR Score Chart to identify a newborn at risk according to APGAR Scoring Chart.</p> <p>10. Perform cardiopulmonary resuscitation following the twelve (12) steps in the Checklist, Cardiopulmonary Resuscitation (CPR) and Skill Checklist, Newborn Care Resuscitation.</p> <p>11. Diagnose emergencies that require immediate attention or referral to a neonatologist according to the criteria outlined in Step 10 of the Skill Checklist, Newborn Care, Resuscitation.</p>		<p>from supervisor</p> <p><b><u>Learning Objectives 9-10:</u></b></p> <p><b>C. Demonstration:</b></p> <ul style="list-style-type: none"> <li>- Supervisor demonstrates CPR on a newborn and identifies infants requiring referral to a neonatologist</li> </ul> <p><b>Coaching:</b></p> <ul style="list-style-type: none"> <li>- During three weeks the supervisor provides close supervision and coaching to each participant</li> </ul> <p><b>D. Weekly Clinical Conference:</b></p> <ul style="list-style-type: none"> <li>- Supervisor holds weekly clinical conference where cases are presented by participants and logistics discussed</li> </ul> <p><b>E. Seminar &amp; Summary:</b></p> <ul style="list-style-type: none"> <li>- All obstetrical staff are invited</li> <li>- Case presentations by participants, critiqued by supervisor</li> <li>- Three week learning experience discussed</li> <li>- One participant critiques to three (3) week practical experience against the criteria in the learning objectives</li> </ul>	<p>- Cases for presentation</p> <p>- Wall graphic or OHT: Learning objectives</p>

**Authors:** Drs. Nevine Hassanein, Alaa Sultan, George Sanad, Sameh Hosny, Amin Helmy and Mr. Tom Coles

### **Session 8: Assessing and Managing Labor and Newborn**

<p><b>PRACTICE FOR MASTERY (Practical)</b></p>
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**Supervisor-Led Session**

**Day:**

**Time:** Six months

**Task:** Recognize and manage normal and abnormal labor and the newborn

**Competency 1:** Complete a client history of pregnant women.

**Skills:**

- 1.1 Demonstrate good interpersonal communications
- 1.2 Complete history taking, recognize and record the symptoms of labor

**Competency 2:** Complete a physical examination of a woman in labor

**Skills:**

- 2.1 Complete and record the findings of the general examination
- 2.2 Complete an abdominal examination
- 2.3 Complete vaginal examination

**Competency 3:** Manage labor using the partograph

**Skills**

- 3.1 Use the partograph to monitor latent and active phases of labor
- 3.2 Manage the mother during all stages of labor to include detection of any problem
- 3.3 Protect the perineum from injury during the 2<sup>nd</sup> stage of labor
- 3.4 Deliver and inspect the placenta

#### **Competency 4: Manage abnormal labor**

##### **Skills**

- 4.1 Detect and manage prolonged labor
- 4.2 Assess need for and perform low forceps delivery
- 4.3 Assess need for and perform vacuum extraction
- 4.4 Assess need for and perform lower - segment cesarean delivery
- 4.5 Determine presence of and manage malpresentation
- 4.6 Determine presence of and manage twins pregnancy

#### **Competency 5: Perform neonatal resuscitation effectively and in the proper time**

##### **Skills**

- 5.1 Prepare the essential equipment needed for neonatal resuscitation (Resource):
  - Suction equipment
  - Bag & mask equipment
  - Intubation equipment
  - Medication
  - Radiant warmer
  - Stethoscope
  - Umbilical catheter 5F, 6F
- 5.2 Perform initial step of resuscitation in 20 sec.
- 5.3 **Evaluate** the infant, **decide** what action to take and then take **action**.
- 5.4 Assess the ABCs of resuscitation
- 5.5 Evaluate spontaneous breathing, perform positive pressure ventilation
- 5.6 Evaluate heart rate, perform chest compression if needed
- 5.7 Evaluate the color of the baby
- 5.8 Clamp and perform clean and safe umbilical cord care
- 5.9 Perform routine care after stabilization of the newborn
- 5.10 Explain the importance of early breast feeding

## **Competency 6: Resuscitation of newborn with meconium**

### **Skills**

- 6.1 Do suction of mouth, nose, oropharynx as soon as the head is delivered (before delivery of the shoulders)
- 6.2 Do suction of residual meconium in the hypopharynx under direct vision after delivery of the head
- 6.3 Intubate the trachea, meconium is suctioned from the lower airway
- 6.4 Re-evaluate → Decide → Take action
- 6.5 Perform initial steps of resuscitation in systematic way

## **OVERVIEW**

### **Purpose**

The purpose of this session is for the participants to have the opportunity to master the competencies skills concerning management of women in normal and abnormal labor, care of the newborn and resuscitation of a baby having trouble living.

### **Story**

It is important for the mother and newborn to be cared for by a physician who can correctly recognize and safely manage labor and delivery. The Labor attendant must be competent in using the partograph to monitor fetal condition, progress of labor and maternal condition. The use of the partograph also helps the physician to identify labor that needs interference. This interference may require forceps, vacuum extraction, or cesarean delivery. The safety of the mother and newborn depends on a skillful physician who is competent in these particular skills.

Regarding the newborn, essential care must be provided and the required equipment must be available. It is the responsibility of the physician to assure that all needs in the facility are in place. A baby having trouble living is in a critical condition, requires immediate resuscitation by a competent physician who can perform cardiopulmonary resuscitation (CPR). A physician who has mastered all the skills associated with this session and who is working in a facility stocked with essential equipment and supplies, with a competent team, will assure that the lady in labor will have a safe delivery and her baby will receive the required essential care.

## LEARNING OBJECTIVES

By the end of this **three (3)** months of “practice for mastery” in a practical setting, each participant will be competent to do the following according to the criteria in the protocol and the associated Skill Checklists:

1. Take a complete client history, perform a complete examination of a woman in labor and record the findings.
2. Assess and manage normal labor by using the partograph.
3. Assess and perform the essential newborn care according to the APGAR Scoring Chart.
4. Perform cardiopulmonary resuscitation (CPR) for a newborn in cardiopulmonary distress.
5. Recognize and manage abnormal labor.

## LEARNING ACTIVITIES

Time

- A. **Motivate Learning:** The supervisor reviews the session purpose, story, learning objectives, learning activities and assignment strategies. The logistics for this **three (3)** months of practical experience are reviewed. **30 min.**

### Learning Objectives 1-5:

- B. **Presentation:** Based on learning objectives the number of cases to be seen are reviewed. Each participant should assess and manage **forty (40)** normal labor and **forty (40)** cases of abnormal labor and newborn care. At a minimum, the following cases should be practiced:
- **Seven (7)** cases of neonatal resuscitation for newborn at risk,
  - **Forty (40)** cases of abnormal labor which include:
    - **Eight (8)** cases requiring cesarean delivery,
    - **Twelve (12)** cases requiring low forceps delivery,
    - **Twelve (12)** cases requiring vacuum extraction,
    - **Four (4)** cases of twins, and
    - **Four (4)** malpresentations (breech)
- over a period of **three (3)** months. **15 min.**

**LEARNING  
ACTIVITIES**

**Time**

**Learning Objectives 1-5:**

- C. **Practical Experience:** Each participant should manage the above mentioned cases according to the criteria in the protocol and the appropriate skill checklist.

The **three (3)** months will be divided into **three (3)** week block. During each **three (3)** week block, each participant should attempt to assess and manage the following abnormal deliveries to include,

- **Two (2)** cesarean delivery,
- **Two (2)** vacuum extractions,
- **Two (2)** forceps deliveries,
- **Two (2)** malpresentations
- **Eight (8)** newborns, **three (3)** newborns requiring CPR.
- **One (1)** twin
- **One (1)** breech

**3 weeks  
blocks 6  
months  
total**

**Learning Objectives 1-5:**

- D. **Clinical Conference:** The supervisor will explain to the participants that a visit every **three (3)** weeks will be scheduled. During the clinical conference, each participant must present detailed case studies concerning clinical activities performed during the previous **three (3)** weeks. The participant should prepare a case presentation for each of the **five (5)** learning objectives.

The supervisors will present his/her observations of participants' "practice for mastery" on-the-job against the criteria in the learning objectives, protocol and appropriate skill checklist concerning labor:

- Normal labor, Abnormal labor
- Cesarean delivery,
- Vacuum extractions,
- Forceps deliveries,
- Malpresentations and
- Newborns care, including those requiring CPR.

Also, any logistical problems and proposed solutions are discussed during the conference.

Individual and collective learning experiences during the **three (3)** weeks are discussed against the criteria in the learning objectives. Suggestions for strengthening the learning experience are noted and remedial action planned as required.

**2 hrs.**

**LEARNING  
ACTIVITIES**

**Time**

**Learning Objectives 1-11:**

- E. **Seminar & Summary:** All obstetrical staff are invited to attend the end of the **three (3)** month seminar. Each participant has prepared **one (1)** or more cases on assessing and managing Normal and abnormal labor. Each presentation is critiqued against the criteria in the learning objectives, protocol and appropriate skill checklists.

Individual and collective learning experiences during the **three (3)** months are discussed against the criteria in the learning objectives. Suggestions for strengthening the learning experience are noted and remedial action planned as required.

One participant then summarizes the **three (3)** month "practice for mastery" practical learning experience against the criteria in the learning objectives. **2 hrs.**

**ASSESSMENT OF  
COMPETENCIES**

To start developing "basic competency", each participant will be assessed against the criteria in the learning objectives while learning activities are being conducted.

Learning Objectives	Assessment Strategy/Methods
According to the criteria in the protocol and the associated Skill Checklists: 1. Take a complete client history and perform a complete examination of a woman in labor.	1. Observation of performance against criteria in protocol and Skill Checklists "Recognize and Manage labor" and Recognize and Manage Abnormal Labor
2. Assess and manage normal labor by using the partograph.	2. Observation of performance against criteria in protocol and Skill Checklists "Recognize and Manage Labor" and Recognize and Manage Abnormal Labor
3. Assess and perform the essential newborn care according to the APGAR Scoring Chart.	3. Observation of performance against criteria in protocol and Skill Checklists "Recognize and Manage Labor" and Recognize and Manage Abnormal Labor

## ASSESSMENT OF COMPETENCIES

To start developing "basic competency", each participant will be assessed against the criteria in the learning objectives while learning activities are being conducted.

Learning Objectives	Assessment Strategy/Methods
4. Perform cardiopulmonary resuscitation (CPR) for a newborn in cardiopulmonary distress.	4. Observation of performance against criteria in protocol and Skill Checklists "Recognize and Manage Labor" and Recognize and Manage Abnormal Labor
5. Recognize and manage abnormal labor.	5. Observation of performance against criteria in protocol and Skill Checklists "Recognize and Manage Labor" and Recognize and Manage Abnormal Labor

**NB:** Each participant must have met all the criteria in the learning objectives and passed the assessment to be "certified" as "mastering" the skills associated with this session.

### PREPARATION (session specific)

**Supervisor:** The supervisor must make sure that the facility meets all of the criteria in the Obstetrics Services Standards. S/he has oriented the obstetrics team to their role during this practical learning experience for the participants. The supervisor is prepared to supervise each participant as required and certify in writing that each participant has mastered the skills associated with this **three (3)** month "practice for mastery" practical learning experience.

**Participant:** Each participant must have met all of the criteria in the learning objectives for **Sessions 5, 6 & 7** as a prerequisite to starting this session. Each participant must be a "self-directed learner" during this "practice for mastery" practical learning experience, by seeking out the required number of cases she must attend as well as supervisory assistance. Each participant is responsible for being prepared for and attending each **Clinical Conference** as well as the ending **Seminar & Summary**.

## RESOURCES

**Module: Recognize and Manage Labor**

**Essential Obstetric Care Resource Manual, Protocol: Recognize and Manage Labor**

Overhead transparency or flip chart of the following:

- Session Purpose and Story
- Session Learning Objectives

Any of the resources from **Sessions 5, 6 & 7** should be used by the supervisor and participants as necessary.

**DEVELOP  
BASIC  
Mastery  
(Practical)**

**SESSION OUTLINE**

**MODULE: RECOGNIZE AND MANAGE LABOR**

**Session 8: Assessing and Managing Labor and Newborn**

**Key:** K = Knowledge      S = Skill      A = Attitudes

Session Agenda	Learning Objectives	Assessment of Competencies	Learning Activities	Key Resources
<p>Months: 3</p>	<p>According to the criteria in the protocol and the associated Skill Checklists <u>each</u> participant will be competent to do the following:</p> <ol style="list-style-type: none"> <li>1. Take a complete client history, perform a complete physical examination of a woman in labor and record the findings.</li> <li>2. Assess and manage normal labor by using the partograph.</li> <li>3. Assess and manage normal newborn care according to the APGAR Scoring Chart.</li> <li>4. Perform cardiopulmonary resuscitation for the newborn in cardiopulmonary distress following the twelve (12) steps in checklist.</li> <li>5. Recognize and manage abnormal labor.</li> </ol>	<p>1-5 S: Observation of performance</p>	<p><b>A. Motivate Learning:</b></p> <ul style="list-style-type: none"> <li>- Purpose of session</li> <li>- Story: It is important for the mother and newborn to be cared for by a physician who can correctly recognize and safely manage labor and delivery. The safety of the mother and newborn depends on a skillful physician who is competent in these particular skills.</li> <li>- Review learning objectives, activities and assessment</li> </ul> <p><b>B. Presentation:</b></p> <ul style="list-style-type: none"> <li>- Review of the number of clinical cases to be seen during the practical experience.</li> </ul> <p><b>C. Practice Experience &amp; Coaching:</b></p> <ul style="list-style-type: none"> <li>- Practice of all skills by participants with <u>less close</u> supervision and</li> </ul>	<ul style="list-style-type: none"> <li>- Module</li> <li>- Protocol</li> <li>- All resources used for Sessions 1, 2 &amp; 4</li> <li>- Competent and oriented obstetrical team</li> <li>- 40 cases of normal labor and newborns:40 cases of abnormal labor for <u>each</u> participant:</li> <li>12 Low forceps delivery</li> <li>12 Vacuum extraction.</li> <li>8 Cesarean delivery</li> <li>4 Malpresentation</li> <li>4 Twins</li> <li>7 Newborns requiring</li> </ul>

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**Session 8: Assessing and Managing Labor and Newborn**

**Key:**      **K = Knowledge**      **S = Skill**      **A = Attitudes**

<b>Session Agenda</b>	<b>Learning Objectives</b>	<b>Assessment of Competencies</b>	<b>Learning Activities</b>	<b>Key Resources</b>
			<ul style="list-style-type: none"> <li>- One participant critiques to three month practical experience against the criteria in the learning objectives</li> </ul>	

Authors: Drs. Ali Abdel Megeid, Alaa Sultan

## Session 1: Maternal Mortality

**DEVELOP  
BASIC  
COMPETENCY  
(Classroom)**

**Facilitator-led Session**

**Day:**

**Time:** 2 hrs., 30 min.

**Task:** Maternal Health Problems

**Competency 1:** Develop preventive programs to reduce maternal mortality

### Skills

- 1.1 Explain correctly the **four (4)** objectives for the National Maternal Mortality Study in Egypt.
- 1.2 Explain correctly the definitions used in maternal mortality.
- 1.3 Explain the maternal mortality survey design conducted in Egypt.
- 1.4 Recognize the major causes of maternal deaths in Egypt.
- 1.5 Explain correctly the difference between “direct” and indirect causes of maternal deaths in Egypt.
- 1.6 Recognize the problems which must be addressed so as to reduce maternal mortality in Egypt.

### OVERVIEW

#### Purpose

The purpose of this session is to introduce participants to findings concerning maternal mortality in Egypt, causes, and measures for preventing as well as managing maternal mortality.

#### Story

Unfortunately, of the many “direct” and “indirect” causes of maternal mortality in Egypt, misdiagnosis and mismanagement by physicians are the major contributing factors.

## LEARNING OBJECTIVES

By the end of this classroom session, each participant should be able to:

1. Explain the **four (4)** objectives for the national maternal mortality study in Egypt according to the protocol.
2. Explain the definitions used in maternal mortality according to the protocol.
3. Explain the maternal mortality survey design conducted in Egypt according to the protocol.
4. Recognize the frequency of the major causes of maternal deaths in Egypt according to the protocol.
5. Differentiate between “direct” and “indirect” causes of maternal deaths in Egypt according to the protocol.
6. Recognize the problems which must be addressed so as to reduce maternal mortality in Egypt according to the protocol
7. Demonstrate the design of the national program to reduce maternal mortality in Egypt according to the protocol.

## LEARNING ACTIVITIES

Time

The following are suggested learning activities which if implemented, should enable learners to meet the criteria stated in the learning objectives and pass the assessment.

- A. **Motivate learning:** The facilitator reviews the session purpose, story learning objectives, activities and assessment strategies. The learning objectives are illustrated on a wall graphic or on an overhead transparency. **10 min.**
- Learning Objectives 1, 2 & 3
- B. **Presentation:** The facilitator will present a short review, about the **four (4)** objectives for national maternal mortality study in Egypt, definitions used in maternal mortality as well as the design conducted during this study, using overhead transparencies as reference followed by open discussion. **30 min.**
- Learning Objectives 4 & 5
- C. **Brain Storming:** The facilitator will ask the participants an open ended question about their knowledge concerning the frequency of major causes responsible for maternal deaths, and the difference between “direct” and “indirect” causes of maternal deaths. Participants answer back and their responses are critiqued against the criteria of the prepared OHT which will be shown to them, discussed and then distributed as a handout. **30 min.**

**LEARNING  
OBJECTIVES**

**Learning Objectives 6**

- D. **Brain Storming:** The facilitator will ask the participants about their knowledge concerning the problems which must be addressed to reduce maternal mortality using flip chart to record what participants mentioned. The facilitator will compare the recorded answers with prepared OHT, which will be shown to them, discussed and then distributed as a handout. **30 min.**

**Learning Objective 7**

- E. **Presentation:** The facilitator will present a short review about the national work-plan and activities taken by Ministry of Health & Population since figures for maternal mortality survey had been conducted to reduce maternal deaths. **30 min.**
- F. **Summary:** At the end of the session, one participant or the facilitator summarizes the session against the criteria in the learning objectives. Wall graphics or overhead transparencies used during the session can also be used as a resource during the summary. **20 min.**

**ASSESSMENT OF  
COMPETENCIES**

Learning Objectives	Assessment Strategy/Methods
1. Explain the <b>four (4)</b> objectives for the national maternal mortality study in Egypt according to the protocol.	1. Questions & answers and group discussion.
2. Explain the definitions used in maternal mortality according to the protocol.	2. Questions & answers and group discussion.
3. Explain the maternal mortality survey design conducted in Egypt according to the protocol.	3. Questions & answers and group discussion.
4. Recognize the frequency of the major causes of maternal deaths in Egypt according to the protocol	4. Outcome of group discussion.
5. Differentiate between "direct" and "indirect" causes of maternal deaths in Egypt according to the protocol.	5. Outcome of group discussion.
6. Recognize the problems which must be addressed so as to reduce maternal mortality in Egypt according to the protocol.	6. Questions & answers and group discussion.
7. Demonstrate the design of the national program to reduce maternal mortality in Egypt according to the protocol.	7. Questions & answers and group discussion.

## RESOURCES

- **Module: Maternal Mortality**
- **Essential Obstetric Care Resource Manual, Protocol: Maternal Mortality**
- Wall graphic, overhead transparency or handout of the following:
  - Session purpose and story
  - Session learning objectives
  - Definitions: - Maternal Mortality Ratio & Rate
  - Direct obstetric causes
  - Indirect obstetric causes
  - Problems which must be addressed to reduce maternal mortality

**RESOURCES (OHT)**

**Problems Which Must Be Addressed  
To Reduce Maternal Mortality**

- Defective registration
- Poor quality of antenatal care
- Referral problems
- Lack of family planning
- Low status of women in the community
- Low grading hospital facilities
- Role of information, education and communication (IEC)
- Role of traditional birth attendants (Dayas)
- International cooperation

## RESOURCES (OHT & HANDOUT)

### Definition of Maternal Mortality

The death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and the site of pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.

RESOURCES (OHT & HANDOUT)

**Definitions of Maternal Mortality Ratio & Rate**

$$\text{MMR} = \frac{\text{No. of M. Ds in 12 months}}{\text{No. of L.Bs in the same 12 months}} \times 100,000$$

$$\text{MM Rate} = \frac{\text{No. of M. Ds in 12 months}}{\text{Average No. of women in the reproductive age in the same 12 months}} \times 100,000$$

M.Ds = Maternal deaths

L.Bs = Live births

**RESOURCES (OHT & HANDOUT)**

**Definition of Direct Obstetric Causes**

Those resulting from obstetric complications of the pregnant state (pregnancy, labor, and puerperium) from interventions, omissions, incorrect treatment or from a chain of events resulting from any of the above.

"

## RESOURCES (OHT & HANDOUT)

### Definition of Indirect Obstetric Causes

Those resulting from previous existing disease or diseases that developed during pregnancy and which were not due to direct obstetric causes, but which were aggravated by physical effects of pregnancy.

**DEVELOP  
BASIC  
COMPETENCY  
(Classroom)**

**SESSION OUTLINE**

**MODULE: Maternal Mortality**

**Session 1: Maternal Mortality Survey in Egypt**

**Key:**      **K = Knowledge**      **S = Skill**      **A = Attitudes**

Session Agenda	Learning Objectives	Assessment of Competence	Learning Activities	Key Resources
<b>Day: 1</b> <b>Time: 2 hrs.</b> <b>30 min.</b>	1. Explain the <b>four (4)</b> objectives for the National Mortality Study in Egypt according to the protocol. 2. Explain the definitions used in the maternal mortality according to the protocol. 3. Explain the maternal survey design conducted in Egypt according to the protocol.	1. <b>K:</b> Questions, answers & group discussion. 2. <b>K:</b> As above 3. <b>K:</b> As above	<b>A. Motivate Learning:</b> - Purpose of session - Story: Unfortunately, of the many "direct" and "indirect" causes of maternal mortality in Egypt, misdiagnosis and mismanagement by physicians are the major contributing factors  <b>B. Presentation:</b> - The <b>four (4)</b> objectives for the National Maternal Mortality Study in Egypt, definitions used in maternal mortality the design conducted during this study	- Module - Protocol - OHT
	4. Recognize the frequency of the major causes of maternal deaths in Egypt according to the protocol. 5. Differentiate between "direct" and "indirect" causes of maternal deaths in Egypt according to the	4. <b>K:</b> Outcome of group discussion 5. <b>K:</b> As above	<b>C. Brain Storming:</b> - Concerning the frequency of major causes responsible for maternal deaths	- Wall graphics - Handout

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### Session 1: Maternal Mortality Survey in Egypt

Key:      K = Knowledge      S = Skill      A = Attitudes

Session Agenda	Learning Objectives	Assessment of Competence	Learning Activities	Key Resources
	protocol.			
	6. Recognize the problems which must be addressed so as to reduce maternal mortality in Egypt according to the protocol.	6. K: Questions, answers & group discussion	<b>D. Brain Storming:</b> - Concerning the problems which must be addressed to reduce maternal mortality	- Wall graphics - Handout
	7. Demonstrate the design of the national program to reduce maternal mortality in Egypt according to the protocol.	7. K: As above	<b>E. Presentation:</b> - National work-plan and activities taken by the Ministry of Health & Population  <b>F. Summary:</b> - Summary of the session	- Wall graphics - Handout

# CONTENTS

Page

## MODULE OVERVIEW

Purpose  
Story

## AGENDA & SEQUENCE OF SESSIONS

## TASK ANALYSIS TABLE

## SESSION OUTLINES

### SESSIONS:

Develop Basic Competency (classroom)

- 1 Diagnose and Manage Post-partum hemorrhage
- 2 Diagnose and Manage Post-partum hemorrhage  
Develop Basic Competency (Practical)
- 3 Diagnose and manage post-partum hemorrhage  
Develop Basic Competency (Mastery)

## MODULE OVERVIEW

### Purpose

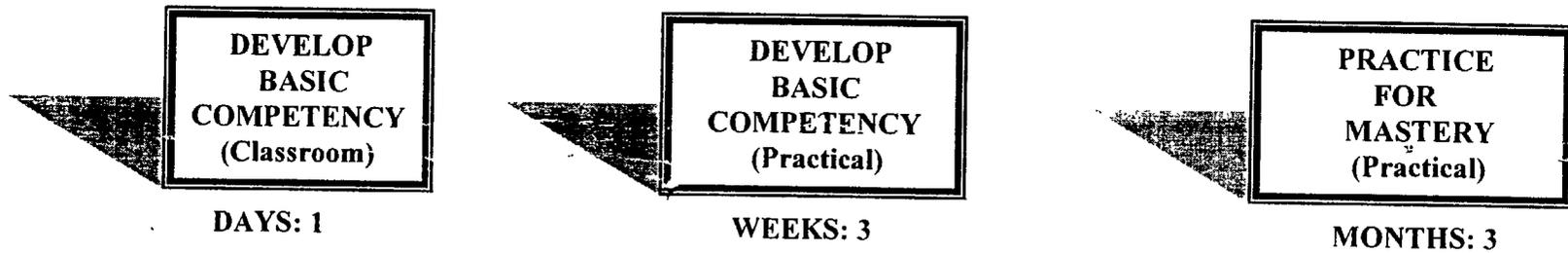
The purpose of this module is to provide facilitators with a sound competency-based training (CBT) methodology, if implemented as designed, will result in physicians reaching the level of Amastery concerning the competencies and skills required to manage post-partum hemorrhage

### Story

The maternal mortality rate (MMR) in Egypt due to PPHge in pregnancy is 40/100,000. Ninety nine percent (99%) of these deaths were avoidable. Of the ten leading causes of maternal mortality in Egypt, PPHge is first (39.2%).

Too many of these women die at private and government health facilities due to lack of late action dealing with PPHge, incompetent performance of physicians in managing these problems, either due to lack of clinical skills, inadequate equipment and supplies or a combination of both. The intent of this training is to rectify this problem and to reduce mortality and morbidity of women due to PPHge.

**AGENDA & SEQUENCE OF SESSIONS**



**DAY: 1**      **TIME: 3 hrs. 35 min.**  
**Session 1: Diagnose and manage  
Post-partum hemorrhage**

**3 Weeks**  
**Session 2: Diagnose and manage Post-partum  
hemorrhage**

**3 Months**  
**Session 3: Diagnose and manage Post-partum  
hemorrhage**

**Task:** Diagnose and manage post-partum hemorrhage

**Competency 1:** Define and manage Post-partum hemorrhage

**Skills**

- 1.1 Define post-partum Hemorrhage (early & late)
- 1.2 Identify cases at risk of post-partum Hemorrhage during antenatal visits.
- 1.3 Identify the causes of post-partum Hemorrhage
- 1.4 Diagnose post-partum Hemorrhage according to the clinical signs.
- 1.5 Manage post-partum Hemorrhage before & after delivery of the placenta (early).
- 1.6 Manage cases of late post-partum Hemorrhage.

**Authors:** Dr. Nevine Hassanein, Ahmed Metwally, Mohsen El Saeed, Mahmoud Hegazy and George Sanad

### **Session 1: Diagnose and manage Post-partum hemorrhage**

**DEVELOP  
BASIC  
COMPETENCY  
(Classroom)**

**Facilitator-led Session**

**Day:**  
**Time:** 3 hrs. 35 min.

**Task:** Diagnose and manage post-partum hemorrhage

**Competency 1:** Define and manage Post-partum hemorrhage

#### **Skills**

- 1.1. Define post-partum Hemorrhage (early & late)
- 1.2. Identify cases at risk of post-partum Hemorrhage during antenatal visits.
- 1.3. Identify the causes of post-partum Hemorrhage.
- 1.4. Diagnose post-partum Hemorrhage according to the clinical signs.
- 1.5. Manage post-partum Hemorrhage before & after delivery of the placenta (early).
- 1.6. Manage cases of late post-partum Hemorrhage.

#### **OVERVIEW**

##### **Purpose**

The purpose of this session is to introduce the participant to the correct definition of post-partum Hemorrhage, either early or late, stressing on the risk factors that must be taken in consideration during the antenatal follow-up. As well as how to assess and manage a lady with post-partum Hemorrhage efficiently so to minimize the potential of maternal & fetal morbidity & mortality.

## Story

**Aswan Governorate:** A woman was 35 years old when she died. She had given birth to nine children, one of which had died. She had no previous medical problems & her previous pregnancies had been normal, except for a post-partum bleeding episode after one delivery. She didn't go for routine antenatal check-up during this pregnancy. Near term she developed an acute abdominal pain & started bleeding. She was seen in a private clinic by an obstetrician who gave her an injection after which bleeding stopped & labor started six hours later, transferred to a governmental hospital where she delivered a dead baby. Following delivery she started bleeding massively. There was no sufficient blood available for transfusion, she received only 1000cc but bleeding continued. Hysterectomy done next morning but patient was in irreversible shock & died.

## LEARNING OBJECTIVES

By the end of this session, each participant should be able to:

1. Define correctly post-partum Hemorrhage (early & late).
2. Identify the causes of post-partum Hemorrhage according to the protocol.
3. Identify the risk factors of post-partum Hemorrhage
4. Identify the principal clinical signs of post-partum Hemorrhage.
5. List the essential laboratory investigations required in cases of post-partum Hemorrhage.
6. Manage hemorrhage immediately after birth of the baby but before delivery of the placenta according to the management scheme in the protocol.
7. Manage hemorrhage immediately after delivery of the placenta according to the management scheme in the protocol.
8. Diagnose hemorrhage 24 hours after delivery and action to be taken according to the management scheme in the protocol.

## LEARNING ACTIVITIES

Time

**A. Motivate Learning:** The facilitator reviews the session purpose, story, learning objectives, learning activities and assessment strategies. Session purpose & story are presented using an overhead transparency. Session learning objectives are presented using a flipchart. The different learning activities to be used during the session, case study, group discussion and brain storming are reviewed with the group. How the participants will be assessed at the end of the session against the criteria stated in the learning

**LEARNING  
ACTIVITIES**

**Time**

objectives is reviewed.

**10 min.**

**Learning Objectives 1:**

- B. Discussion:** The facilitator asks an open question about the definition of Post-partum hemorrhage. The participants are allowed to answer and their Answers are recorded on flip chart. Then the facilitator open a covered wall Graphic on which the definition according to the protocol is recorded. This Wall graphic will be fixed on the wall all through the session.

**15 min.**

**Learning Objectives 2 & 3:**

- C. Brain Storming:** The facilitator will use two flip charts, one on which is written "Causes of post-partum hemorrhage" & the other "Risk factors for post-partum hemorrhage". Then the participants "brain storm" what to be listed under each title. Answers are recorded by the facilitator on the flip-charts, 10 minutes are allowed after which, facilitator will show an overhead transparency listing the causes & risk factors of post-partum hemorrhage comparing it with the participants answers.

**30 min.**

**Learning Objectives 4 & 5:**

- D. Group Discussion:** The facilitator asks participant about principal clinical signs of post partum hemorrhage, and laboratory investigations needed. Facilitator will plot the answers on flip chart. Then will show an OHT for the clinical signs of post-partum hemorrhage needed and the laboratory investigations according to the protocol.

**45 min.**

**Learning Objectives 6,7 & 8:**

- E. Case study:** The facilitator prepares 3 case studies.
- I. About a case of hemorrhage immediately after birth of the baby but before birth of the placenta.
  - II. A case of hemorrhage immediately after delivery of the placenta.
  - III. Post-partum hemorrhage after the lapse of 24 hours from delivery

Facilitator divides the participants into three groups. Group (A) , group (B) And group (C). Each group will study one case and prepare answer on flip Chart to be presented by one of the group.

**30 min.**

**Discussion:** Answers presented are discussed by the other groups and views Are recorded. Then facilitator will present the steps to follow for each case According to the protocol as a handout.

**1 hour**

- F. Summary:** At the end of the session, the facilitator asks one of the Participants to summarize the session against the criteria in the learning Objectives. The facilitator then completes the session summary using the flip Chart graphics & OHT used during the session.

**15 min.**

## ASSESSMENT OF COMPETENCIES

To start developing a basic competency, each participant will be assessed against the criteria in the learning objectives while learning activities are being conducted.

Learning Objectives	Assessment Strategy/Methods
1. Define correctly post-partum Hemorrhage (early & late).	1. Outcome of group discussion
2. Identify the causes of post-partum Hemorrhage according to the protocol	2. Outcome of group brain storming
3. Identify the risk factors of post-partum Hemorrhage	3.
4. Identify the principal clinical signs of post-partum Hemorrhage	4. Outcome of group discussion
5. List the essential laboratory investigations required in cases of post-partum Hemorrhage	5. Outcome of group discussion
6. Manage hemorrhage immediately after birth of the baby but before delivery of the placenta according to the management scheme in the protocol	6. Outcome of case study & problem solving according to the protocol
7. Manage hemorrhage immediately after delivery of the placenta according to the management scheme in the protocol.	7. Outcome of case study & problem solving according to the protocol
8. Diagnose hemorrhage 24 hours after delivery and action to be taken according to the management scheme in the protocol.	8. Outcome of case study & problem solving according to the protocol

### PREPARATION (Session Specific)

**Facilitator:** The facilitator must prepare all the materials listed under the following resource.

### RESOURCES

- **Module: Post-partum Hemorrhage**
- **Essential Obstetric Care Resource Manual, Protocol: Post-partum hemorrhage as a complication of delivery**
- Over Head Transparency, Handout, and Flip charts of the following:
  - Session purpose & story
  - Causes & risk factor for Post-partum hemorrhage
  - Principal clinical signs of Post-partum hemorrhage
  - List of laboratory investigations for case of Post-partum hemorrhage

## RESOURCES

- Case Study I
- Case Study II
- Case Study III

Video Films

"

## RESOURCE (Wall graphic)

### Definition of Post-partum Hemorrhage

#### DEFINITION:

Post-partum hemorrhage (PPH) is excessive blood loss at delivery leading or likely to lead to a rising pulse rate, falling blood pressure and poor peripheral perfusion. Definition based on amount of hemorrhage (blood loss of 500 ml or more from or within the reproductive tract after birth within 24 hours of delivery) is notoriously impactful and unreliable.

## RESOURCE (OHT)

### Post-partum hemorrhage Causes & risk factors

#### Causes:

1. Poor uterine contraction (Hypotonic or Atonic).
2. Damage to genital tract (Traumatic).

#### Risk factors:

1. Increasing parity
2. Anemia and poor nutritional status.
3. Multiple pregnancy (uterine overdistension).
4. Ante-partum hemorrhage.
5. Previous post-partum hemorrhage.
6. Prolonged labor.
7. Traumatic use of forceps (Large baby, maternal obesity); perinatal incisions or tear.
8. Coagulation disorders.
9. General Anesthesia.
10. Poly hydramnios
11. Uterine fibroids
12. Retained parts of placenta

## RESOURCE (OHT)

### Principal clinical signs of Post-partum hemorrhage

- (1) Loss of bright red blood before and after delivery of the placenta.
- (2) Excessive and gushing blood from the vagina.
- (3) Nausea, dizziness, vomiting and sweating.
- (4) Tachycardia and/or hypotension (signs of shock).
- (5) After C.S. these signs and symptoms may be masked.

**RESOURCE (OHT)**

**Laboratory investigations required for a case  
with Post-partum hemorrhage**

**Blood Tests**

- (1) RH
  - (2) ABO
  - (3) Cross-matching
  - (4) Hamatocrit (Hct)
  - (6) Coagulation factor
  - (7) Hb%
- Blood grouping and Rh factor

## RESOURCE (OHT)

### Case Study I

Mona is 36 years old, has five (5) children normally delivered. This is her 6<sup>th</sup> pregnancy. She just delivered since 5 minutes, assisted by a ventouse, a big size baby after prolonged second stage. Placenta not yet separated, but there is gush of blood from the vagina which is bright red, excessive in amount.

- What are your expectations?
- How do you manage her?

## RESOURCE (OHT)

### Case Study II

Soheir is 23 years old. She is a primipara with twin pregnancy. Her vital signs are normal and stable. Twins are presentation in vertex. She was allowed for normal vaginal delivery. Both babies delivered successfully followed immediately by the placenta, which was huge, presented with double cord. Immediately after delivery there is gush of excessive bright red blood from the vagina accompanied by passage of clots.

- What are your expectations?
- How do you manage her?

## RESOURCE (OHT)

### Case Study III

Alya is a lady 30 years old. G<sub>9</sub>P<sub>7H</sub>, had 7 normal vaginal deliveries, 5 only are alive. She delivered since 2 days, at home, a full term baby, which was presented by a breech. Her delivery went normally, but since delivery time she is bleeding more than the expected to be as compared with previous deliveries.. Today she is so ill, fatigued and collapsed. You were asked to see her and evaluate the condition.

- What are your expectations?
- How do you manage her?

## RESOURCE (Hand Out)

### I. Management of case with Post-partum hemorrhage immediately after birth of the baby but before delivery of the placenta

#### Hemorrhage immediately after birth of the baby, before birth of the placenta:

- Management of the case will be continuously monitored by the pulse, blood pressure, urine output and blood coagulation.
- Place a canulla #18 if not already in place, prepare for blood transfusion.
- Empty bladder with Foley's catheter.
- Abdominal massage of uterine fundus.
- Ergotrate 0.2 mg (1 ampule) I.M. stat followed by controlled cord traction to deliver the placenta [maximum dose should not exceed 1 mg (5 amps)].
- Rapid intravenous Saline solution + 10 IU Syntocinon to be started.
- If the bleeding persists without delivery of the placenta, rapidly explore the perineum, vagina and cervix looking for lacerations. Call the anesthesiologist.
- Reform manual removal of the placenta with or without anesthesia.
- If bleeding persists, after removal of the placenta, see below.

## RESOURCE (Hand Out)

### II. Management of case with hemorrhage immediately after delivery of the placenta

#### Hemorrhage immediately after birth of the placenta:

- Place canulla #18 if not already in place, prepare for blood transfusion.
- Empty bladder with Foley's catheter.
- Ergotrate 0.4 mg (2 amps) I.V. stat.
- Oxytocin (Syntocin 50 IU) in 500 ml of Dextrose or mixed IV solution, rapid infusion rate until the uterus contracts and the hemorrhage stops.
- Put the baby to the breast to suck, or stimulate nipples manually.
- Massage uterine fundus.
- If the bleeding persists, rapidly explore the perineum, vagina and cervix looking for lacerations. Explore the uterine cavity for retained placental fragments. Call the anesthesiologist.
- If there are retained placental fragments: Removal (manual or ring forceps).
- If there are lacerations: Suture them immediately if they are the source of the hemorrhage (exclude uterine rupture) under anesthesia with good exploration.

## RESOURCE (Hand Out)

### II. Management of case with hemorrhage immediately after delivery of the placenta

#### Hemorrhage immediately after birth of the placenta:

- If the hemorrhage still persists:
  1. Call the senior specialist on duty who should proceed with the ? or refer to higher level; and continue massage bimanually.
  2. Look for a blood donor and transfer whole blood
  3. Perform an emergency laparotomy
  4. Give prostaglandin F2 $\alpha$  1mg IM and infusion: 5 mg in 500 ml saline "20 drops per minute".
  
- In the laparotomy:
  - 1<sup>st</sup> step: Open uterine massage. Inspect uterus for lacerations.
  
  - 2<sup>nd</sup> step: Intramyometrial oxytocin, prostaglandin or methergin as follows:
    - Oxytocin 10 IU divided between the two cornuae.
    - Prostaglandin F2 $\alpha$  1 mg divided in multiple sites.
    - Prostaglandin 15 methyl 0.25 mg divided in multiple sites.
    - Methergin 0.2 mg divided between the two cornuae.
  
  - 3<sup>rd</sup> step: Ligation of the hypogastric arteries if trained.
  
  - 4<sup>th</sup> step: subtotal hysterectomy
  
- 1gm ampicillin before and after the procedures.

## RESOURCE (Hand out)

### III. Management of case of hemorrhage after 24 hours of delivery

#### Hemorrhage immediately after birth of the placenta:

- Place canulla #18 if not already in place, prepare for blood transfusion.
- Empty bladder with Foley's catheter.
- Ergotrate 0.4 mg (2 amps) I.V. stat.
- Oxytocin (Syntocin 50 IU) in 500 ml of Dextrose or mixed IV solution , rapid infusion rate until the uterus contracts and the hemorrhage stops.
- Put the baby to the breast to suck, or stimulate nipples manually.
- Massage uterine fundus.
- If the bleeding persists, rapidly explore the perineum, vagina and cervix looking for lacerations. Explore the uterine cavity for retained placental fragments. Call the anesthesiologist.
- If there are retained placental fragments: Removal (manual or ring forceps).
- If there are lacerations: Suture them immediately if they are the source of the hemorrhage (exclude uterine rupture) under anesthesia with good exploration.

## RESOURCE (Hand out)

### III. Management of case of hemorrhage after 24 hours of delivery

#### Hemorrhage immediately after birth of the placenta:

- If the hemorrhage still persists:
  1. Call the senior specialist on duty who should proceed with the ? or refer to higher level; and continue massage bimanually.
  2. Look for a blood donor and transfer whole blood
  3. Perform an emergency laparotomy
  4. Give prostaglandin F<sub>2α</sub> 1mg IM and infusion 5 mg in 500 ml saline "20 drops per minute".
- In the laparotomy:
  - 1<sup>st</sup> step: Open uterine massge. Inspect uterus for lacerations.
  - 2<sup>nd</sup> step: Intramyometrial oxytocin, prostaglandin or methergin as follows:
    - Oxytocin 10 IU divided between the two cornuae.
    - Prostaglandin F<sub>1α</sub> mg divided in multiple sites.
    - Prostaglandin 15 methyl 0.25 mg divided in multiple sites.
    - Methergin 0.2 mg divided between the two cornuae.
  - 3<sup>rd</sup> step: Ligation of the hypogastric arteries if trained.
  - 4<sup>th</sup> step: subtotal hysterectomy
- 1gm ampicillin before and after the procedures.

**Authors:** Dr. Nevine Hassanein, Mohsen El Sayed, Mahmoud Hegazy, George Sanad and Ahmed Metwally

## Session 2: Diagnose and Manage Postpartum hemorrhage

<p style="text-align: center;"><b>DEVELOP BASIC COMPETENCY (Practical)</b></p>
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**Supervisor-led Session**

**Day:**  
**Time:** 3 weeks

**Task:** To Diagnose and manage He as post-partum complication

**Competency 1:** Identify and manage Postpartum hemorrhage

### Skills

- 1.1 Define post-partum Hemorrhage (early & late)
- 1.2 Identify cases at risk of post-partum Hemorrhage during antenatal visits.
- 1.3 Identify the causes of post-partum Hemorrhage
- 1.4 Diagnose post-partum Hemorrhage according to the clinical signs.
- 1.5 Manage post-partum Hemorrhage before & after delivery of the placenta.
- 1.6 Manage cases of late post-partum Hemorrhage.

### OVERVIEW

#### Purpose

The purpose of this three week practical session is to allow each participant to practice what was learned in the classroom about diagnosis and management of postpartum he under close supervision.

#### Story

According to training progression which is:

- Provide participant with background facts
- Tell participant how to perform skill
- Have participant simulate skill in safe setting.
- Then have the participant perform the practical skills in the health facilities under close supervision from the supervisor from the supervisor to fulfil the criteria for proper diagnosis and management of post-partum Hge according to the protocol of post-partum Hge.

## LEARNING OBJECTIVES

By the end of this three weeks practical session, each participant should be able to:

1. Define correctly post-partum Hemorrhage (early & late)
2. Identify and manage 20 cases with risk factors of PPHge during ante-natal visits.
3. Assess, diagnose and management 6 cases with post-partum and differentiate between early & late cases.

## LEARNING ACTIVITIES

	Time
<b>A. Motivate Learning:</b> The supervisor review the purpose, story and learning Objectives, learning activities and assessment strategies. The session purpose and story are presented using an overhead transparency. The session learning objectives are presented using flip chart. How the participant will be assessed at the end of session against the criteria started in the learning objectives is reviewed.	15 min.
<u>Learning Objectives 1-3</u>	
<b>B. Presentation:</b> The supervisor makes a presentation on the skills to practice during this session according to the objectives.	15 min.
<u>Learning Objectives 1-3</u>	
<b>C. Practical Experience &amp; Coaching:</b> Participant will be assigned to select pregnant woman at risk of Postpartum hemorrhage during antenatal clinic visits, according to risk factors listed in the protocol. Also participant will be assigned to diagnose and manage cases of post-partum Hge according to the management scheme in the protocol.	3 weeks
<u>Learning Objectives 1-3</u>	
<b>D. Weekly Clinical Conference:</b> The Supervisor will hold a weekly clinical Conference with the participants for individual case presentation (against the criteria in the learning objectives) and review of any issues which have come up during training Remedial learning experience are planned as required.	2 hrs. conference
<u>Learning Objectives 1-3</u>	
<b>E. Seminar &amp; Summary:</b> All Obstetrical staff are invited to attend the end of the week seminar. Each participant has prepared one case presentation on PPHge. Each presentation is critiqued against the criteria in the Learning objectives (as well as protocol and management schemes).	

Individual and collective learning experiences during the three (3) weeks are discussed against the criteria in the learning objectives. Suggestions

## LEARNING ACTIVITIES

Time

for strengthening the learning experience are noted and remedial action planned as required.

One participant then summarizes the three (3) week practical learning experience against the criteria in the learning objectives.

2 hrs.

## ASSESSMENT OF COMPETENCIES

To start developing "Basic competency", each participant will be assessed against the criteria in the learning objectives while learning activities are being conducted.

Learning Objectives	Assessment Strategy/Methods
1. Define correctly postpartum Hemorrhage (early & late)	1. Direct supervision; fulfillment of the criteria according to skill checklist "Obstetric communities & recording" and protocol
2. Identify and manage 20 cases with risk factors of PPHge during ante-natal visits.	2. Direct supervision; fulfillment of the criteria to the skill in the protocol
3. Assess, diagnose and management 6 cases with post-partum and differentiate between early & late cases.	3. Direct supervision; fulfillment of the criteria according to the skill checklist "Standard Obstetric & recording form" and protocol

## PREPARATION (Session Specific)

**Facilitator:** The facilitator must prepare all the materials listed under the following resources.

## RESOURCES

- **Module: Post-partum Hemorrhage**
- **Essential Obstetric Care Resource Manual, Protocol: Postpartum hemorrhage as a complication of delivery**
- Overhead Transparency, Handout, and Flip charts of the following:
  - Learning Objectives
  - Definition of postpartum hemorrhage
  - Session purpose & story
  - Causes & risk factor for postpartum hemorrhage

## RESOURCES

- Principal clinical signs of postpartum hemorrhage
- List of laboratory investigations for case of postpartum hemorrhage
  
- H.U.
  - After handout examination sheet
  - After handout check list

**Authors:** Drs. Mohsen El Sayed, Ahmed Metwally, Mahmoud Hegazy and George Sanad

### Session 3: Diagnose and manage post-partum hemorrhage

<p><b>DEVELOP BASIC COMPETENCY (Mastery)</b></p>
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**Facilitator-led Session**

**Day:**

**Time:** 3 months

**Task:** Diagnose and manage post-partum as hemorrhage complication

**Competency 1:** Identify and manage post-partum hemorrhage

#### Skills

- 1.1. Define post-partum Hemorrhage (early & late)
- 1.2. Identify cases at risk of post-partum Hemorrhage during antenatal visits.
- 1.3. Identify the causes of post-partum Hemorrhage.
- 1.4. Diagnose post-partum Hemorrhage according to the clinical signs.
- 1.5. Manage post-partum Hemorrhage before & after delivery of the placenta.
- 1.6. Manage cases of late post-partum Hemorrhage.

#### OVERVIEW

##### Purpose

The purpose of this 3 months practice for Mastery Session, is to allow each Participant to practice what was learned in Practical Session about diagnosis and management of post-partum hemorrhage by himself without close supervision with periodic evaluation of his achievements every 3 weeks.

##### Story

According to training progression the Trainee perform practical work under close supervision for 3 weeks during Session 2. Now it is the time for him to practice the skills of dealing with post-partum hemorrhage to gain Mastery for the next 3 months.

## LEARNING OBJECTIVES

By the end of this 3 months practice for Mastery Session, each Participant should be able to:

1. Define correctly post-partum hemorrhage early and late.
2. Identify and manage 40 cases of pregnant women at risk of post-partum hemorrhage during ante-natal visits.
3. Assess, diagnose and manage 15 cases of post-partum hemorrhage and differentiate between early and late cases.

## LEARNING ACTIVITIES

Time

**A. Motivate Learning:** The facilitator review the session purpose, story, learning objectives, learning activities and assessment strategies. Session purpose & story are presented using an overhead transparency. Session learning objectives are presented using a flipchart. The different learning activities to be used during the session, case study, group discussion and brain storming are reviewed with the group. How the participants will be assessed at the end of the session against the criteria stated in the learning objectives is reviewed.

15 min.

### Learning Objectives 1-3:

**B. Presentation:** The supervisor makes a presentation on the skills to practice During this Session according to the objectives. Each Participant is expected to diagnose and manage 40 cases of pregnant women with risk factors of post-partum hemorrhage during ante-natal visits and 15 – 20 cases of post-partum hemorrhage (different types).

30 min.

### Learning Objectives 1-3:

**C. Practical experience:** Each Participant should manage the above mentioned cases according to the protocol of post-partum hemorrhage. The 3 months will be divided into 3 weeks blocks, during each block each Participant should attend to assess and manage at least 12 cases of pregnant women at risk of post-partum hemorrhage during anti-natal visits and at least 4 cases of post-partum hemorrhage (different types) during this period.

### Learning objectives 1-3:

**D. Clinical Conference:** The Supervisor explains to the Participants that a visit every 3 weeks will be scheduled, during these visits clinical conference will be held for 3 hours, each participant must present detailed cases studies concerning clinical activities performed during the previous 3 weeks. The supervisor will present feedback of his observation of Participant's practice for Mastery against the criteria in the Learning Objectives and Protocol concerning the diagnosis and management of post-partum hemorrhage.

Suggestions for strengthening to learning experience are noted and remedial Action plan as required.

## LEARNING ACTIVITIES

Time

### Learning Objectives 1-3:

- E. **Seminar and Summary:** All the concerned Staff are invited to attend the end of the 3 months Seminar. Each Participant has prepared one or more cases on the diagnosis and management of pregnant women with risk factors for post-partum hemorrhage during ante-natal visits and one or more cases of post-partum hemorrhage. Each presentation is critiqued against the criteria of Learning Objectives, Protocol and appropriate skill check list. One Participant then summarizes the 3 months practice for Mastery, Practical learning experience against the criteria in the Learning Objectives.

## ASSESSMENT OF COMPETENCIES

To start developing a basic competency, each participant will be assessed against the criteria in the learning objectives while learning activities are being conducted.

Learning Objectives	Assessment Strategy/Methods
1. Define correctly post-partum hemorrhage early and late.	1. Outcome of group discussion
2. Identify and manage 40 cases of pregnant women at risk of post-partum hemorrhage during ante-natal visits.	2. Direct supervision for fulfillment of the criteria according to the protocol and checklist for ante-natal visits.
3. Assess, diagnose and manage 15 cases of post-partum hemorrhage and differentiate between early and late cases.	3. Direct supervision for fulfillment of the criteria according to protocol and checklist for post-partum hemorrhage.

## PREPARATION (Session Specific)

**Facilitator:** The facilitator must prepare all the materials listed under the following resource

## RESOURCES

- **Module: Post-partum Hemorrhage**
- **Essential Obstetric Care Resource Manual, Protocol for ante-partum hemorrhage**

Over Head Transparency, Handout, and Flip charts of the following:

- Checklist for ante-natal visits and for post-partum hemorrhage
- Session purpose & story
- Learning Objectives
- List of laboratory investigations

**RESOURCE (OHT & HANDOUT)**

**SKILL CHECKLIST**

**Obstetric Communications & Recording**

**Facilitator:** Use this skill checklist as a guide when demonstrating the skill and assessing participant's performance.

**Participants:** Use the skill checklist as a guide when practicing this skill. Your performance will be assessed against the criteria in this checklist.

**Rating:**        1 = Needs Improvement  
                     2 = Satisfactory

STEPS	RATE	COMMENTS
1. Greeted and welcomed the client		
2. Introduced yourself		
3. Took & recorded correctly the client personal data: - Name - Age - Address - Profession, marital status (1 <sup>st</sup> or no. of yr.) - Consanguinity - Special habits		
4. Was patient with the client		
5. Took and recorded a complete reproductive history: - Menstrual pattern/flow/LMP - Obstetric parity/pregnancy outcome (age, sex, live births, stillbirths) - Date of last pregnancy - Abortions (number, types)		

RESOURCE (OHT & HANDOUT)

SKILL CHECKLIST

Obstetric Communications & Recording

**Facilitator:** Use this skill checklist as a guide when demonstrating the skill and assessing participant's performance.

**Participants:** Use the skill checklist as a guide when practicing this skill. Your performance will be assessed against the criteria in this checklist.

**Rating:** 1 = Needs Improvement  
2 = Satisfactory

STEPS	RATE	COMMENTS
6. Took and recorded correctly the client medical history: - D.M. - Hypertension - T.B. - Rheumatic heart disease - Anaemia - Pre-eclampsia & eclampsia - T.T. immunization - Genital tract infection - Schistosomiasis - UTI - APH - Allergies		
7. Took and recorded client complete surgical history		
8. Reviewed and recorded the client family history		
9. Was respectful, listened actively, gave complete attention to the client		

RESOURCE (OHT & HANDOUT)

SKILL CHECKLIST

Obstetric Communications & Recording

**Facilitator:** Use this skill checklist as a guide when demonstrating the skill and assessing participant's performance.

**Participants:** Use the skill checklist as a guide when practicing this skill. Your performance will be assessed against the criteria in this checklist.

**Rating:** 1 = Needs Improvement  
2 = Satisfactory

STEPS	RATE	COMMENTS
10. Explained clearly to the client: <ul style="list-style-type: none"><li>- The complete duration of pregnancy and her EDD.</li><li>- The division of the 3 trimesters of pregnancy</li><li>- The concerns of each trimester (complaints and medical importance)</li><li>- The essential and routine investigations <u>Blood:</u> CBC, VDRL, ABO-RH, FBS, Toxoplasmosis <u>Urine:</u> complete urine analysis <u>Stool:</u> analysis for ova &amp; parasites</li><li>- The schedule of antenatal follow-up visits was completed:<ul style="list-style-type: none"><li>A. Once/month/till 28 weeks</li><li>B. 28 wks – 36 wks/2wks</li><li>C. 36 wks – delivery/1 week</li></ul></li></ul>		
11. Used easy and understandable language		

**RESOURCE (OHT & HANDOUT)**

**SKILL CHECKLIST**

**Obstetric Communications & Recording**

**Facilitator:** Use this skill checklist as a guide when demonstrating the skill and assessing participant's performance.

**Participants:** Use the skill checklist as a guide when practicing this skill. Your performance will be assessed against the criteria in this checklist.

**Rating:**        1 = Needs Improvement  
                     2 = Satisfactory

STEPS	RATE	COMMENTS
12. Care strategy during the antenatal Period included: <ul style="list-style-type: none"><li>- Complete physical examination on first visit:<ul style="list-style-type: none"><li>- HT</li><li>- Chest</li><li>- Height</li><li>- Weight</li></ul></li><li>- Antenatal status checked regularly during every visit and noted on the antenatal card:<ul style="list-style-type: none"><li>- BP</li><li>- WT</li><li>- Gestational age</li><li>- Fundle level</li><li>- Lie</li><li>- Presenting part</li><li>- Fetal HT sounds</li><li>- Lower limb oedema, HB%</li><li>- Urine (albumen, sugar, acetone)</li></ul></li></ul>		
13. Identified the present patient complaint		
14. Explained and solved the patient complaint		
15. Encouraged the client to ask questions		
16. Asked about breast-feeding history: <ul style="list-style-type: none"><li>- Previous, breast-feeding experience</li><li>- Breast feeding of other relative</li><li>- Family support for breast feeding</li><li>- Anticipated separation (return to work)</li></ul>		

**RESOURCE (OHT & HANDOUT)**

**SKILL CHECKLIST**

**For post-partum hemorrhage**

**Facilitator:** Use this skill checklist as a guide when demonstrating the skill and assessing participant's performance.

**Participants:** Use the skill checklist as a guide when practicing this skill. Your performance will be assessed against the criteria in this checklist.

**Rating:**        1 = Needs Improvement  
                      2 = Satisfactory

Skills	CASES						Comments
	1	2	3	4	5	6	
1. General examination: - Pulse - B.P - Chest - Heart							
2. Abdominal examination: - Fundal level of the uterus - Contractility of the uterus							
3. Local examination: - Empty of the bladder - Amount of blood loss							
4. Explore placenta * Deliver completely or not with membrane * Time of delivery							
5. Exploration of genital tract * Vulva: laceration or wound * Perineum: laceration or wound * Vagina: laceration or wound * Cervix: tears * Uterus: contractility Remnant and blood clot							
Early Breast Feeding							

RESOURCE (OHT & HANDOUT)

SKILL CHECKLIST

For labour

**Facilitator:** Use this skill checklist as a guide when demonstrating the skill and assessing participant's performance.

**Participants:** Use the skill checklist as a guide when practicing this skill. Your performance will be assessed against the criteria in this checklist.

**Rating:** 1 = Needs Improvement  
2 = Satisfactory

STEPS	RATE	COMMENTS
2. General examination: - Pulse - B.P - Chest - Heart		
3. Abdominal examination: - Fundal level of the uterus - Contractility of the uterus		
4. Local examination: - Empty of the bladder - Amount of blood loss - Explore placenta Time of delivery of placenta before 30 cm or after 30 cm Delivery completely or not with Membrane - Exploration of genital tract Vulva: tear or laceration Perineum: Wound or laceration Vagina: wound or laceration Cervix: tears Uterus: contractility or not remnant and blood clot		
5. Early breast feeding		

Time of checklist of labor: two hours after delivery of fetus

**MODULE**  
**POSTPARTUM HEMORRHAGE**  
**March, 1998**

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**Healthy Mother/Healthy Child Project**

**&**

**MotherCare Egypt/Project**  
**Cairo, Egypt**

**IN COOPERATION WITH**  
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**Authors:** Drs. Alaa Sultan and Nevine Hassanein

**Session 1: Antenatal Care and Identification of Alarming Symptoms and Signs**

**DEVELOP  
BASIC  
COMPETENCY  
(Classroom)**

**Facilitator-led Session**

**Day:**  
**Time: 5 hrs.**

**Task:** Provide Antenatal Care and Early Detection/Management of High Risk Pregnancy

**Competency 1:** Provide antenatal care for pregnant women

**Skills**

- 1.1 Define and explain correctly the meaning of antenatal care.
- 1.2 Explain correctly the **four (4)** objectives for providing antenatal care.
- 1.3 Outline the schedule for providing good antenatal care.
- 1.4 Take and record complete antenatal history.
- 1.5 Perform antenatal physical examination and record the findings.
- 1.6 Recognize the alarming symptoms and signs during antenatal visits.

**Competency 2:** Assess the pregnancy state during follow-up visits

**Skills**

- 2.1 Record any new complaints during follow-up visits.
- 2.2 Perform physical examination during follow-up antenatal visits and record the findings.
- 2.3 Assess fetal wellbeing.
- 2.4 Provide basic health educational plan for any pregnant woman.

## **Purpose**

The purpose of this session is to introduce participants to the competencies and skills for history taking and examination of the pregnant woman. For most physicians, this session will be a revision. In session 3 & 4, the skills addressed in this session will be practiced in a practical setting.

## **Story**

It is important for the mother and newborn to be cared for by a physician who can correctly take a full history and do a complete physical examination of the pregnant woman, so as to be able to achieve the antenatal care objectives, and to give correct diagnosis and correct management.

## **LEARNING OBJECTIVES**

By the end of this classroom session, each participant should be able to:

1. Define the meaning of antenatal care according to the protocol.
2. Explain the four (4) objectives for providing antenatal care according to the protocol.
3. Outline the schedule for providing good antenatal care according to the protocol.
4. Take and record complete antenatal history according to the protocol.
5. Perform antenatal physical examination and record the findings according to the protocol.
6. Recognize the alarming symptoms and signs during antenatal care and record the findings according to the skill checklist.
7. Record any new complaints during follow-up visits according to the protocol.
8. Perform physical examination during a follow-up antenatal visits according to the protocol.
9. Assess fetal wellbeing according to the protocol.
10. Provide basic health educational plan for any pregnant woman according to the protocol.

## LEARNING ACTIVITIES

Time

The following are suggested learning activities which if implemented, should enable participants to meet the criteria stated in the learning objectives and pass the assessment.

- A. **Motivate learning:** The facilitator reviews the session purpose, story, learning objectives, activities and assessment strategies. The learning objectives are illustrated on a wall graphic or on an overhead transparency. **10 min.**

### Learning Objectives 1, 2, 3 & 4

- B. **Presentation:** The facilitator will present a short review, about the definition, four (4) objectives, schedule and taking complete antenatal history, using overhead transparencies as reference followed by open discussion. **60 min.**

### Learning Objectives 5

- C. **Demonstration:** The facilitator will demonstrate steps of physical examination using the model (pelvis, doll and model of abdomen). **20 min.**

**Coaching:** The facilitator will coach the participants to perform physical examination individually.

**Note:** Participants will continue to develop basic competency during the Practical experience session.

### Learning Objectives 6

- D. **Large Group Discussion:** The facilitator will ask the participants an open ended question about their knowledge concerning the alarming symptoms and signs during antenatal care. Participants answer back and their responses are critiqued against the criteria of the prepared OHT which will be showed to them, discussed and then distributed as a handout. **30 min.**

### Learning Objectives 7, 8 & 9

- E. **Presentation:** The facilitator will present a short review about the follow-up visits, concerning any new complaints, the minimal basic examination required for any pregnant woman and methods of assessment of fetal wellbeing during follow-up visits. The facilitator will use wall graphic and he will distribute an antenatal card for all participants, followed by an open discussion. **40 min.**

### Learning Objectives 10

- F. **Large Group Discussion:** The facilitator will ask the participants an open ended question about their knowledge concerning the basic educational plan for any pregnant woman. Participants answer back and their answers recorded on a wall graphic. The facilitator will review their recorded answers and compared with a well prepared OHT showing the basic educational plan for any pregnant women. **60 min.**

**LEARNING  
ACTIVITIES**

**G. Summary:** At the end of this session, facilitator summarizes the session against the criteria in the learning objectives. The facilitator then completes the session summary using the flip chart and overhead transparencies presented during the session.

20 min.

**ASSESSMENT OF  
COMPETENCIES**

Learning Objectives	Assessment Strategy/Methods
1. Define the meaning of antenatal care according to the protocol.	1. Questions and answers
2. Explain the <b>four (4)</b> objectives for providing antenatal care according to the protocol.	2. Questions and answers and group discussion
3. Outline the schedule for providing good antenatal care according to the protocol.	3. Questions and answers and group discussion
4. Take and record complete antenatal history according to the skill checklist.	4. Questions and answers and group discussion
5. Perform antenatal physical examination and record the findings according to the skill checklist.	5. Simulated return demonstration and observation of performance
6. Recognize the alarming symptoms and signs during antenatal care and record the findings according to the skill checklist.	6. Questions and answers and outcome of group discussion
7. Record any new complaints during follow-up visits according to the protocol.	7. Outcome of large group discussion
8. Perform physical examination during a follow-up antenatal visit according to the protocol.	8. Outcome of large group discussion
9. Assess fetal wellbeing according to the protocol.	9. Outcome of large group discussion
10. Provide basic health educational plan for any pregnant woman according to the protocol.	10. Questions and answers and outcome of group discussion

**PREPARATION (Session Specific)**

**Facilitator:** Preparation of model (pelvis, doll and model of abdomen) and antenatal Card.

## RESOURCES

- **Module: Antenatal Card**
- **Essential Obstetric Care Resource Manual, Protocol: Antenatal Care**
- Wall graphic, overhead transparency or handout:
  - Session purpose and story
  - Session learning objectives
  - Definition, objectives and schedule of ANC visits
  - Skill Checklist: (Alarming Symptoms and Signs)
  - Antenatal card (periodic visits and assessment of fetal wellbeing)
  - Health education (Basic educational plan for any pregnant woman)
- Model (pelvis, doll, and model of abdomen)

**DEVELOP  
BASIC  
COMPETENCY  
(Classroom)**

**SESSION OUTLINE  
MODULE: ANTENATAL CARE**

**Session 1: Antenatal Care and Identification of Alarming Symptoms & Signs**

**Key:**      **K = Knowledge**                      **S = Skill**                      **A = Attitudes**

Session Agenda	Learning Objectives	Assessment of Competencies	Learning Activities	Key Resources
Day: 1 Time: 5 hrs	1. Define the meaning of antenatal care according to the protocol.	1. K: Questions and answers	<b>A. Motivate Learning</b> <ul style="list-style-type: none"> <li>- Purpose of session</li> <li>- Story: A full history and complete physical examination are the key to achieve antenatal care objectives diagnosis &amp; correct management</li> <li>- Review learning objectives, activities and assessment</li> </ul>	- Module - Flip chart or OHT
	2. Explain the four (4) objectives for providing ANC according to the protocol 3. Outline the schedule for providing good antenatal care according to the protocol. 4. Take and record complete antenatal history according to the protocol.	2. K: Questions and answers and group discussion 3. K: as above 4. K: as above	<b>B. Presentation:</b> <ul style="list-style-type: none"> <li>- Definition of antenatal care</li> <li>- Four (4) objectives of ANC</li> <li>- Schedule for providing ANC</li> <li>- Taking a complete antenatal history</li> </ul>	- Protocol - Overhead transparencies  - Skill Checklist
	5. Perform antenatal physical examination and record the findings according to the protocol.	5. KS: Simulated return demonstration and observation of performance	<b>C. Demonstration:</b> <ul style="list-style-type: none"> <li>- Facilitator demonstrates steps of physical examination</li> </ul> <b>Coaching</b>	- Skill Checklist

Session Agenda	Learning Objectives	Assessment of Competencies	Learning Activities	Key Resources
			<ul style="list-style-type: none"> <li>- Participants practice how to perform physical examination</li> </ul>	
	<p>6. Recognize the alarming symptoms and signs during ANC record the findings according to the skill Checklist</p>	<p>6. K: Questions, answers and discussion</p>	<p><b>D. Large Group Discussion:</b></p> <ul style="list-style-type: none"> <li>- Large group discuss the alarming S &amp; S during ANC and critiques against the criteria of the prepared OHT</li> </ul>	
	<p>7. Record any new complaints during follow-up visits according to the protocol</p> <p>8. Perform physical examination during follow-up antenatal visit according to the protocol</p> <p>9. Assess fetal well being according to the protocol.</p>	<p>7. K: Outcome of large group discussion</p> <p>8. K: As above</p> <p>9. K: As above</p>	<p><b>E. Presentation</b></p> <ul style="list-style-type: none"> <li>- Facilitator presents the schedule for follow-up visits, new complaints, minimal basic examination required and methods of assessment of fetal well being</li> </ul>	<p>- Antenatal Card</p>
	<p>10. Provide basic health educational plan for any pregnant woman according to the protocol.</p>	<p>10. K: Questions, answers and discussion</p>	<p><b>F. Large Group Discussion:</b></p> <ul style="list-style-type: none"> <li>- Large group discusses the basic health educational plan for any pregnant woman</li> </ul>	<p>- Handout</p>
			<p><b>G. Summary:</b></p> <ul style="list-style-type: none"> <li>- Determine if <u>each</u> participant meets the criteria in all of the learning objectives</li> </ul>	

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**Authors:** Drs. Ali Abdel Megeid, Alaa Sultan, Nevine Hassanein, Sedik Ahmed, Mohamed Abdel Motaleb, and Sameh Hosny

### Session 2: High-Risk Pregnancy

**DEVELOP  
BASIC  
COMPETENCY  
(Classroom)**

#### Facilitator-led Session

**Day:**

**Time:** 3 hrs.

**Task:** Antenatal Care and Early Detection\Management of High-risk Pregnancy

**Competency 1:** Identify and manage high-risk pregnancies

#### Skills

- 1.1 Explain correctly the meaning of high-risk pregnancy.
- 1.2 Recognize the risk factors to be evaluated during the initial screen history of the antenatal mother.
- 1.3 Recognize the potential adverse effects of any risk factor during the initial physical examination of the antenatal mother.
- 1.4 Interpret laboratory findings associated with high-risk pregnancies.
- 1.5 Identify signs, which may indicate high-risk pregnancy during fetal wellbeing assessment.
- 1.6 Provide appropriate action to be taken during pregnancy for associated high-risk findings.
- 1.7 Provide appropriate referral to a higher level when needed

#### OVERVIEW

##### Purpose

The purpose of this session is to introduce participants to the competencies and skills for identification and manage high-risk pregnancies. For most physicians, this session will be a review. In sessions 3 & 4 the skills addressed in this session will be practiced in a practical setting.

## Story

It is important for the mother and newborn to be cared for by a physician who can correctly identify and manage high risk pregnancies, so as to be able to achieve the antenatal care objectives, and to give correct diagnosis and correct management.

## LEARNING OBJECTIVES

By the end of this classroom session, each participant should be able to:

1. Explain correctly the meaning of high-risk pregnancy according to the protocol.
2. Recognize the risk factor to be evaluated during the initial screen history of antenatal mother according to the protocol.
3. Recognize the potential adverse effects of any risk factor during the initial physical examination of the antenatal mother according to the protocol.
4. Interpret laboratory findings associated with high-risk pregnancies according to the protocol.
5. Identify signs which may indicate high-risk pregnancy during fetal wellbeing assessment, according to the skill checklist.
6. Provide appropriate action to be taken during pregnancy for associated high-risk finding according to the protocol.
7. Provide appropriate referral to a higher level when needed according to the protocol.

## LEARNING ACTIVITIES

The following are suggested learning activities which if implemented, should enable participants to meet the criteria stated in the learning objectives and pass the assessment.

- A. **Motivate learning:** The facilitator reviews the session purpose, story, learning objectives, activities and assessment strategies. The learning objectives are illustrated on a wall graphic or on an overhead transparency.

**Time**

**10 min.**

### Learning Objective 1

- B. **Presentation:** The facilitator will present a short review, about the meaning of high risk pregnancy using an overhead transparency as reference followed by open discussion.

**10 min.**

### Learning Objectives 2, 3, 4, 5 & 6

- C. **Brain Storming:** The facilitator will ask the participants about their knowledge concerning recognition of the high-risk factors, recognition of the potential adverse effects of any risk factor during the initial physical examination of antenatal mother, and action to be taken for each associated

**LEARNING  
ACTIVITIES**

**Time**

risk factor as well as interpreting the laboratory findings associated with high risk pregnancy using flip chart to record what participants mentioned.

**2 hrs.**

**Learning Objective 7**

**D. Large Group Discussion:** The facilitator will ask the participants an open ended question about their knowledge concerning referral of high-risk pregnancies to a higher level. The participant answers back and their response are critiqued against the criteria of the prepared OHT which will be showed to them, discussed and then distributed as handouts.

**30 min.**

**E. Summary:** At the end of this session, facilitator summarizes the session against the criteria in the learning objectives. The facilitator then completes the session summary using flip chart and over head transparency presented during the session.

**ASSESSMENT OF  
COMPETENCIES**

Learning Objectives	Assessment Strategy/Methods
1. Explain correctly the meaning of high-risk pregnancy according to the protocol.	1. Questions and answers
2. Recognize the risk factor to be evaluated during the initial screen history of antenatal mother according to the protocol.	2. Questions, answers and outcome of group discussion.
3. Recognize the potential adverse effects of any risk factor during the initial physical examination of the antenatal mother according to the protocol.	3. Questions, answers and outcome of group discussion
4. Interpret laboratory findings associated with high-risk pregnancies according to the protocol.	4. Questions, answers and outcome of group discussion.
5. Identify signs which may indicate high risk pregnancy during fetal wellbeing assessment to the skill checklist.	5. Questions, answers and outcome of group discussion.
6. Provide appropriate action to be taken during pregnancy for associated high-risk finding according to the protocol.	6. Questions, answers and outcome of group discussion.
7. Provide appropriate referral to a higher level when needed according to the protocol.	7. Outcome of large group discussion

## PREPARATION (Session Specific)

**Facilitator:** Preparation of model (pelvis, doll, and model of abdomen) and antenatal Card.

## RESOURCES

- **Module: Antenatal Card**
- **Essential Obstetric Care Resource Manual, Protocol: Antenatal Care.**
- Wall graphic, overhead transparency or handout of the following:
  - Session purpose and story
  - Session learning objectives
  - Definition of high risk pregnancy
  - Skill Checklist: (Alarming Symptoms and Signs)
  - Prenatal card (periodic visits and assessment of fetal wellbeing)

**DEVELOP  
BASIC  
COMPETENCY  
(Classroom)**

**SESSION OUTLINE**  
**MODULE: ANTENATAL CARE**

**Session 2: High-Risk Pregnancy**

**Key:**                      **K = Knowledge**                      **S = Skill**                      **A = Attitudes**

Session Agenda	Learning Objectives	Assessment of Competencies	Learning Activities	Key Resources
<p>Day: 1 Time: 3 hrs</p>	<p>1. Explain correctly the meaning of HRP according to the protocol.</p>	<p>1. <b>K:</b> Questions and answers</p>	<p><b>A. Motivate Learning:</b></p> <ul style="list-style-type: none"> <li>- Purpose of session</li> <li>- Story: Early identification and management of HRP are the key to achieve antenatal care objectives &amp; to give correct management</li> <li>- Review learning objectives, activities and assessment</li> </ul> <p><b>B. Presentation:</b></p> <ul style="list-style-type: none"> <li>- Definition of HRP</li> </ul>	<ul style="list-style-type: none"> <li>- Module</li> <li>- Flip chart or OHT</li> <li>- Protocol</li> <li>- Handout</li> </ul>
	<p>2. Recognize the risk factor to be evaluated during the initial screen history of antenatal mother according to the protocol.</p> <p>3. Recognize the potential adverse effects of any risk factor during the initial physical examination of the antenatal mother according to the protocol.</p> <p>4. Interpret laboratory findings associated with HRP according to the protocol.</p> <p>5. Identify signs which may indicate HRP during fetal</p>	<p>2. <b>K:</b> Questions, answers and discussion</p> <p>3. <b>K:</b> As above</p> <p>4. <b>K:</b> As above</p> <p>5. <b>K:</b> As above</p>	<p><b>C. Brain Storming:</b></p> <ul style="list-style-type: none"> <li>- Participants brain storm high risk factors, its effects and action to be taken as well as interpreting the laboratory findings associated with HRP</li> </ul>	<ul style="list-style-type: none"> <li>- Protocol</li> </ul>

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Session Agenda	Learning Objectives	Assessment of Competencies	Learning Activities	Key Resources
	<p>wellbeing assessment according to the skill checklist</p> <p>6. Provide appropriate action to be taken during pregnancy for associated high risk findings according to the protocol</p>	<p>6. K: As above</p>		
	<p>7. Provide appropriate referral to a higher level when needed according to the protocol</p>	<p>7. K: Outcome of large group discussion</p>	<p><b>D. Large Group Discussion:</b></p> <ul style="list-style-type: none"> <li>- Participants discuss referral of HRP to a higher level</li> </ul> <p><b>E. Summary:</b></p> <ul style="list-style-type: none"> <li>- Determine if <u>each</u> participant meets the criteria in all of the learning objectives</li> </ul>	<p>- Protocol</p>

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### Session 3: Antenatal Care

**DEVELOP  
BASIC  
COMPETENCY  
(Practical)**

#### Supervisor-led Session

**Day:**

**Time:** Three weeks

**Task:** Antenatal Care and Early Detection/Management of High Risk Pregnancy

**Competency 1:** Provide antenatal care for pregnant women

#### Skills

- 1.1 Take and record complete antenatal history.
- 1.2 Perform antenatal physical examination and record the findings.
- 1.3 Recognize the alarming symptoms and signs during follow-up visits.

**Competency 2:** Assess the pregnancy state during follow-up visits

#### Skills

- 2.1 Record any new complaints during follow-up visits.
- 2.2 Perform physical examination during follow-up antenatal visits and record the findings.
- 2.3 Assess fetal wellbeing.
- 2.4 Provide basic health educational plan for any pregnant woman.

**Competency 3:** Identify and manage high-risk pregnancies

#### Skills

- 3.1 Recognize the risk factors to be evaluated during the initial screen history of the antenatal mother.
- 3.2 Recognize the potential adverse effects of any risk factor during the initial physical examination of the antenatal mother.
- 3.3 Interpret laboratory findings associated with high risk pregnancies.

## **Skills**

- 3.4 Identify signs which may indicate high risk pregnancy during fetal wellbeing assessment.
- 3.5 Provide appropriate action to be taken during pregnancy for associated high risk findings.
- 3.6 Provide appropriate referral to a higher level when needed.

## **OVERVIEW**

### **Purpose**

The purpose of this three weeks session is to introduce participants to “develop basic competency” in session specific competencies and skills for providing antenatal care, timely detection and action to be taken for high risk pregnancies in the practical, outpatient clinics.

### **Story**

It is important for participants to have the opportunity to practice what they have trained for in the classroom under close supervision (supervised practice). They must be provided the opportunity to practice the required skills for providing antenatal care, early detection and managing high risk pregnancies.

## **LEARNING OBJECTIVES**

By the end of this three weeks practical session, each participant should be able to start to “Develop Basic Competency” in providing antenatal care. Each participant will provide antenatal care for **fifty (50)** pregnant woman and identify **fifteen (15)** cases with high risk factors, then s/he will follow and manage **five (5)** cases.

Basic competency for the following will be assessed against the criteria in the protocol and appropriate skill checklist. For each case, each participant should be able to do the following under close supervision:

1. Take and record complete antenatal history.
2. Perform antenatal physical examination and record the findings.
3. Recognize the alarming symptoms and signs during antenatal visits and record the findings.
4. Record any new complaints during follow-up visits.
5. Perform physical examination during follow-up antenatal visits and record the findings.
6. Assess fetal wellbeing.

**LEARNING  
OBJECTIVES**

7. Provide basic health educational plan for any pregnant woman.
8. Recognize the risk factors to be evaluated during the initial screen history of the antenatal mother.
9. Recognize the potential adverse effects of any risk factor during the initial physical examination of the antenatal mother.
10. Interpret laboratory findings associated with high risk pregnancies.
11. Identify signs which may indicate high risk pregnancy during fetal wellbeing assessment.
12. Provide appropriate action to be taken during pregnancy for associated high risk findings.
13. Provide appropriate referral to a higher level when needed.

**LEARNING  
ACTIVITIES**

**Time**

The following are suggested learning activities which if implemented, should enable participants to meet the criteria stated in the learning objectives and pass the assessment.

- A. Motivate learning:** The supervisor reviews the session purpose, story, learning objectives, activities and assessment strategies. The learning objectives are illustrated on a wall graphic or on an overhead transparency. Logistic for practical experience are reviewed.

**15 min**

**Learning Objectives 1-13**

- B. Demonstration:** The supervisor demonstrates taking a complete history and performing a complete examination (according to the criteria in the protocol and skill checklist) and record the findings. From these findings s/he will identify any alarming symptoms and signs to detect any pregnancy of high risk.

**Practice & Coaching:** The supervisor will coach each participant in taking a complete history and performing a complete physical examination (according to the criteria in the protocol and skill checklist), records the findings followed by identification of any associated risk factors.

**1 hrs**

**Learning Objectives 1-13**

- C. Practical Experience and Coaching:** During the **three (3)** weeks practice, the supervisor will supervise each participant in taking a complete history, performing a complete physical examination (according to the criteria in the protocol and skill checklist), recording his findings and detecting and managing high risk pregnancies.

**3 weeks**

**LEARNING  
ACTIVITIES**

**Time**

**Learning Objectives 1-13**

**D. Weekly Clinical Conference:** The supervisor will hold a weekly clinical conference with the participants for individual case presentation (against the criteria in the learning objectives) and review of any issues which have come up during training. Remedial learning experiences are planned as required.

**2 hrs.  
conference**

**Learning Objectives 1-13**

**E Seminar & Summary:** All obstetrical staff are invited to attend the end of the **three (3)** week seminar. Each participant has prepared **one (1)** case presentation on action to be taken for a high-risk pregnant woman after providing a good prenatal care. Each presentation is critiqued against the criteria in the learning objectives (as well as protocol and skill checklist). Individual and collective learning experience during the **three (3)** weeks are discussed against the criteria in the learning objective. Suggestions for strengthening the learning experience are noted and remedial action planned as required. One participant then summarizes the **three (3)** weeks practical learning experience against the criteria in the learning objectives.

**2 hrs**

**ASSESSMENT OF  
COMPETENCIES**

Learning Objectives	Assessment Strategy/Methods
1. Take and record complete antenatal history according to the protocol.	1. Observation of performance according to the criteria of the protocol.
2. Perform antenatal physical examination and record the findings according to the protocol.	2. Observation of performance according to the criteria of the protocol.
3. Recognize the alarming symptoms and signs during the antenatal visits and record the findings according to the checklist.	3. Observation of performance according to the criteria in the skill checklist.
4. Record any new complaint during follow-up visits according to the protocol.	4. Observation of performance according to the criteria of the protocol.
5. Perform physical examination during follow-up antenatal visits and record the findings according to the findings according to the protocol.	5. Observation of performance according to the criteria of the protocol.
6. Assess fetal wellbeing according to the protocol.	6. Observation of performance according to the protocol.
7. Provide basic health educational plan for any pregnant woman according to the protocol.	7. Observation of performance according to the criteria of the protocol.
8. Recognize the risk factors to be evaluated during the initial screen history of the antenatal mother woman according to the protocol.	8. Observation of performance according to the criteria of the protocol.
9. Recognize the potential adverse effects of any risk factor during the initial physical examination of the antenatal mother according to the protocol.	9. Observation of performance according to the criteria of the protocol.
10. Interpret laboratory findings associated with high risk pregnancies according to the protocol.	10. Observation of performance according to the criteria of the protocol.
11. Identify signs which may indicate high risk pregnancy during fetal wellbeing assessment according to the skill checklist.	11. Observation of performance according to the criteria of the skill checklist.
12. Provide appropriate action to be taken during pregnancy for associated high risk findings according to the protocol.	12. Observation of performance according to the criteria of the protocol.
13. Provide appropriate referral to a higher level when needed according to the protocol.	13. Observation of performance according to the criteria of the protocol.

**N.B.:** By the end of this **three (3)** weeks practical experience each participant should take history and perform physical examination for **fifty (50)** pregnant, identify risk for **fifteen (15)** cases and manage **five (5)** cases of high risk pregnancy.

## PREPARATION (Session Specific)

**Supervisor:** The supervisor must prepare all of the material listed under the following resources and organize the practical learning experience in the hospital assuring that the facilities and support system are ready for the participants. The supervisor is prepared to supervise each participant during the **three (3)** weeks practical session. The roles of other health team members are reviewed to facilitate the learning process.

**Participant:** Each participant must have met all of the criteria in the learning objectives for sessions 1 & 2 as a prerequisite to start this session.

## RESOURCES

- **Module: Antenatal Care**
- **Essential Obstetric Care Resource Manual, Protocol: Antenatal Care**
- Wall graphic, overhead transparency or handout of the following:
  - Session purpose and story
  - Session learning objectives
  - Definition, objectives and schedule of ANC visits
  - Definition of high risk pregnancy
  - Skill Checklist: Obstetric booking procedures (History, examination, and alarming symptoms and signs)
  - Antenatal card (periodic visits and assessment of fetal wellbeing)
  - Health education (Basic educational plan for any pregnant woman)
- Competent and oriented obstetric team
- Supervisor readily available to supervise each participant
- **Fifty (50)** pregnant woman in (ANC), **fifteen (15)** with high risk pregnancy (HRP) and **five (5)** out of these **fifteen (15)** to be managed.

**DEVELOP  
BASIC  
COMPETENCY  
(Practical)**

**SESSION OUTLINE**

**MODULE: Antenatal Care**

**Session 3: Antenatal Care**

**Key:**      **K = Knowledge**      **S = Skill**      **A = Attitudes**

Session Agenda	Learning Objectives	Assessment of Competencies	Learning Activities	Key Resources
<p><b>Weeks: 3</b></p>	<p>By the end of this three week practical session, <u>each</u> participant should be able to provide ANC for <b>fifty (50)</b> pregnant woman and identify <b>fifteen (15)</b> cases with H.R.P., then s/he will follow and manage <b>five (5)</b> cases. Basic competency for the following will be assessed against the criteria in the protocol and appropriate skill checklist. For each case, <u>each</u> participant should be able to do the following under <u>close</u> supervision.</p> <ol style="list-style-type: none"> <li>1. Take and record complete antenatal history.</li> <li>2. Perform antenatal physical examination and record the findings.</li> <li>3. Recognize the alarming symptoms and signs during antenatal visits and record the findings</li> <li>4. Record any new complaints during follow-up visits.</li> <li>5. Perform physical examination during follow-up antenatal visits and record the findings.</li> <li>6. Assess fetal wellbeing</li> <li>7. Provide basic health educational plan for any pregnant woman.</li> </ol>	<p><b>1-13 S:</b> Observation of performance</p>	<p><b>A. Motivate Learning:</b></p> <ul style="list-style-type: none"> <li>- Purpose of session</li> <li>- Story: proper ANC, early detection and management of HRP will reduce maternal and perinatal mortality and morbidity.</li> <li>- Review learning objectives, activities and assessment.</li> </ul> <p><b><u>Learning Objectives 1-13:</u></b></p> <p><b>B. Demonstration:</b></p> <ul style="list-style-type: none"> <li>- History, physical examination and record the findings from which S &amp; S of HRP could be detected.</li> </ul> <p><b>Practice &amp; Coaching:</b></p> <ul style="list-style-type: none"> <li>- Practice of all skills by participants with <u>close</u> supervision and coaching from</li> </ul>	<ul style="list-style-type: none"> <li>- Module</li> <li>- Protocol</li> <li>- All resources used for sessions <b>1 &amp; 2</b></li> <li>- Competent and oriented obstetrical team</li> <li>- <b>Fifty (50)</b> pregnant women for ANC for <u>each</u> participant.</li> </ul>

Session 3: Antenatal Care

Key: K = Knowledge S = Skill A = Attitudes

Session Agenda	Learning Objectives	Assessment of Competencies	Learning Activities	Key Resources
	<p>8 Recognize the risk factors to be evaluated during the initial screen history of the antenatal mother.</p> <p>9. Recognize the potential adverse effects of any risk factor during the initial physical examination of the antenatal mother</p> <p>10 Interpret laboratory findings associated with HRP</p> <p>11 Identify signs which may indicate HRP during fetal wellbeing assessment</p> <p>12. Provide appropriate action to be taken during pregnancy for associated high risk findings</p> <p>13 Provide appropriate referral to a higher level when needed</p>		<p>supervisor</p> <p><b>C. Practical Experience and coaching:</b></p> <ul style="list-style-type: none"> <li>- During the three weeks, the supervisor provides <u>close</u> supervision and coaching to <u>each</u> participant</li> </ul> <p><b>D. Weekly Clinical Conference:</b></p> <ul style="list-style-type: none"> <li>- Supervisor holds weekly clinical conference where cases are presented and logistics discussed.</li> </ul> <p><b>E. Seminar &amp; Summary:</b></p> <ul style="list-style-type: none"> <li>- All obstetrical staff are invited.</li> <li>- Case presentations by participants critiqued by the supervisor.</li> <li>- Three week learning experience discussed</li> <li>- One participant critiques to <b>three (3)</b> week practical experience against the criteria in the learning objectives</li> </ul>	<ul style="list-style-type: none"> <li>- Cases for presentation</li> <li>- Wall graphics or OHT: Learning objectives.</li> </ul>

**Authors:** Drs. Ali Abdel Megeid, Alaa Sultan, Sedik Ahmed, Mohamed Abdel Motaleb, and Sameh Hosny

### Session 4: Antenatal Care

<p><b>PRACTICE FOR MASTERY (Practical)</b></p>
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#### Supervisor-led Session

**Day:**

**Time:** Three months

**Task:** Antenatal Care and Early Detection/Management of High Risk Pregnancy

**Competency 1:** Provide antenatal care for pregnant woman

#### Skills

- 1.1 Take and record complete antenatal history.
- 1.2 Perform antenatal physical examination and record the findings.
- 1.3 Recognize the alarming symptoms and signs during antenatal visits.

**Competency 2:** Assess the pregnancy state during follow-up visits

#### Skills

- 2.1 Record any new complaints during follow-up visits.
- 2.2 Perform physical examination during follow-up antenatal visits and record the findings.
- 2.3 Assess fetal wellbeing
- 2.4 Provide basic health educational plan for any pregnant woman

**Competency 3:** Identify and manage high-risk pregnancies

#### Skills

- 3.1 Recognize the risk factors to be evaluated during the initial screen history of the antenatal mother.
- 3.2 Recognize the potential adverse effects of any risk factor during the initial physical examination of the antenatal mother.

## Skills

- 3.3 Interpret laboratory findings associated with high risk pregnancies.
- 3.4 Identify signs which may indicate high risk pregnancies during wellbeing assessment.

## OVERVIEW

### Purpose

The purpose of this three months session is for the participants to have opportunity to master the skills concerning how to provide antenatal care, timely detecting and managing high risk pregnancies.

### Story

It is important for participants to have the opportunity to practice what they have trained for in the classroom under close supervision (supervised practice), and to give practice for mastery of their facilities with periodic supervision from their trainers to get feed-back and take corrective action for any malpractice when practicing skills for mastery. Each participant will be a self directed learner, required less supervision. A drop in maternal mortality and morbidity statistics should be anticipated if participants have mastered the required skill.

## LEARNING OBJECTIVES

By the end of this **three (3)** month practical session, each participant should be able to do the following with **one hundred twenty (120)** pregnant women:

1. Take and record complete antenatal history according to the protocol.
2. Perform antenatal physical examination and record findings according to the protocol.
3. Recognize the alarming symptoms and signs during antenatal care according to the skill checklist.
4. Record any new complaints during follow-up visits according to the protocol.
5. Perform physical examination during a follow-up antenatal visit according to the protocol.
6. Assess fetal wellbeing according to the protocol.
7. Provide basic health educational plan for any pregnant woman according to the protocol.

## LEARNING OBJECTIVES

By the end of this **three (3)** month practical session, each participant should be able to do the following with **fourty (40)** pregnant women:

8. Recognize the risk factor to be evaluated during the initial screen history of antenatal mother according to the protocol.
9. Recognize the potential adverse effects of any risk factor during the initial physical examination of the antenatal mother according to the protocol.
10. Interpret laboratory findings associated with high-risk pregnancies according to the protocol.
11. Identify signs which may indicate high risk pregnancy during fetal wellbeing assessment, according to the skill checklist.

By the end of this **three (3)** month practical session, each participant should be able to do the following with **twenty (20)** pregnant women:

12. Provide appropriate action to be taken during pregnancy for associated high-risk findings according to the protocol.
13. Provide appropriate referral to a higher level when needed according to the protocol.

## LEARNING ACTIVITIES

### Time

- A. **Motivate learning:** The supervisor reviews the purpose, story, learning objectives, activities and assessment strategies of this session. The logistics for this **three (3)** month of practical experience are reviewed

#### Learning Objectives 1-13

- B. **Presentation:** Based on the learning objectives. The number of cases to be seen are reviewed. Each participant should:
- Provide antenatal care for **one hundred twenty (120)** pregnant women.
  - Identify high risk factors in **fourty (40)** pregnant women.
  - Manage high risk pregnancy in **twenty (20)** pregnant women

**15 min.**

#### Learning Objectives 1-13

- C. **Practical Experience:** Each participant should assess and manage the above mentioned cases according to the criteria in the protocol and appropriate skill checklist under periodic supervision. The **three (3)** months will be divided into **three (3)** weeks blocks. During each **three (3)** week block, each participant should attempt to assess and manage at least:
- **Fourty (40)** cases for providing antenatal care
  - **Ten (10)** cases with high risk factors
  - **Five (5)** cases with high risk pregnancy for management

**3 weeks**

**LEARNING  
ACTIVITIES**

**Time**

**Learning Objectives 1-13**

- D. Clinical Conference:** The supervisor will explain to the participants that a visit every **three (3)** weeks will be scheduled during the clinical conference. each participant must present a detailed case study concerning clinical activities performed during the previous **three (3)** weeks. The case presentation should address the criteria in the learning objectives. The supervisor will present his/her observations of participant's practice for mastery on-the-job against the criteria in the learning objectives. protocol and appropriate skill checklist concerning antenatal care, early detection and management of high-risk pregnancy. Any logistical problems and proposed solutions are also discussed during the conference.

Individual and collective learning experiences during **three (3)** weeks are discussed against criteria in the learning objectives. Suggestions for strengthening the learning experience are noted and remedial action planned as required.

**3 months**

**Learning Objectives 1-13**

- E. Seminar and Summary:** All obstetrical staff are invited to attend the end of **three (3)** month seminar. Each participant has prepared **one (1)** or more cases on providing scheduled antenatal care, assessing and managing the high-risk pregnancy. Each presentation is critiqued against in the learning objectives, as well as protocol and skill checklist.

Individual and collective learning experience during the **three (3)** months are discussed against the criteria in the learning objectives. Suggestions for strengthening the learning experience are noted and remedial action planned as required.

One participant then summarizes the **three (3)** months "practice for mastery" practical learning experience against the criteria in the learning objectives. **(Total)**

**ASSESSMENT OF  
COMPETENCIES**

Learning Objectives	Assessment Strategy/Methods
1. Take and record complete antenatal history according to the protocol.	1. Observation of performance according to the criteria of the protocol.
2. Perform antenatal physical examination and recording the findings according to the protocol.	2. Observation of performance according to the criteria of the protocol.
3. Recognize the alarming symptoms and signs during the antenatal visits according to the skill checklist.	3. Observation of performance according to the criteria in the skill checklist.
4. Record any new complaint during follow-up visits according to the protocol.	4. Observation of performance according to the criteria of the protocol.
5. Perform physical examination during follow-up antenatal visits and record the findings according to the protocol.	5. Observation of performance according to the criteria of the protocol.
6. Assess fetal wellbeing according to the protocol.	6. Observation of performance according to the criteria of the protocol.
7. Provide basic health educational plan for any pregnant woman according to the protocol.	7. Observation of performance according to the criteria of the protocol.
8. Recognize the risk factors to be evaluated during the initial screen history of the antenatal mother according to the protocol.	8. Observation of performance according to the criteria of the protocol.
9. Recognize the potential adverse effects of any risk factor during the initial physical examination of the antenatal mother according to the protocol.	9. Observation of performance according to the criteria of the protocol.
10. Interpret laboratory findings associated with high risk pregnancies according to the protocol.	10. Observation of performance according to the criteria of the protocol.
11. Identify signs which may indicate high risk pregnancy during fetal wellbeing assessment according to the skill checklist.	11. Observation of performance according to the criteria.
12. Provide appropriate action to be taken during pregnancy for associated high risk findings according to the protocol.	12. Observation of performance according to the criteria of the protocol.
13. Provide appropriate referral to a higher level when needed according to the protocol.	13. Observation of performance according to the criteria of the protocol.

## RESOURCES

- **Module: Antenatal Care**
- **Essential Obstetric Care Resources Manual, Protocol: Antenatal Care**
- Wall graphic, overhead transparency or handout of the following:
  - Session purpose and story
  - Session learning objectives
  - Definition, objectives and schedule of ANC visits
  - Definition of high risk pregnancy
  - Skill Checklist: alarming symptoms and signs
  - Antenatal care (periodic visits and assessment of fetal wellbeing)
  - Health education (Basic educational plan for any pregnant woman)
- Competent and oriented obstetric team
- Supervisor readily available to supervise each participant
- **One hundred twenty (120)** pregnant woman in (ANC), **fourty (40)** with high risk pregnancy and **twenty (20)** out of these **fourty (40)** to be managed

## SKILL CHECKLIST

### Title: Alarming Symptoms and Signs During Antenatal Care

**Facilitator:** Use this skill checklist as a guide when demonstrating the skill and assessing participant's performance.

**Participants:** Use the skill checklist as guide when practicing this skill. Your performance will be assessed against the criteria in the checklist.

**Rating:** 1 = Needs Improvement  
2 = Satisfactory

STEPS (Alarming symptoms or signs)	RATE	COMMENTS
1. When vaginal bleeding is identified, need for gestational age assessment was followed.		
2. When gestational age < 20 weeks, associated with mild bleeding, mild colics, need for management completed the following: - No Examination - No intercourse - Bed rest - Ultrasound - Follow-up		
3. When gestational age < 20 weeks, associated with moderate/severe bleeding and moderate/severe colics, need for management completed the following: - P.V examination - 1 <sup>st</sup> aid measures - Termination		
4. When gestational age > 20 weeks, associated with mild, moderate or severe bleeding, need for management was according to the protocol of antenpartum hemorrhage		
5. Identified symptoms of preeclampsia: - Severe persisting headache - Blurring of vision - Epigastric pain - Generalized edema		

## SKILL CHECKLIST

### Title: Alarming Symptoms and Signs During Antenatal Care

**Facilitator:** Use this skill checklist as a guide when demonstrating the skill and assessing participant's performance.

**Participants:** Use the skill checklist as guide when practicing this skill. Your performance will be assessed against the criteria in the checklist.

**Rating:** 1 = Needs Improvement  
2 = Satisfactory

STEPS (Alarming symptoms or signs)	RATE	COMMENTS
6. Identified signs of preeclampsia: <ul style="list-style-type: none"><li>- Excessive weight gain</li><li>- High blood pressure &gt; 140/90</li><li>- Albuminuria</li></ul>		
7. Suspected accidental hemorrhage in case of severe abdominal pain in the 2 <sup>nd</sup> half of pregnancy specially when one of the following was associated: <ul style="list-style-type: none"><li>- Trauma</li><li>- PET</li><li>- F.L. &gt; period of amenorrhea</li><li>- Difficult to feel fetal parts</li><li>- Hard tender uterus</li><li>- F. H.S. usually absent</li></ul>		
8. Identified other alarming symptoms during Routine antenatal care: <ul style="list-style-type: none"><li>- Persistent vomiting</li><li>- Dysuria</li><li>- Chills or fever</li><li>- Escape of fluid from vagina (PROM)</li><li>- Marked changes in frequency or intensity of fetal movements</li></ul>		

**NB** Each step must receive a rating of 2. Note corrective action to be taken under "comments" for any step receiving a rating of 1 (needs improvements).

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**PRACTICE  
FOR  
MASTERY  
(Practical)**

**SESSION OUTLINE  
MODULE: ANTENATAL CARE**

**Session 4: Antenatal Care**

**Key: K = Knowledge S = Skill A = Attitudes**

Session Agenda	Learning Objectives	Assessment of Competencies	Learning Activities	Key Resources
<p>Months: 3</p>	<p>By the end of this <b>three (3)</b> month practical session, <u>each</u> participant should be able to do the following with <b>one hundred twenty (120)</b> pregnant women:</p> <ul style="list-style-type: none"> <li>1. Take and record antenatal history according to the protocol.</li> <li>1. Perform antenatal physical examination and record findings according to the protocol</li> <li>1. Recognize the alarming symptoms and signs during ANC according to the skill checklist.</li> <li>1. Record any new complaints during follow-up visits according to the protocol.</li> <li>1. Perform physical examination during a follow-up antenatal visits according to the protocol.</li> <li>1. Assess fetal wellbeing according to the protocol.</li> <li>1. Provide basic health educational plan for any pregnant woman according to the protocol.</li> </ul> <p>By the end of this <b>three (3)</b> month practical session, <u>each</u> participant should be able to do the following with</p>	<p>1-13 <b>KSA</b>: Observation of performance according to the criteria of skill checklist(s) and protocol.</p>	<p><b>A. Motivate Learning:</b></p> <ul style="list-style-type: none"> <li>- Purpose of session</li> <li>- Story: A drop in maternal mortality and morbidity statistics concerning ANC &amp; early detection of HRP should be anticipated if participants have mastered the competencies and skills for this session</li> <li>- Review learning objectives, activities and assessment</li> </ul> <p><b>A. Presentation:</b></p> <ul style="list-style-type: none"> <li>- Based on the learning objectives, the supervisors review the cases to be assessed and managed under his/her supervision over the next <b>three (3)</b> months</li> </ul>	<ul style="list-style-type: none"> <li>- Module</li> <li>- Protocol</li> <li>- All resources used for sessions 1, 2 &amp; 3</li> <li>- Competent and oriented obstetrical team</li> </ul>

Session Agenda	Learning Objectives	Assessment of Competencies	Learning Activities	Key Resources
	<p>fourty (40) pregnant women</p> <p>8. Recognize the risk factors to be evaluated during the initial screen history of antenatal mother according to the protocol.</p> <p>9 Recognize the potential adverse effects of any risk factor during the initial physical examination of the antenatal mother according to the protocol.</p> <p>10 Interpret laboratory findings associated with HRP according to the protocol.</p> <p>11 Identify signs which may indicate HRP during fetal wellbeing assessment according to the protocol.</p> <p>By the end of this <b>three (3)</b> month practical session, <u>each</u> participant should be able to do the following with <b>twenty (20)</b> pregnant women:</p> <p>12 Provide appropriate action to be taken during pregnancy for associated high risk findings according to the protocol.</p> <p>13 Provide appropriate referral to a higher level when needed according to the protocol.</p>		<p><b>C. Practical Experience:</b></p> <ul style="list-style-type: none"> <li>- Under periodic supervision, participants practice the skills for this module</li> </ul> <p><b>C. Clinical Conference:</b></p> <ul style="list-style-type: none"> <li>- Supervisors hold weekly clinical conference with participants to review progress towards meeting learning objectives, any logistical or other issues which may come up</li> <li>- Remedial learning experience are planned as required</li> </ul> <p><b>Case Presentation:</b></p> <ul style="list-style-type: none"> <li>- <u>Each</u> participant presents a minimum of <b>one (1)</b> interesting case assessed and managed during the week</li> <li>- Group and supervisor critiques each presentation</li> </ul> <p><b>C. Seminar and Summary:</b></p> <ul style="list-style-type: none"> <li>- All obstetrical staff are invited to attend the end of <b>three (3)</b> month seminar</li> <li>- <u>Each</u> participant has prepared <b>one (1)</b> presentation on providing scheduled ANC, assessing and managing high risk pregnancy</li> <li>- <u>Each</u> presentation is critiqued against the relevant learning objective criteria associated with the presentation</li> </ul>	

Session Agenda	Learning Objectives	Assessment of Competencies	Learning Activities	Key Resources
			<ul style="list-style-type: none"><li>- <b>Three (3)</b> month learning experience discussed</li><li>- One participant critiques the <b>three (3)</b> month practical experience against the criteria in the learning objectives</li></ul>	

**MODULE**  
**INFECTION PREVENTION**

**May, 1998**

**Editors**

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**IN COOPERATION WITH  
USAID**

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## **MODULE OVERVIEW**

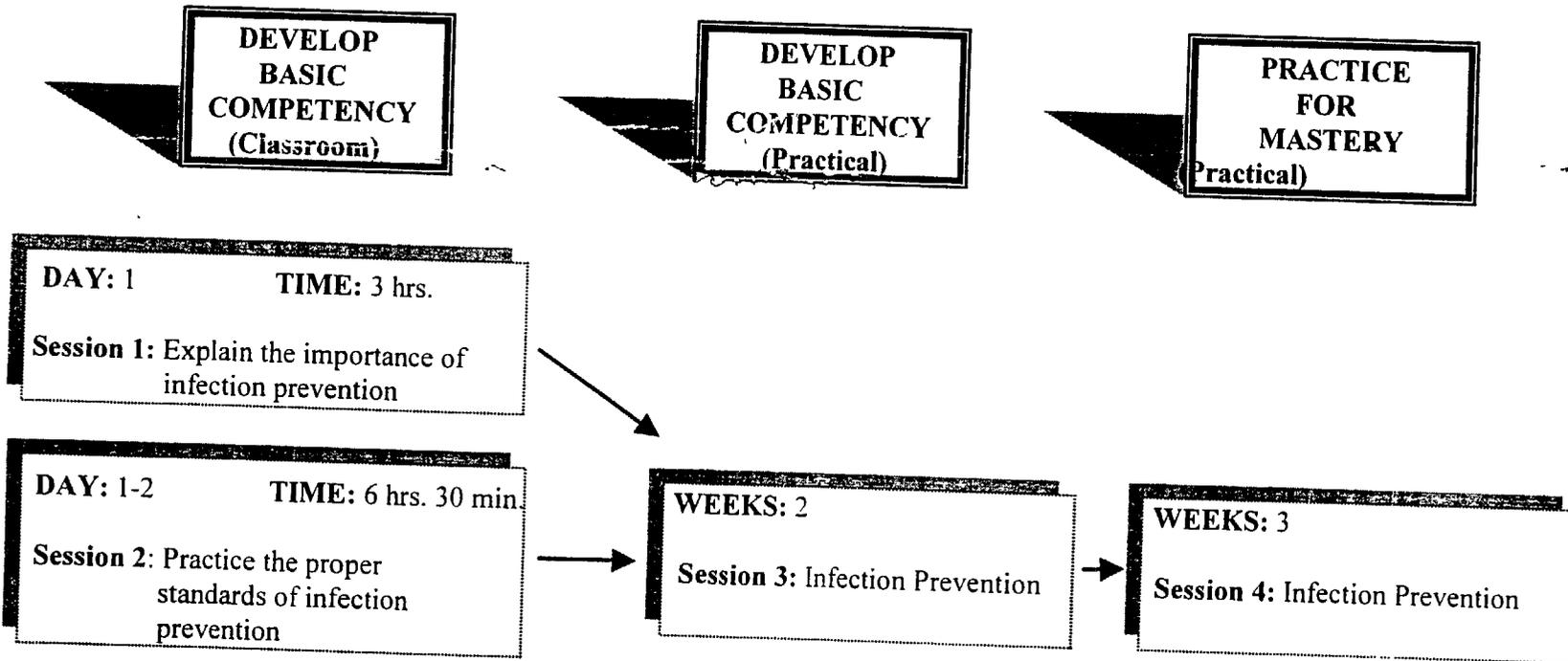
### **Purpose**

The purpose of this module is to provide facilitators with a sound competency-based training (CBT) methodology, if implemented as designed, will result in physicians reaching the level of " mastery " concerning the competencies and skills required to apply safe environment using standard of infection prevention techniques.

### **Story**

The National Maternal Mortality study was conducted in 1992-93, reported that genital sepsis ranked the third among major direct causes of Maternal deaths (8%). It also highlighted that 92% of cases were avoidable, and 60% of all maternal deaths occur in the medical facilities.

**MODULE: INFECTION PREVENTION**  
**AGENDA & SEQUENCE OF SESSIONS**



**Task:** Apply safe environment using standard of infection prevention Technique.

**Competency 1:** Explain the importance of infection prevention.

**Skills**

- 1.1 Define the term infection, infection prevention, sepsis, asepsis, antiseptics, decontamination, cleaning, disinfection and sterilization.
- 1.2 Identify the importance of infection prevention in breaking disease transmission cycle.
- 1.3 Recognize the protective barriers, which minimize the risks of infection.
- 1.4 Recognize the proper procedure for every type of sterilization and disinfection.
- 1.5 Recognize proper handling and cleaning of instruments, equipment and other items.
- 1.6 Ensure that physical environment meet the standard criteria for infection control.

**Competency 2:** Practice the proper standards of infection prevention.

**Skills**

- 2.1 Identify importance of proper hand washing.
- 2.2 Demonstrate proper hand washing.
- 2.3 Recognize the importance of using gloves and the proper gloving methods of clean or sterile gloves.
- 2.4 Demonstrate the proper gloving methods of clean gloves or sterile gloves.
- 2.5 Demonstrate the proper way of wearing sterile gown.
- 2.6 Demonstrate the proper client skin preparation prior to injection or surgical procedures.
- 2.7 Demonstrate proper handling and processing of instruments and equipment.
- 2.8 Demonstrate proper processing of used syringe & needle.
- 2.9 Apply proper procedure for waste disposal.

**Authors:** Drs. Mohammed Abou Gabal, Abdel-Moneim Abdel Aziz, Essam Abdallah, Amin H. , and Ms. Amira El-Malatawai

### **Session 1: Infection Prevention (the importance of infection prevention)**

**DEVELOP  
BASIC  
COMPETENCY  
(Classroom)**

**Facilitator-led Session**

**Day:**

**Time:** 3 hrs.

**Task:** Apply safe environment using standard of infection prevention Technique.

**Competency 1:** Explain the importance of infection prevention.

#### **Skills**

- 1.1 Define the term infection, infection prevention, sepsis, asepsis, antiseptics, decontamination, cleaning, disinfection and sterilization.
- 1.2 Identify the importance of infection prevention in breaking disease transmission cycle.
- 1.3 Recognize the protective barriers, which minimize the risks of infection.
- 1.4 Recognize the proper procedure for every type of sterilization and disinfection.
- 1.5 Recognize proper handling and cleaning of instruments, equipment and other items.
- 1.6 Ensure that physical environment meet the standard criteria for infection control.

#### **OVERVIEW**

##### **Purpose**

The purpose of this session is to explain proper standards of infection prevention Techniques.

##### **Story**

The mother-in law reported that her daughter-in law was weak during her last pregnancy. She was complaining of spontaneous gush of vaginal bleeding. She transferred to Komombo district Hospital. The staff in duty took her to the operating room. She was giving blood transfusion, in addition to performing vaginal examinations using clean glove. Specialist diagnosed her as inevitable abortion. Evacuation was carried out using the available equipment. Three days later, she developed fever, then she died at the fourth day.

The National Maternal Mortality study, which was conducted in 1992-93, reported that genital sepsis ranked the third among major direct causes of maternal deaths (8%). It also highlighted that 92% of cases were avoidable, and 60% of all maternal deaths occur in the medical facilities.

**LEARNING OBJECTIVES**

By the end of this session, each participant should be able to:

1. Define the term infection, infection prevention, asepsis, antiseptics, decontamination, cleaning, disinfection and sterilization.
2. Identify the importance of infection prevention in breaking the disease transmission cycle.
3. Identify the protective barriers which minimize the risk of infection
4. Recognize the proper procedure for every type of sterilization and disinfection according to protocol.
5. Recognize proper handling and cleaning of instruments, equipment, and other items.
6. Ensure that physical environment meet the standard criteria for infection control according to the observation sheet.

**LEARNING ACTIVITIES**

**Time**

**A. Motivate Learning:** The facilitator reviews the purpose, story, learning objectives, learning activities and assessment strategies. The session purpose and story are presented using an overhead transparency. The session learning objectives are presented using flip chart. The different learning activities to be used during the session: role-play, case study, group discussion and brain storming are reviewed with the group. How the participants will be assessed at the end of the session against the criteria stated in the learning objectives is reviewed. **15 min.**

**Learning objective 1:**

**B. Presentation:** The facilitator using overhead transparencies for presentation, that shows terminologies and definitions stated in objective (1) allowing feedback from participants **15 min.**

**Learning Objectives 2 & 3:**

**C. Brain Storming:** The facilitator taking the story as background, use the brain storming activity to identify the importance of infection prevention and factors that minimize the risk of infection. Facilitator shows an O.H.T. Discuss disease transmission cycle and protective barriers for infection prevention. **30 min.**

**LEARNING  
ACTIVITIES**

**Time**

**Learning Objectives 4 & 5:**

- D. **Demonstration:** The facilitator will explain to the participants the proper technique of handling equipment and other items according to the protocol using the Flipchart. 30 min.
- E. **Video Presentation:** The facilitator uses the available video tape to present techniques of proper handling and cleaning of instruments and other items followed by group discussion. 30 min.

**Learning Objectives 6:**

- F. **Brain Storming:** will be used to identify procedures to be considered in order to ensure safe environment. Comments and feedback will be written on flip chart followed by presentation of a prepared transparency highlighting infection control procedures that ensure safe physical environment, used as an "observation sheet" for system supervision, distributed as handout at the end of the session. 45 min.
- G. **Summary:** At the end of the session, the facilitator delegates the responsibility of summarizing the session against the criteria in the learning objectives. The facilitator then completes rap-up of the session using summary transparency sheet. 15 min.

**ASSESSMENT OF  
COMPETENCIES**

To start developing " basic competency ", each participant will be assessed against criteria in the learning objectives while learning activities are being conducted.

Learning Objectives	Assessment Strategy/Methods
1. Define the term infection, infection prevention, sepsis, asepsis, antiseptics, decontamination, cleaning, disinfection and sterilization.	1. Outcome of feedback on the used transparency.
2. Identify the importance of infection prevention in breaking the disease transmission cycle.	2. Outcome of brain storming sessions
3. Recognize the protective barriers, which minimize the risk of infection.	3. Outcome of brain storming sessions
4. Recognize the proper procedure for every type of sterilization and disinfection according to protocol.	4. Feedback/comments on presentation of the procedures according to the protocol.
5. Recognize proper handling and cleaning of instruments, equipment, and other items.	5. Feedback/comments on presentation and of video.

## ASSESSMENT OF COMPETENCIES

To start developing “ basic competency ”, each participant will be assessed against criteria in the learning objectives while learning activities are being conducted.

Learning Objectives	Assessment Strategy/Methods
6. Ensure that physical environment meet standard criteria for infection control, according to the observation sheet.	6. Outcome of brain storming and feed back from the transparency used.

### PREPARATION (Session Specific)

**Facilitator:** The facilitator must prepare all of the materials listed under the following resources.

### RESOURCES

- **Module: Infection Prevention**
- **Essential Obstetric Care Resource Manual, Protocol: Infection Prevention**
- Overhead transparencies, flipchart graphic or handouts of the following:
  - Session Purpose and Story
  - Session Learning Objectives
  - Observation Sheet
  - Overhead transparencies definitions
  - Infection cycle
- Overhead projector and screen
- Television and Video connected together
- Video tape

**RESOURCE (OHT & HANDOUT)  
OBSERVATION SHEET**

---

**1. INFECTION CONTROL PROCEDURES:**

---

1. Was the exam table cleaned between patients?

Yes

No

2. Did clinician always wash hands between patients?

Yes

No

3. Did physician use clean gloves on both hands?

Yes

No

4. Were instruments thoroughly cleaned before disinfections?

Yes

No

5. Were disinfectant solutions prepared every day?

Yes

No

6. Did the nurse operate sterilizers; hot air boiler and autoclave properly?

Yes

No

7. Were metal instruments disinfected by boiling?

Yes

No

8. Were metal instruments disinfected by soaking in high level disinfectant?

Yes

No

9. Did nurse use proper procedures for the disposal the decontaminated and sharp items?

Yes

No

**Authors:** Drs. Mohammed Abou Gabal, Abdel-Moneim Abdel Aziz, Essam Abdallah, Amin H., Ms. Amira El-Malatawai, and Nevine Hassanein

## Session 2: Infection Prevention (proper standards of infection prevention)

**DEVELOP  
BASIC  
COMPETENCY  
(Classroom)**

**Facilitator-led Session**

**Day:**  
**Time:** 5 hrs.

**Task:** Apply safe environment using standard of infection prevention Technique.

**Competency 2:** Practice the proper standards of infection prevention.

### Skills

- 2.1 Identify importance of proper hand washing.
- 2.2 Demonstrate proper hand washing.
- 2.3 Recognize the importance of using gloves and the proper gloving methods of clean or sterile gloves.
- 2.4 Demonstrate the proper gloving methods of clean gloves or sterile gloves.
- 2.5 Demonstrate the proper way of wearing sterile gown.
- 2.6 Demonstrate the proper client skin preparation prior to injection or surgical procedures.
- 2.7 Demonstrate proper handling and processing of instruments and equipment.
- 2.8 Demonstrate proper processing of used syringe & needle.
- 2.9 Apply proper procedure for waste disposal.

### OVERVIEW

#### Purpose

The purpose of this session is to learn and allow each participant to practice the proper standards of infection prevention Techniques.

## Story

The mother-in law reported that her daughter-in law was weak during her last pregnancy. She was complaining of spontaneous gush of vaginal bleeding. She was transferred to Komombo district Hospital. The staff in duty took her to the operating room. She was giving blood transfusion, in addition to performing vaginal examinations using clean glove. Specialist diagnosed her as inevitable abortion. Evacuation was carried out using the available equipment. Three days later, she developed fever, then she died at the fourth day. The National Maternal Mortality study, which was conducted in 1992-93, reported that genital sepsis ranked the third among major direct causes of maternal deaths (8%). It also highlighted that 92% of cases were avoidable, and 60% of all maternal deaths occur in the medical facilities.

## LEARNING OBJECTIVES

By the end of this session, each participant should be able to:

1. Identify importance of proper hand washing being one of the most important infection prevention procedure.
2. Demonstrate hand washing according to the skill checklists I & II.
3. Recognize the importance of using clean disinfected or sterile gloves.
4. Demonstrate the proper gloving methods of clean or sterile gloves.
5. Demonstrate the proper wearing method of sterile gown.
6. Demonstrate the proper client skin preparation prior to injection or surgical procedure according to protocol.
7. Demonstrate proper handling and processing of instruments & equipment according to the skill checklist III.
8. Demonstrate syringe & needle processing according to skill checklist IV.
9. Recognize the tips for handling clinic waste.
10. Apply the proper procedure for different type of waste disposal according to skill checklist (V).
11. Identify the important tips for handling waste items & containers, as well as the use of burial site for waste disposal.

**LEARNING  
ACTIVITIES**

**Time**

- A. **Motivate Learning:** The facilitator reviews the purpose, story, learning objectives, learning activities and assessment strategies. The session purpose and story are presented using an overhead transparency. The session learning objectives are presented using flip chart. The different learning activities to be used during the session: role- play, case study, group discussion and brain storming are reviewed with the group. How the participants will be assessed at the end of the session against the criteria stated in the learning objectives are reviewed. **10 min.**

**Learning objective 1:**

- B. **Presentation:** The facilitator using overhead transparencies to present the importance of proper hand washing being one of the most important infection prevention procedure allowing feedback from participants. **10 min.**

**Learning Objective 2:**

- C. **Presentation:** In preparation for a role play, the facilitator makes a presentation of the skill checklists I & II for hand washing using an O.H.T., which is distributed as an H.O. to the participants. **15 min.**

**Role-Play:** Two participants will volunteer for a role-play. One will show proper hand washing, the second participant will take the role of the supervisor who will observe and check the other one using the skill checklists. The rest of the group observes the role- play. **15 min.**

**Feedback & Discussion:** Feedback concerning the role- play is recorded on a flip chart, using an overhead projection of the skill checklist as a reference. The feedback is then discussed. **10 min.**

**Learning Objective 3:**

- D. **Brain storming:** The facilitator asks participants about basic principles for the use of gloves. Answers are recorded on flip chart, then using overhead transparency, the facilitator mention the importance of using clean disinfected or sterile gloves allowing sometimes for feedback from participants. **10 min.**

**Learning Objective 4:**

- E. **Presentation:** The facilitator makes a presentation on the skills to practice during this session “gloving method” according to the objective and allow each participant to practice the use of sterile gloves according to the protocol. **20 min.**

**Learning Objectives 5:**

- F. **Presentation:** The facilitator makes a presentation on the skills to practice during this session “wearing properly sterile gowns” according to the objective and allow each participant for practice use of sterile gown

## LEARNING ACTIVITIES

### Time

according to the protocol.

20 min.

### Learning objectives 6-7:

- G. Demonstration:** The facilitator will demonstrate the proper technique for instruments & equipment also syringe & needle processing according to the skill checklist III & IV which will be distributed as handouts.

20 min.

**Role-Play:** Two participants will volunteer for a role to repeat the demonstrated skill. One will act for proper handling of instruments and the second participant will take the role of the supervisor who will observe and correct. The rest of the group observes the role play against the skill checklist III & IV.

30 min.

**Feedback & Discussion:** Feedback concerning the role-play is recorded on a flip chart, using an overhead projection of the skill checklist as a reference. The feedback is then discussed.

10 min.

**Repeat Role-Play:** The participants are then divided into groups of two. Each group completes the demonstrated skills. The skills are repeated in each group until everyone has had the opportunity to grasp the skill. The facilitator rotates between the small groups, coaching and providing feedback as necessary.

30 min.

### Learning objective 8:

- H. Brain Storming:** Facilitator uses this activity & record the participants answers on flip chart about the skin preparation before giving injection and before surgery. An O.H.T. is then used by the facilitator to show the skin preparation according to the protocol.

20 min.

### Learning objectives 9 & 10:

- I. Group activity:** Participants are divided into 3 groups A, B & C. Each group will be assigned to prepare one of the following:

- 1- Steps to follow for disposal of liquid contaminated waste.
- 2- Steps to follow for disposal of solid wastes & used chemical containers.
- 3- Steps to follow for disposal of sharp objects (razors, needles & scalpel blades).

20 min.

### Presentation & Discussion:

Each group present its work on flip chart and the rest of participants will feed back. Then facilitator show the concerning skill checklists and recorded feedback is critiqued against the presented O.H.T.

30 min.

**LEARNING  
ACTIVITIES**

**Time**

**Learning objective 11:**

**J. Presentation:** The facilitator will present O.H.T. showing important tips for handling waste items & containers as well as the use of burial site for waste disposal.

**10 min.**

**K. Summary:** At the end of the session, the facilitator delegates the responsibility of summarizing the session against the criteria in the Learning objectives. The facilitator then completes rap-up of the session using summary transparency sheet.

**15 min.**

**ASSESSMENT OF  
COMPETENCIES**

To start developing “basic competency”, **each** participant will be assessed against criteria in the learning objectives while learning activities are being conducted.

<b>Learning Objectives</b>	<b>Assessment Strategy/Methods</b>
1. Identify importance of proper hand washing being one of the most important infection prevention procedures.	1. Outcome of feedback on the used transparency.
2. Demonstrate hand washing according to the skill-checklists I & II.	2. Outcome of observation and role play.
3. Recognize the importance of using clean disinfected or sterile gloves.	3. Outcome of feedback on the used transparency
4. Demonstrate proper gloving methods of clean or sterile gloves.	4. Feedback/comments on presentation and observations of practicing the procedures. Observation of applying the acquired skills.
5. Demonstrate the proper wearing method of sterile gown.	5. Feedback/comments on presentation and observations of practicing the procedures. Observation of applying the acquired skills.
6. Demonstrate the proper client skin preparation prior to injection or surgical procedure according to protocol.	6. Outcome of group discussion and feed back from the transparency used.
7. Demonstrate proper handling and processing of instruments & equipment according to the skill checklist III.	7. Outcome of feedback on skill demonstration and O.H.T. used as skill checklist.
8. Demonstrate syringe & needle processing according to skill checklist IV.	8. Outcome of feedback on skill demonstration and O.H.T. used as skill checklist.
9. Recognize the tips for handling clinic waste	9. Outcome of Brain storming.

## ASSESSMENT OF COMPETENCIES

To start developing “basic competency”, **each** participant will be assessed against criteria in the learning objectives while learning activities are being conducted.

Learning Objectives	Assessment Strategy/Methods
10. Apply the proper procedure for different types of waste disposal according to skill-checklist V	10. Outcome of group assignments and feedback on presented skill checklists.
11. Identify the important tips for handling waste items & containers as well as the use of burial site for waste disposal.	11. Feedback and comments on O.H.T. presentation.

### PREPARATION (Session Specific)

**Facilitator:** The facilitator must prepare all of the materials listed under the following resources.

### RESOURCES

- **Module: Infection Prevention**
- **Essential Obstetric Care Resource Manual, Protocol: Infection Prevention**
- Overhead transparencies, flipchart graphic or handouts of the following:
  - Session Purpose and Story
  - Session Learning Objectives
  - Handout: Observation Sheet
  - Flip chart and marking pens
  - Water resource
  - Soap
  - Gloves
  - Gown
  - Autoclave
  - Hot-air oven

**OHT, Flipchart and Hand out of the following:**

Session purpose and story (OHT)

## Importance of Proper Hand Washing

### OVERVIEW:

- May be the single most important infection prevention procedure.

### INDICATED:

#### (a) Before:

- 1- Direct contact with a client
- 2- Putting on sterile or high level disinfected gloves for surgical procedures.

#### (b) After:

- 3- Any situation in which hands may be contaminated such as:
  - Handling used instruments
  - Touching mucus membrane or blood
- 4- Removing gloves as gloves may have invisible holes or tears

### Certain basic principles that must be observed

- The first hand wash of the day should last for five minutes or as long as it takes to ensure that hands are clean and disinfected.
- Nails should be short and nail polish should not be worn.
- Weak chemical agents can safely be used for hand washing provided there is no skin cut or abrasion.

## Skill checklist (I) for hand washing

TASK	CASES			
1- Push wristwatch and long uniform sleeves up above wrists. Remove jewelry, except a plain band, from fingers and arms.				
2- Keep finger nails short and filed.				
3- Stand in front of sink, keeping hands and uniform away from sink surface. Use sink with easily accessible faucet. If hands touch sink during hand washing, repeat the process.				
4- Turn on water. Press foot pedals to regulate flow and temperature "warm".				
5- Avoid splashing water on uniform.				
6- Wet hands and lowers arms thoroughly under running water. Keep hands and forearms lower than the elbow level during washing.				
7- Apply 1ml of regular or 3ml of antiseptic liquid soap to the hands, lathering thoroughly.				
8- Wash hands, using plenty of lather and friction, for 10-15 sec. for each hand. Interlace fingers and rub palms and back of hands with circular motion at least 5 times.				
9- Rinse hands and wrists thoroughly, keeping hands down and elbows up.				
10-Dry hand thoroughly, from fingers up to wrists and forearms.				
11-Discard paper towel in proper receptacle.				
12-Turn off water with foot or knee pedals.				
13-Hold the hands up and away from clothing.				

## Skill checklist (II) for Surgical Hand Wash

TASK	CASES			
1. Turn on the water and ensure that it is warm and the flow is moderate.				
2. Wet and lather hands and forearms with the selected agent. Keeping hands above level of elbows during entire procedure.				
3. With hands under running water, clean under nails with nailbrush. Discard after use (Fig. 1).				
4. Rinse hands and arms thoroughly under running water. Remember to keep hands above elbows.				
5. Scrub each hand with brush for 45 sec. Holding brush perpendicular to fingers. Scrub all sides of each digit, including web spaces between and palm and back of hand (Fig. 2).				
6. Then using the same brush, scrub each arm to 5cm above the elbow dividing the arm into thirds: scrub each lower forearm 15 seconds, each upper forearm 15 sec. and 5 cm above each elbow 15 seconds.				
7. Discard brush and rinse hands and arms thoroughly. Turn off water with foot pedal (Fig. 3).				
8. Keep hands higher than elbows and away from the body.				

## Importance of Using Gloves

Once thorough hand washing is completed, sterile gloves act as an additional barrier to bacterial transfer.

### Basic principles

- As a precaution gloves should be worn by all Staff prior to contact with blood and body fluids from any client.
- A separate pair of gloves must be used for each client to avoid cross contamination.
- Using new, single use (disposable gloves) is preferable.
- Gloves can be washed and high level disinfected by boiling before reuse.
- Gloves can be made of latex, natural materials or synthetic materials such as vinyl.
- Do not use gloves, which are cracked, peeling or which have detectable holes or tears.
- A recent report found that surgeons wearing single gloves had a blood hand contact rate of 14%, while surgeons wearing double gloves had a rate of 5%.

### Gloving Methods

- Arrange glove package on flat surface.
- Remove the outer package wrapper by carefully peeling apart sides.
- Grasp the inner package and lay it on a clean, flat surface above waist level
- Identify right and left glove.
- Glove dominant hand first.
- With thumb and first two fingers of non-dominant hand grasp edge of cuff of glove for dominant hand. Only touch the inside surface of gloves.
- Carefully push the fingers of the dominant hand into the glove leaving a cuff and being sure cuff does not roll up wrist.
- With gloved dominant hand, slip fingers underneath second glove's cuff.
- Carefully pull second glove over non-dominant hand.
- Once second glove is on, interlock fingers. Cuffs usually fall down after application. Be sure to touch only sterile sides.

## GOWN

- As a precaution, gowns should be worn by all Staff prior to handling the patient.
- Gowns should be sterilized in sterile container or drum.

### IMPLEMENTATION:

- Pick up the gown firmly. It should be packed inside out to avoid the risk of touching the outside with the ungloved hand.
- Find the top of the gown.
- Hold the gown at arm length away from your body and allow the gown to unfold by itself.
- Open shoulder seams, and inserts each hand through the armholes.
- Extend the hands towards the gown cuff.
- Have a circulating nurse. Tie the back tapes of the gown.

### Skill Checklist III for Instruments & Equipment processing

TASK	CASES				
<b>DECONTAMINATION</b>					
1. Put on utility gloves or leave on surgical gloves post-procedure.					
2. Place all instruments in chlorine solution for 10 minutes immediately after completing the procedure.					
3. Dispose of waste material in leak-proof container following guidelines.					
4. Decontaminate examination or table or other surfaces contaminated during the procedure by wiping them with 0.5% chlorine solution.					
5. Remove instruments from chlorine solution after 10 minutes and place them in water.					
6. Clean instruments immediately (GO TO CLEANING) or continue to soak in water until cleaning can be done.					
7. Remove gloves by inverting and soak in 0.5% chlorine solution for 10 minutes. (If wearing utility gloves, do not remove until instrument cleaning is finished).					
<b>CLEANING (Instruments)</b>					
1. Place instruments in a basin with clean water and mild, non-abrasive detergent.					
2. Completely disassemble instruments and/or opens jaws of jointed items.					
3. Wash all instruments surface with a brush or cloth until visibly clean (hold instruments under water while cleaning).					
4. Thoroughly clean serrated edges (e.g. jaws of hemostat) of instruments using small brush.					
5. Rinse all surfaces thoroughly with clean water.					
6. Towel dry instruments or allow them to air dry.					
7. Towel dry gloves or allows them to air dry.					
8. Remove utility gloves and allow them to air dry.					

### Skill Checklist (III) (CONT..) for instruments & Equipment processing

TASK	CASES				
<b>HIGH-LEVEL DISINFECTION</b>					
<b>Boiling or steaming</b>					
1. Completely submerge cleaned instruments and other items in water (boiling), or place in steamer pans.					
2. Place lid on pot and bring water to a gentle, rolling boil.					
3. Start timing when rolling boil begins.					
4. Keep at rolling boil for 20 minutes.					
5. Remove items with high-level disinfected forceps/pickups.					
6. Use immediately after air drying or place in covered, dry high-level disinfected container.					
<b>Chemical</b>					
7. Prepare fresh solution of chemical high-level disinfectant or check to be sure solution is not out of date.					
8. Immerse clean, dried items in appropriate high-level disinfectant.					
9. Cover container and soak for 20 minutes (2% glutaraldehyde or 8% formaldehyde).					
10. Remove items from chemical solution using high-level disinfected gloves or high-level disinfected forceps/pickups.					
11. Rinse items thoroughly with high-level disinfected (boiled) water to remove all traces of chemical disinfectant.					
12. Use items immediately or place in high-level disinfected, covered container.					

## Skill Checklist (III) (Cont.) for Instruments & Equipment Processing

TASK	CASES				
<b>STERILIZATION</b>					
<b>Packaging</b>					
1. Arrange instruments in trays or on cloth wrap using appropriately cleaned material.					
2. Wrap items using envelope or square wrap technique.					
3. Place packs in drums or trays for autoclaving.					
4. Place instruments in metal container with lid for dry heat.					
5. Autoclaving (Gravity Displacement)					
6. Arrange packs and loose items in autoclave chamber to allow free circulation and penetration of steams to all surfaces.					
7. Sterilize for 30 minutes for wrapped items; 20 minutes for unwrapped items (time with clock) at 121 °C (250°F) and 106Kpa (15lbs/).					
8. Wait 20-30 minutes (or until pressure gauge reads zero) to open lid to allow steam to escape. Allow packs to dry completely before removal.					
9. Place sterile drums or packs on a surface padded with paper or fabric to prevent condensation.					
10. Allow drums or packs to reach room temperature before storing.					
11. Record sterilization conditions (time, temperature and pressure) in logbook.					
<b>Dry Heat (Oven)</b>					
12. Put loose instruments in metal containers and pack on trays; then place items in oven and heat to desired temperature.					
13. Begin timing after desired temperature is reached and keep this temperature for the recommended time.					
14. After cooling, remove packs and loose items with sterile forceps/pickups and store in sterile covered containers.					
<b>Chemical</b>					
15. Prepare fresh solution of chemical sterilant or check to be sure solution is not out of date.					
16. Immerse cleaned and dried items in 2% glutaraldehyde or 8% formaldehyde solution, completely covering all items.					
17. Cover container and soak for appropriate time (8-10 hours for glutaraldehyde or at least 24 hours for formaldehyde).					
18. Remove items from the chemical solution using sterile gloves or a sterile forceps/pickups.					
19. Rinse items thoroughly with sterile water to remove all traces of chemical sterilant.					
20. Use the item immediately or place it in a sterile, covered container.					

### Skill Checklist IV for Syringe & Needle Processing

STEP/TASK	CASES				
<b>DECONTAMINATION</b>					
1. Leave on gloves after surgical procedure.					
2. Leave needle attached to syringe.					
3. Fill syringe with 0.5% chlorine solution by drawing up through needle.					
4. Cover syringe and needle with chlorine solution and soak for 10 minutes.					
<b>CLEANING</b>					
1. Put on utility gloves and expel chlorine solution from syringe and needle.					
2. Dispose of needle in puncture-proof container. If needle must be reused, check to be sure is not blocked, take needle and syringe apart and clean with soapy water.					
3. Reassemble and rinse syringe and needle by filling with clean water and pushing out at least three times.					
4. Detach needle from syringe.					
5. Check to be sure that needle and syringe are not damaged.					

## **Client skin preparation prior to surgical procedures**

While skin cannot be sterilized, skin preparation with antiseptic solutions minimizes the number of microorganisms on the client's skin that may contaminate the surgical wound and cause infection.

### **Steps for skin preparation prior to surgical procedure.**

- (1) Do not remove hair from the operative site unless absolutely necessary. If hair removal must be done, trim the hair close to the skin surface immediately before surgery. Shaving increases the risk of wound infection as the tiny nicks in the skin provide an ideal setting for microorganisms to grow and multiply.
- (2) Ask the client about allergic reactions before selecting an antiseptic solution.
- (3) Thoroughly clean the client's skin with soap and water before applying an antiseptic.
- (4) Apply antiseptic as:  
  
Savlon, Betadine  
Iodine (1-3%) followed by 60-90% alcohol.
- (5) Using dry, disinfected forceps and cotton soaked in antiseptic, thoroughly cleans the skin by gently scrubbing. Work from the operative site outward for several inches.
- (6) Do not allow the antiseptic to pool underneath the client's body (This step reduce skin irritation).
- (7) Allow the antiseptic to dry before beginning the procedure

### **Steps for skin preparation prior to injection**

- Cleanse skin with 60-90% ethyl or isopropyl alcohol
- With a fresh cotton swab and alcohol solution, wipe the injection site thoroughly using a circular, over lapping motion starting at the center.
- Allow to dry before giving the injection.

## Tips for handling Waste items

- Proper handling of waste items minimizes the spread of infection to clinic personnel and to the local community.
- Wastes from family planning and health care facilities may be non-contaminated (paper, trash, boxes, bottles and plastic containers) or contaminated (blood, pus, urine, stool and other body fluids).
- Persons handling wastes should wear heavy gloves.
- None contaminated wastes should be transported to disposal sites in covered containers.
- Contaminated clinic wastes should be incinerated or buried.

## **Tips for handling waste containers**

- Use non-corrosive washable containers with cover.
- Place waste containers at convenient places for users.
- Equipment, which is used to hold and transport wastes, must not be used for any other purpose.
- Wash all waste containers with a disinfectant cleaning solution (0.5 chlorine solution).
- When possible, use separate containers for burnable and non-burnable wastes.
- Use heavy work gloves when handling wastes.
- Wash hands after handling wastes.

## Tips for using a burial site for waste disposal

- Bury in a specified location
  - Select a site at least 50 meters away from any water source.
  - The site should have proper drainage, be located down hill from any wells, and free of standing water.
  - Make certain the burial site is not in an area, which floods.
- Dig a pit 1-meter wide and 2 meters deep.
- Cover with 15-30 cm of earth each day.
- Fence the site to keep animals and children away

**Skill Checklist (IV) for Disposal of liquid contaminated wastes (blood, feaces, and urine)**

TASK	CASES			
1. Wear thick gloves when handling and transporting wastes.				
2. Wastes should carefully be poured into a flushable toilet. Avoid splashing.				
3. Rinse the toilet thoroughly with water to remove residual wastes. Avoid splashing.				
4. Decontaminate specimen container with 8.5% chlorine solution, by soaking for 10 minutes before washing.				
5. Wash hands after handling liquid wastes and decontaminate and wash gloves.				

## Skill Checklist (IV) for Disposal of Solid Wastes & Used Chemical Containers

TASK	CASES			
<b>How to dispose of solid wastes</b>				
1. Wear thick gloves when handling and transporting wastes.				
2. Dispose of solid wastes in non-corrosive washable containers with tight fitting covers.				
3. Collect the waste containers on a regular basis and transport the burnable ones to the incinerator. Bury non-burnable waste.				
4. Wash hands after handling wastes, and decontaminate and wash gloves.				
<b>How to dispose of used chemical containers</b>				
1. Glass containers may be washed with detergent, rinsed and reused.				
2. Plastic containers, rinsed three times with water and dispose by burial. Do not reuse.				

**Skill Checklist (IV) (Cont.) for Disposal of sharp objects  
(needles, razors, and scalpel blades)**

TASK	CASES			
1. Wear thick, household gloves				
2. Dispose of all sharp items in a puncture-resistant container.				
3. Do not bend or break needles prior to disposal.				
4. Needles should not be recapped routinely, but if necessary, a one-handed recap method should be used:  4.1 Place cap on a hard, flat surface, then remove hand. 4.2 With one hand, held syringe and use needle to "scoop-up cap". 4.3 When cap covers needle completely, use other hand to secure cap on.				
5. When the 'sharp' container is $\frac{3}{4}$ full; cap, plug or tap it tightly closed.				
6. Dispose of container is $\frac{3}{4}$ full by burying.				
7. Wash hands after handling sharps containers and decontaminate and wash gloves.				

### Activity against Bacteria of Antiseptic Solutions

Group	Gram positive	Most gram negative	TB	Viruses	Fungi	Endo Spores	Relation speed of action	Surgical scrub	Skin prep.	Comments
<u>Alcohol</u>	Very good	Very good	Good	Good	Good	None	Fast	Yes	Yes	Not for use on mucus membrane
<u>Chlorhexidine</u>	Very good	Good	Poor	Fair	Fair	None	Slow	Yes	Yes	Has good persistent effect
<u>Hexachlorophane</u>	Good	Poor	None	Fair	Poor	None	Slow	Yes	No	Rebound growth of bacteria may occur
<u>Iodine preparation</u>	Very good	Very good	Good	Good	Good	Poor	Intermediate	No	Yes	Not for use on mucus membrane
<u>Iodophors (Betadine)</u>	Very good	Good	Good	Good	Good	None	Slow	Yes	Yes	Can be used on mucus membrane

**Authors:** Drs. Mohamed Abou Gabal, Abdel Moneim Abdel Aziz, Essam Abdallah, Amin H. Amin, and Ms. Amira El-Malatawai

### Session 3: Infection Prevention

<p><b>DEVELOP BASIC COMPETENCY (Practical)</b></p>
--

**Supervisor-led Session**

**Day:**

**Time:** Two weeks

**Session 1:** Infection Prevention (The importance of infection prevention)

**Session 2:** Infection Prevention (Proper standards of infection prevention)

**Task:** Apply safe environment using standard of infection prevention Technique

**Competency 1:** Explain the importance of infection prevention.

#### **Skills**

- 1.1 Define the term infection, infection prevention, sepsis, asepsis, antiseptics, decontamination, cleaning, disinfection and sterilization.
- 1.2 Identify the importance of infection prevention in breaking disease transmission cycle.
- 1.3 Recognize the protective barriers, which minimize the risks of infection.
- 1.4 Recognize the proper procedure for every type of sterilization and disinfection.
- 1.5 Recognize proper handling and cleaning of instruments, equipment and other items.
- 1.6 Ensure that physical environment meet the standard criteria for infection control.

**Competency 2:** Practice the proper standards of infection prevention.

**Skills**

- 2.1 Identify importance of proper hand washing.
- 2.2 Demonstrate proper hand washing.
- 2.3 Recognize the importance of using gloves and the proper gloving methods of clean or sterile gloves.
- 2.4 Demonstrate the proper gloving methods of clean gloves or sterile gloves.
- 2.5 Demonstrate the proper way of wearing sterile gown.
- 2.6 Demonstrate the proper client skin preparation prior to injection or surgical procedures.
- 2.7 Demonstrate proper handling and processing of instruments & equipment.
- 2.8 Demonstrate proper processing of used Syringe & needle.
- 2.9 Apply proper procedure for waste disposal.

**OVERVIEW**

**Purpose**

The purpose of this two weeks practical session is to allow each participant to practice what he has learned and practiced in the classroom about apply safe environment using standard of infection prevention technique under close supervision.

**Story**

According to training progression which is:

- Provide participant with background facts,
- Tell participant how to perform skill,
- Have participant simulate skill in safe setting.
- Now it is the step to have participant perform the practical skills in the health facilities under close supervision from the supervisor to fulfil the criteria for applying safe environment using standard of infection prevention technique according to the protocol.

## LEARNING OBJECTIVES

### Session 1:

By the end of this two weeks practical session, each participant should be able to do the following:

1. Define the term infection, infection prevention, sepsis, asepsis, antiseptic, decontamination, cleaning, disinfection and sterilization.
2. Identify the importance of infection prevention in breaking the disease transmission cycle.
3. Recognize the protective barriers which minimize the risk of infection
4. Recognize the proper procedure for every type of sterilization and disinfection according to protocol.
5. Recognize proper handling and cleaning of instruments, equipment, and other items.
6. Ensure that physical environment meet standard criteria for infection control according to the observation sheet.

### Session 2:

By the end of this two weeks practical session, each participant should be able to:

7. Identify importance of proper hand washing being one of the most important infection prevention procedures.
8. Demonstrate hand washing according to the skill checklists I & II.
9. Recognize the importance of using clean disinfected or sterile gloves.
10. Demonstrate the proper gloving methods of clean or sterile gloves.
11. Demonstrate the proper wearing method of sterile gown.
12. Demonstrate the proper client skin preparation prior to injection or surgical procedure according to protocol.
13. Demonstrate proper handling and processing of instruments & equipment according to the skill checklist III.
14. Demonstrate syringe & needle processing according to skill checklist IV.
15. Recognize the tips for handling clinic waste.

**LEARNING  
OBJECTIVES**

- 16. Apply the proper procedure for different type of waste disposal according to skill checklist V.
- 17. Identify the important tips for handling waste items & containers as well as the use of burial site for waste disposal.

**LEARNING  
ACTIVITIES**

**Time**

- A. Motivate Learning:** The supervisor reviews the purpose, story and learning objectives, learning activities and assessment strategies. The session purpose and story are presented using an overhead transparency. The session learning objectives are presented using flip chart. How the participant will be assessed at the end of session against the criteria started in the learning objectives is reviewed.

**15 min.**
- Learning Objectives 1-14:**

**B. Presentation:** The supervisor makes a presentation on the skills to practice during this session according to the objectives.

**15 min.**
- Learning Objectives 1- 14:**

**C. Practical Experience & Coaching:** Participant will be assigned to the outpatient clinic and emergency department concerning applying safe environment using standard of infection prevention technique following the criteria in the protocol.

**2 weeks**
- Learning Objectives 1- 14:**

**D. Weekly Clinical Conference:** The Supervisor will hold a weekly clinical conference with the participants for presentations (against the criteria in the learning objectives) and review of any issues which have come up during training Remedial learning experiences are planned as required.

**2hrs./Week  
conference**

**LEARNING  
ACTIVITIES**

**Time**

**Learning Objectives 1- 14:**

- E. **Seminar & Summary:** All obstetrical staff is invited to attend the end of two (2) week seminar. Each participant has prepared presentation on one topic of applying safe environment using standard of infection prevention technique. Each presentation is critiqued against the criteria in the learning objectives as well as protocol.

Individual and collective learning experiences during the two (2) weeks are discussed against the criteria in the learning objectives. Suggestions for strengthening the learning experience are noted and remedial action planned as required.

One participant then summarizes the two (2) week practical learning experience against the criteria in the learning objectives **2 hrs.**

**ASSESSMENT OF  
COMPETENCIES**

To start developing A basic competency, **each** participant will be assessed against the criteria in the learning objectives while learning activities are being conducted.

Learning Objectives	Assessment Strategy/Methods
1. Define the term infection, infection prevention, sepsis, asepsis, antiseptics, decontamination, cleaning, disinfecting and sterilization.	1. Outcome of feedback on the used transparency.
2. Identify the importance of infection prevention in breaking disease transmission cycle.	2. Outcome of brain storming sessions
3. Recognize the protective barriers, which minimize the risk of infection.	3. Outcome of brain storming sessions
4. Recognize the proper procedure for every type of sterilization and disaffection according to protocol.	4. Feedback/comments on presentation of the procedures according to the protocol.

## ASSESSMENT OF COMPETENCIES

To start developing A basic competency, **each** participant will be assessed against the criteria in the learning objectives while learning activities are being conducted.

Learning Objectives	Assessment Strategy/Methods
5. Recognize the proper handling and cleaning of instruments, equipment, and other items	5. Feedback/comments on presentation and of video
6. Ensure that the physical environment meet standard criteria for infection control according to the observation sheet.	6. Outcome of brain storming and feed back from the transparency used.
7. Identify importance of proper hand washing being one of the most important infection prevention procedures.	7. Outcome of feedback on the used transparency.
8. Demonstrate proper hand washing according to the skill-checklists I & II.	8. Outcome of observation and role- play.
9. Recognize the importance of using clean disinfected or sterile gloves.	9. Outcome of feedback on the used transparency.
10. Demonstrate the proper gloving methods of clean g'oves or sterile gloves.	10. Feedback/comments on presentation and observations of practicing the procedures. Observation of applying the acquired skills.
11. Demonstrate the proper way of wearing sterile gown.	11. Feedback/comments on presentation and observations of practicing the procedures. . Observation of applying the acquired skills.
12. Demonstrate proper handling and processing of instruments & equipment according to the skill checklist III.	12. Outcome of feedback on Skill demonstration and O.H.T. used as skill checklist.
13. Demonstrate proper processing of used syringe & needle.	13. Outcome of feedback on Skill demonstration and O.H.T. used as skill checklist.
14. Demonstrate the proper client skin preparation prior to injection or surgical procedures.	14. Outcome of group discussion and feed back from the transparency used.
15. Apply the proper procedure for waste disposal.	15. Outcome of group discussion and feed back on presented skill checklist.

## PREPARATION (session specific)

**Supervisor:** The supervisor must prepare all of the material listed under the following resources and organize the practical learning experience in the hospital assuring that the facilities and support system is ready for the participants. The roles of other health team members are reviewed to facilitate the learning process.

**Participant:** Each participant must have met all of the criteria in the learning objectives for Sessions 1 & 2 as a prerequisite for starting this session.

## RESOURCES

- **Module: Infection Prevention**
- **Essential Obstetric Care Resource Manual, Protocol: Infection Prevention**
- Overhead transparencies, flip chart wall graphics and handouts of the following:
  - Session Purpose and Story
  - Session Learning Objectives
  - Any of the resources used for Sessions 1 & 2

Authors: Drs. Mohamed Abou Gabal, Abdel Moneim Abdel Aziz, Essam Abdallah, Amin H. Amin, and Ms. Amira El-Malatawai

## Session 4: Infection Prevention

**Practice  
For  
Mastery  
(Practical)**

**Supervisor-led Session**

**Day:**  
**Time:** Eight weeks

**Session 1:** Infection Prevention (the importance of infection prevention)

**Session 2:** Infection Prevention (proper standards of infection prevention)

**Session 3:** Infection Prevention (proper standards of infection prevention)

**Task:** Apply safe environment using standard of infection prevention technique.

**Competency 1:** Explain the importance of infection prevention.

### Skills

- 1.1 Define the term infection, infection prevention, sepsis, asepsis, antiseptics, decontamination, cleaning, disinfection and sterilization.
- 1.2 Identify the importance of infection prevention in breaking disease transmission cycle.
- 1.3 Recognize the protective barriers which minimize the risks of infection
- 1.4 Recognize the proper procedure for every type of sterilization and disinfection.
- 1.5 Recognize proper handling and cleaning of instruments, equipment and other items.
- 1.6 Ensure that physical environment meet the standard criteria for infection control.

**Competency 2:** Practice the proper standards of infection prevention.

**Skills**

- 2.1 Identify importance of proper hand washing.
- 2.2 Demonstrate proper hand washing.
- 2.3 Recognize the importance of using gloves and the proper gloving methods.
- 2.4 Demonstrate the proper gloving methods of clean gloves or sterile gloves.
- 2.5 Demonstrate the proper way of wearing sterile gown.
- 2.6 Demonstrate the proper client skin preparation prior to injection or surgical procedures
- 2.7 Demonstrate proper handling and processing of instruments & equipment.
- 2.8 Demonstrate proper processing of used syringe & needle.
- 2.9 Apply proper procedure for waste disposal.

**OVERVIEW**

**Purpose**

The purpose of this eight weeks session is for participants to have the opportunity to practice for mastery. A session specific competencies and skills in a general and distinct hospital concerning safe environment using standard of infection prevention technique e.g. hand washing, using gloves and gown properly.

**Story**

It is important for the participants to have an adequate opportunity to “practice for mastery” the skills in this session. Since they A developed basic competency A during **Session 3**, they are now prepared to practice these skills with less close supervision at their work site. They will receive periodic supervision. This will provide them with feedback on their performance. A drop in morbidity and mortality statistics concerning infection prevention in obstetrics should be anticipated if participants have mastered the skills associated with this session.

## LEARNING OBJECTIVES

By the end of four (8) weeks of practical experience, **each** participant should be able to:

1. Define the term infection, infection prevention, asepsis, antiseptic, decontamination, cleaning, disinfection and sterilization.
2. Identify the importance of infection prevention in breaking the disease transmission cycle.
3. Identify the protective barriers, which minimize the risk of infection.
4. Recognize the proper procedure for every type of sterilization and disaffection according to protocol.
5. Recognize proper handling and cleaning of instruments, equipment, and other items.
6. Ensure that physical environment, meet standard criteria for infection control according to the observation sheet.
7. Identify importance of proper hand washing being one of the most important infection prevention procedure.
8. Demonstrate hand washing according to the skill checklist I & II.
9. Recognize the importance of using clean disinfected or sterile gloves.
10. Demonstrate the proper gloving methods of clean or sterile gloves.
11. Demonstrate the proper wearing method of sterile gown.
12. Demonstrate the proper client skin preparation prior to injection or surgical procedure according to protocol.
13. Demonstrate proper handling and processing of instruments & equipment according to the skill checklist III.
14. Demonstrate syringe & needle processing according to skill checklist IV.
15. Recognize the tips for handling clinic waste.
16. Apply the proper procedure for different types of waste disposal according to skill checklist V.

**LEARNING  
OBJECTIVES**

17. Identify the important tips for handling waste items & containers as well as the use of burial site for waste disposal.

**LEARNING  
ACTIVITIES**

**Time**

- A. Motivate Learning:** The supervisor reviews the purpose, story and learning objectives, learning activities and assessment strategies. The logistics for this eight (8) weeks of practical experience are reviewed. **30 min.**

**Learning Objectives 1-14:**

- B. Presentation:** The supervisor makes a presentation on the skills to practice during this session according to the objectives. Each participant is expected to apply the proper standard of infection prevention for 10 cases e.g. normal labor and minor operations e.g. D. & C. and D.&E.

**Learning Objectives 1-14:**

- C. Practical Experience:** Each participant should PRACTICE the above mentioned cases according to the criteria in the protocol. The eight (8) weeks will be divided into two (2) blocks, during each block, each participant should attempt to assess and practice at least (5) times for applying the proper standard of infection prevention for e.g. normal labor, and minor operation e.g. D. & C. and D.&E.

**Learning Objectives 1-14:**

- D. Clinical Conference:** The supervisor will explain to the participants that a visit every (2) weeks will be scheduled. During the clinical conference, each participant must present detailed case studies concerning clinical activities performed during the previous week. The participant should prepare a case presentation for each of the (14) learning objectives.

The supervisor will present his/her observation of participants "Practice for mastery" on-the-job against the criteria in the learning objectives and protocol concerning the applying of the proper standard of infection prevention. Any logistical problems and proposed solutions are also discussed during Individual and collective learning experiences during the two (2) weeks are discussed against the criteria in the learning objectives.

Suggestions for strengthening the learning experience are noted and remedial action planned as required.

**2 hrs. per  
conference**

**LEARNING  
ACTIVITIES**

**Time**

**Learning Objectives 1-14:**

- E. **Seminar & summary:** All obstetrical staff are invited to attend the end of the eight (8) weeks seminar. Each participant has prepared one (1) topic of infection prevention procedures. Each presentation is critiqued against the criteria in the learning objectives and protocol. Individual and collective learning experiences during the eight (8) weeks are discussed against the criteria in the learning objectives. Suggestions for strengthening the learning experience are noted and remedial action planned as required. One participant then summarizes the eight (8) weeks “practice for mastery” practical learning experience against the criteria in the learning objectives.

**ASSESSMENT OF  
COMPETENCIES**

To start developing A basic competency, **each** participant will be assessed against the criteria in the learning objectives while learning activities are being conducted.

<b>Learning Objectives</b>	<b>Assessment Strategy/Methods</b>
1. Define the term infection, infection prevention, asepsis, antiseptic, decontamination, cleaning, disinfectants and sterilization.	1 Outcome of feedback on the used transparency.
2. Identify the importance of infection prevention in breaking the disease transmission cycle.	2. Outcome of brain storming sessions
3. Identify the protective barriers, which minimize the risk of infection.	3. Outcome of brain storming sessions
4. Recognize the proper procedure for every type of sterilization and disaffection according to protocol.	4. Feedback/comments on presentation of the procedures according to the protocol.
5. Recognize proper handling and cleaning of instruments, equipment, and other items.	5. Feedback/comments on presentation and of video.
6. Ensure that the physical environment, meet standard criteria for infection control according to the observation sheet.	6. Outcome of brain storming and feed back from the transparency used.

**ASSESSMENT OF  
COMPETENCIES**

7. Identify importance of proper hand washing being one of the most important infection prevention procedure.	7. Outcome of feedback on the used transparency.
8. Demonstrate hand washing according to the skill checklists I & II.	8. Outcome of observation and role-play.
9. Recognize the importance of using clean disinfected or sterile gloves.	9. Outcome of feedback on the used transparency
10. Demonstrate the proper gloving methods of clean or sterile gloves.	10. Feedback/comments on presentation and observations of practicing the procedures. Observation of applying the acquired skills.
11. Demonstrate the proper wearing method of sterile gown.	11. Feedback/comments on presentation and observations of practicing the procedures. Observation of applying the acquired skills.
12. Demonstrate the proper client skin preparation prior to injection or surgical procedure according to protocol.	12. Outcome of group discussion and feed back from the transparency used.
13. Demonstrate proper handling and processing of instruments & equipment according to the skill checklist III.	13. Outcome of feed back on skill demonstration and O.H.T. used as skill checklist.
14. Demonstrate syringe & needle processing according to skill checklist IV.	14. Outcome of feed back on skill demonstration and O.H.T. used as skill checklist.
15. Recognize the tips for handling clinic waste.	15. Outcome of group Brain storming.
16. Apply the proper procedure for different types of waste disposal according to skill checklist V.	16. Outcome of group assignments and feed back on presented skill checklist.
17. Identify the important tips for handling waste items & containers as well as the use of burial site for waste disposal.	17. Feed back and comments on O.H.T. presentation.

**PREPARATION (session specific)**

**Supervisor:** The supervisor must prepare all of the material listed under the following resources and organize the practical learning experience in the hospital assuring that the facilities and support system is ready for the participants. The roles of other health team members are reviewed to facilitate the learning process.

**Participant:** Each participant must have met all of the criteria in the learning objectives for Sessions 1 & 2 as a prerequisite for starting this session.

## **RESOURCES**

- **Module: Infection Prevention**
- **Essential Obstetric Care Resource Manual, Protocol: Infection Prevention**
- Overhead transparencies, flip chart wall graphics and handouts of the following:
  - Session Purpose and Story
  - Session Learning Objectives
  - Any of the resources used for Sessions 1 & 2

**MODULE**  
**SEPTIC SHOCK IN OBSTETRICS**

**March, 1998**

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**&**

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**IN COOPERATION WITH**  
**USAID**

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## MODULE OVERVIEW

### Purpose

The purpose of this module is to provide facilitators with a sound competency-based training (CBT) methodology, if implemented as designed, will result in physicians reaching the level of "mastery" concerning the competencies and skills required to prevent, diagnose and manage of septic shock in obstetrics.

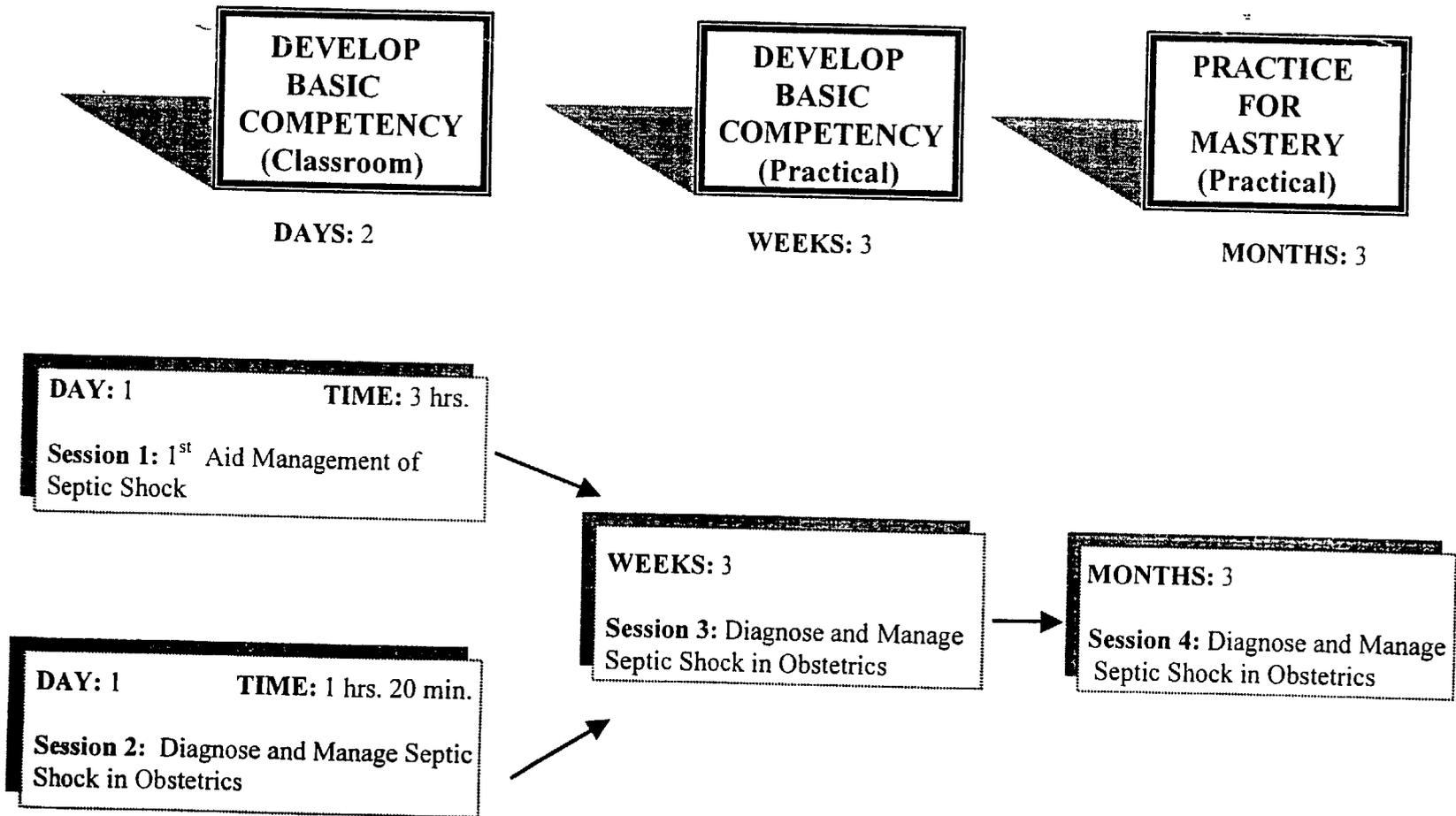
### Story

By August of 1997 in Egypt, 60 maternal deaths were associated with sepsis. These represent 12% of all direct obstetric deaths, and 8% of all maternal deaths. Ninety seven percent (97%) of deaths due to sepsis were avoidable.

Too many of these women die at private and government health facilities due to incompetent performance of physicians either due to lack of clinical skills, inadequate equipment and supplies or a combination of both. The intent of this training is to rectify this problem and to reduce mortality of women due to obstetric septic shock.

# MODULE: SEPTIC SHOCK IN OBSTETRICS

## AGENDA & SEQUENCE OF SESSIONS



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**Task:** Prevent, diagnose and manage septic shock in obstetrics

**Competency 1:** Provide 1<sup>st</sup> aid management of septic shock in obstetrics

**Skills**

- 1.1 Define septic shock in obstetrics.
- 1.2 Identify risk factors, which contribute to septic shock in obstetrics.
- 1.3 Provide 1st aid management for septic shock in obstetrics.
- 1.4 Differentiate between the signs of initial and late phases of septic shock by physical examination.

**Competency 2:** Manage septic shock in obstetrics

**Skills**

- 2.1 Follow the management protocol of septic shock
- 2.2 Identify and request appropriate surgical interventions for a case of septic shock if needed, as soon as an initial shock management step have been taken

**Authors:** Drs. Mohsen El Said, Nevine Hassanein, Mohammed Abou Gabal, Alaa Sultan, Abdel Moneim Abdel Aziz, Sedik Ahmed, Talaat Fathy, Mohamed Abdel Mottaleb and Mr. Tom Coles

**Session 1: 1<sup>st</sup> Aid Management of Septic Shock**

**DEVELOP  
BASIC  
COMPETENCY  
(Classroom)**

**Facilitator-led Session**

**Day:**

**Time:** 2 hrs. 30 min.

**Task:** Prevent, diagnose and manage septic shock in obstetrics

**Competency 1:** Provide 1<sup>st</sup> aid management of septic shock in obstetrics

**Skills**

- 1.1 Define septic shock in obstetrics.
- 1.2 Identify risk factors, which contribute to septic shock in obstetrics.
- 1.3 Provide 1<sup>st</sup> aid management for septic shock in obstetrics.
- 1.4 Differentiate between the signs of initial and late phases of septic shock by physical examination.

**OVERVIEW**

**Purpose**

The purpose of this session is to acquaint the participant with the symptoms and signs of septic shock to achieve a proper diagnosis, so as to be able to take a timely decision in management.

## Story

**Aswan Governorate:** The mother-in-law reported that her daughter-in-law had recurrent attacks of 1<sup>st</sup> trimester bleeding. The last attack was severe and associated with passage of soft tissue products. She was thinking that she had already aborted, but few days later she developed nausea, vomiting, diarrhea and fever. Later on she developed cold extremities, palpitation, difficult breathing and oliguria. For this reason she asked medical advice in Komombo district hospital. A junior obstetrician examined her and started immediately I.V. fluid and massive antibiotics. He then consulted his senior obstetrician who diagnosed the case as septic shock due to delay in seeking medical advise during the early stage of abortion which then developed the complications of sepsis. He gave her fresh blood transfusion because of the continuous non- coagulated uterine bleeding. Response to medical treatment was slow and she developed anuria for which renal dialysis was advised.

Adjust 60 maternal deaths were associated with sepsis. These represent 12% of all direct obstetric deaths, and 8% of all maternal deaths. Ninety seven percent (97%) of deaths due to sepsis were avoidable.

## LEARNING OBJECTIVES

By the end of this session, each participant should be able to:

1. Define septic shock in obstetrics according to the protocol.
2. Identify predisposing risk factors for septic shock in obstetrics according to the protocol.
3. Provide 1<sup>st</sup> aid management for septic shock in obstetrics according to the skill checklist.
4. Differentiate between the symptoms and signs of initial and late phases of septic shock by physical examination according to the diagnostic table and protocol.

**LEARNING  
ACTIVITIES**

**Time**

- A. **Motivate learning:** The facilitator reviews the session purpose, story, learning objectives, learning activities and assessment strategies. The session purpose and story are presented using an overhead transparency. The session learning objectives are presented using a flip chart. The different learning activities to be used during this session are reviewed with the group. How the participants will be assessed at the end of the session against the criteria stated in the learning objectives is reviewed. **10 min.**
- B. **Learning Objective 1**  
**Brain Storming:** The facilitator asks about the definition of septic shock. Record the answers from participants on a flip chart. Then present the definition using an overhead transparency. **15 min.**
- C. **Learning Objective 2**  
**Presentation:** The facilitator discusses the magnitude of sepsis in general as a major direct obstetric cause of maternal deaths referring to the OHT. In maternal mortality. Also, explains that unhygienic deliveries in hospitals at homes are the major contributing factor to this problem. **10 min.**
- Discussion:** The facilitator divides the participants into small groups, 3-4 each, and ask them to list the predisposing risk factors leading to septic shock in obstetrics. Each group will present the outcome of their discussion and after completion of all groups discussion, the facilitator summarizes the end result of group discussion using a flip chart and OHT. **30 min.**
- D. **Learning Objective 3**  
**presentation:** The facilitator will present the steps of the 1<sup>st</sup> aid management of septic shock in obstetrics according to the skill checklist which will be distributed as H.O. **30 min.**
- E. **Learning Objective 4**  
**Presentation:** The facilitator discuss with the participants the S & S of initial and late phases of septic shock. Then shows them an OHT. With the diagnostic table of initial and late phases of septic shock. **25 min.**

**LEARNING  
ACTIVITIES**

**Time**

**Case Study:** The facilitator divides the participants into 2 groups and distributes one different case study to each group. Participants are instructed to review the case study and identify the symptoms and signs of initial and the late phases of septic shock.

**25 min.**

**Discussion:** The case studies are presented on a flip chart and critiqued by the facilitator and participants against the OHT. Previously presented.

**20 min.**

**F. Summary:** At the end of this session, the facilitator asks one of the participants to summarize the session against the criteria in the learning objectives. The facilitator then completes the session summary using the flip chart.

**10 min.**

**ASSESSMENT  
OF COMPETENCIES**

To start developing “basic competency”, each participant will be assessed against the criteria in the learning objectives while learning activities are being conducted.

<b>Learning Objectives</b>	<b>Assessment Strategy/Methods</b>
1. Define septic shock in obstetrics according to the protocol.	1. Questions, answers and group discussion.
2. Identify predisposing risk factors for septic shock in obstetrics according to the protocol.	2. Questions, answers and group discussion.
3. Provide 1 <sup>st</sup> aid management for septic shock in obstetrics according to the skill checklist.	3. Skill checklist.
4. Differentiate between the symptoms and signs of initial and late phases of septic shock by physical examination according to the diagnostic table and protocol.	4. Outcomes of case study

## **PREPARATION (Session Specific)**

**Facilitator:** The facilitator must prepare all of the materials listed under the following resources.

## **RESOURCES**

- **Module: Septic shock**
- **Essential Obstetric Care Resource Manual, Protocol: Septic Shock in Obstetric**
- **Overhead transparency, flip-chart and Handouts of the following:**
  - Direct causes of Maternal Mortality
  - Session Purpose and story
  - Session Learning Objectives
  - Definition of septic shock
  - Case study: Symptoms and signs of initial and late phases of septic shock in obstetrics.

## Definition

### Septic Shock

A morbid condition caused by infectious focus in which the patient's functional intra-vascular volume is less than the capacity of the circulatory system of the body.

This results in low blood pressure and diminished tissue perfusion.

Without treatment the resulting cellular acidosis and hypoxia cause a terminal organ tissue dysfunction and death.

**RESOURCES (OHT and Handout)**

**Predisposing risk factors for septic shock in obstetrics**

1. Septic abortion
2. Chorioamnionitis
3. Puerperal sepsis
4. Acute pyelonephritis
5. Emergency surgery
6. Anemia
7. Immuno suppression

RESOURCES (OHT and Handout)

1<sup>st</sup> Aid Management of Septic Shock in Obstetrics

Resuscitation

A - B - C

**A**

- . Antishock
- . Air way
- Antibiotics

**B**

- . Blood Sample
- Blood Culture
- Blood and Plasma Transfusion

**C**

- Correct Acidosis
- Corticosteroids
- . Catheter

**D**

Digitalis

**E**

Exclude Other Causes of Shock

**F**

- . Fluid and Electrolyte Solution Replacement

**G**

- . Good Observation ---- Vital signs

**H**

Haemostasis

**I**

Intensive Care

**K**

- . Keep Warmth

Antishock IV-line

Central  
Peripheral

\*Underlined = 1<sup>st</sup> Aid

## First Aid Management Skill-check list for Septic Shock

	<u>A</u>	<u>B</u>	<u>C</u>			
	Task		Cases			
<b>1</b>	<b>3.1 Airway</b> Oxygen via nasal canula at 3-5 liters/min					
	<b>3.2 Anti-shock measures (Intravenous fluids)</b> Crystalloids (Saline/Ringer/Hartmann's) 1000cc over 30 minutes Measure the CVP If > 12 cm. H2O Maintain fluids at 125 ml/hr Monitor CVP/Hour If < 12 cm H2O Give 200ml/10 min till reaching 12 cm H2O					
	<b>3.3 Antibiotics (IV)</b> First choice    AMPICILLIN + CLINDAMYCIN 1 gm/4 hrs            900 mg/8 hrs Second choice CLINDAMYCIN + Gentamycin 900 mg/8 hrs            80 mg/8 hrs Third choice CEPHALOSPORINS + METRONIDAZOLE 3 <sup>rd</sup> generation            Infusion					
<b>2</b>	<b>Blood sample for analysis</b>					
<b>3</b>	<b>Catheter</b> Foley's catheter					

## Laboratory Investigations

### Blood

- C.B.C
- Differential count
- Blood glucose level
- Platelets count
- Fibrinogen
- FDP
- B.T.
- C.T.
- P.T.
- P.T.T
- Blood Sodium / Potassium
- Transaminases
- Bilirubins
- SGOT (ALT)
- SGPT (AST)
- Blood culture
- Blood urea
- S. creatinine

### Urine

- CUA
- Urine culture

**RESOURCES (OHT and Handout)**

**Case Study**

**Case I**

Lady arrived in an ambulance with her husband and mother in law cold, pale, very weak and dyspnic. She couldn't talk but her husband gave a history of delivery a dead baby 6 days ago after the leakage of the baby's water day after day and she was feverish the day of the delivery, which was attended by a Daya. Her vital signs showed BP 70/50, temp. 35 C and cyanosed extremities..

What are the S & S that help you to diagnose the case and classify the phase of the condition?

**RESOURCES (OHT and Handout)**

**Case Study**

Case II

Lady arrived with her sister and mother in law, wrapped in blanket, dyspnic, weak and shivering. Her mother in law told you that this lady aborted since 2 weeks at home, and daya examined her after and assured that no need to go to a hospital. Her vital signs showed BP 90/60, pulse 120/min. temp. 39 °C.

What are the S. & S. that help you to diagnose the case and classify the phase of the condition?

**RESOURCES (OHT and Handout)**

**Diagnostic table to Differentiate Between Initial and Late Phases of Septic Shock**

<b>Phase S &amp; S</b>	<b>Initial Phase</b>	<b>Late Phase</b>
<b>Symptoms</b>	Chills, fever, nausea vomiting, diarrhea palpitation, difficult breathing.	
<b>Signs</b>	Low blood pressure Hyperthermia Tachycardia Tachypnea Warm extremities Oliguria	Severe hypotension Hypothermia Dyspnea Peripheral cyanosis Cold extremities Metabolic acidosis cardiac arrhythmia oliguria – Anuria Psychological attitude deterioration

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**Session 2: Diagnose and Manage Septic Shock in Obstetrics**

**DEVELOP  
BASIC  
COMPETENCY  
(Classroom)**

**Facilitator-led Session**

**Day:**

**Time: 1 hr. 20 min**

**Task:** Prevent, diagnose and manage septic shock in obstetrics

**Competency 2:** Manage septic shock in obstetrics

**Skills**

- 2.1 Follow the management protocol of septic shock
- 2.2 Identify and request appropriate surgical interventions for a case of septic shock if needed, as soon as an initial shock management step have been taken

**OVERVIEW**

**Purpose**

The purpose of this session is to investigate and manage a case of septic shock in obstetrics either in the initial or late phases of septic shock.

**Story**

The mother-in-law reported that her daughter-in-law was weak during her previous pregnancies. During the current pregnancy, she complained of 1<sup>st</sup> trimester bleeding for which she went to an obstetrician who did an ultrasound. He told her that the fetus was living and O.K. and he gave her treatment in the form of injections to stop this bleeding. Bleeding was stopped for 3-4 days after which she had recurrent attacks of vaginal bleeding associated with fever. Her husband took her to Komombo District Hospital, where she received treatment and returned back home. Then, they transferred her to Aswan General

## Story

Hospital by ambulance because of recurrent attacks of vaginal bleeding and the associated fever which was not responding to medical treatment. Ultrasonography revealed dead fetus, and the mother was feverish and transferred to ICU for the management of shock. The mother died six hours later. The obstetrician reported that the woman died due to cardiac arrest.

## LEARNING OBJECTIVES

By the end of this session, each participant should be able to:

1. Manage a case of septic shock according to the protocol.
2. Identify and request the appropriate surgical intervention for a case of septic shock if needed, according to the protocol.

## LEARNING ACTIVITIES

- |  | Time    |
|--|---------|
| A. <b>Motivate Learning:</b> The facilitator reviews the session purpose, story, learning objectives, learning activities, and assessment strategies. The session purpose and story are presented using an overhead transparency. The session learning objectives are presented using a flip chart. The different learning activities to be used during the session are reviewed with the group. How the participants will be assessed at the end of the session against the criteria stated in the learning objectives is reviewed. | 10 min. |
| <b><u>Learning Objective 1 &amp; 2</u></b>   |         |
| B. <b>Case Study:</b> The facilitator distributes a case study to each pair of participants. Each pair is instructed to review the case study and answer the questions about the investigations needed for such a case.  | 20 min. |
| <b>Discussion:</b> The case study is then presented on an OHT. Participants discuss the answers. Their feed back are recorded on a flip chart and critiqued by the facilitator and the participants.   | 20 min. |

**LEARNING  
ACTIVITIES**

**Time**

- C. **Summary:** At the end of this session, the facilitator asks one of the participants to summarize the session against the criteria in the learning objectives. The facilitator then completes the session summary using the flip chart.

**10 min.**

**ASSESSMENT OF  
COMPETENCE**

To start developing "basic competency", each participant will be assessed against the criteria in the learning objectives while learning activities are being conducted.

<b>Learning Objectives</b>	<b>Assessment Strategy/Methods</b>
1. Manage a case of septic shock according to the protocol.	1. Outcome of case study and protocol Scheme
2. Identify and request the appropriate surgical intervention for a case of septic shock if needed, according to the protocol	2. Outcome of case study and protocol Scheme

**PREPARATION (Session Specific)**

**Facilitator:** The facilitator must prepare all of the materials listed under the following resources.

**RESOURCES**

- **Module: Septic shock**
- **Essential Obstetric Care Resource Manual, Protocol: Septic Shock in Obstetric**
- **Overhead Transparency, Handout, and Flip chart of the following:**
  - Session Purpose and story
  - Session learning Objectives
  - Septic shocks in Obstetrics

## **RESOURCES (Handout)**

### **Case Study**

#### **Septic Shock in Obstetrics**

Shocked feverish female patient arrived to emergency department by ambulance with her husband and mother - in - law who said that the lady was pregnant and aborted 2 weeks ago, and since that time she was not O.K. Bleeding was off and on, then fever appeared since 2 days. That is her state today.

- 1) How do you investigate her?
- 2) How would you manage the patient?

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### Session 3: Diagnose & Manage Septic Shock in Obstetrics

<p><b>DEVELOP BASIC COMPETENCY (Practical)</b></p>
--

**Supervisor-led Session**

**Day:**

**Time:** Three weeks

**Task:** Prevent, diagnose and manage septic shock in obstetrics

**Competency 1:** Provide 1<sup>st</sup> aid management of septic shock in obstetrics

**Skills**

- 1.1 Define septic shock in obstetrics.
- 1.2 Identify risk factors, which contribute to septic shock in obstetrics.
- 1.3 Provide 1st aid management for septic shock in obstetrics.
- 1.4 Differentiate between the signs of initial and late phases of septic shock by physical examination.

**Competency 2:** Manage septic shock in obstetrics

**Skills**

- 2.1 Follow the management protocol of septic shock
- 2.2 Identify and request appropriate surgical interventions for a case of septic shock if needed, as soon as an initial shock management step have been taken

### OVERVIEW

**Purpose**

The purpose of this three (3) week practical session is to assure that each participant can deal with cases of septic shock in the emergency department in regard to 1<sup>st</sup> aid

## **Purpose**

management, history taking, complete physical examinations and management as he has learned in classroom concerning septic shock.

## **Story**

A young woman had been married for one year. It was her first pregnancy. At delivery, the family called the midwife working at MCH to attend the woman. The midwife gave her oxytocin and IV glucose to induce labor. When the midwife found her not responding, she referred the patient to the obstetrician, who did a cesarean section. The next day the woman developed fever, which persisted. The woman died from obstetric septic shock on the fourth day after delivery. The baby survived.

## **LEARNING OBJECTIVES**

### **Session 1: 1<sup>st</sup> Aid Management of Septic Shock in Obstetrics**

By the end of this three-(3) week practical session, each participant should be able to do the following for 2 or more cases:

1. Define septic shock in obstetrics according to the protocol.
2. Identify predisposing risk factors for septic shock in obstetrics according to the protocol.
3. Provide 1<sup>st</sup> aid management for septic shock in obstetrics according to the skill checklist.
4. Differentiate between the symptoms and signs of initial and late phases of septic shock by physical examination according to the diagnostic table and protocol.

### **Session 2: Management of Septic Shock in Obstetrics**

By the end of this three (3) week practical session, each participant should be able to do the following:

5. Manage a case of septic shock according to the protocol.
6. Identify and request the appropriate surgical intervention for a case of septic shock if needed, according to the protocol.

**LEARNING  
ACTIVITIES**

**Time**

**A. Motivate learning:** The supervisor reviews purpose story, learning objectives, learning activities and assessment strategies. The session purpose and story are presented using an OHT. The session learning objective, are presented using a flip chart. The different learning activities to be used during the session are reviewed with the group. How the participants will be assessed at the end of the session against the criteria stated in learning objectives is reviewed.

**15 min.**

**B. Learning Objectives 1-6:**

**Presentation and Discussion:** The supervisor makes a presentation on the skills to be practiced during this session according to the objectives. The participants will be assigned to manage cases of septic shock arriving at the emergency department, concerning providing 1st aid measures taking a history, physical examination and care given to a case of septic shock following the criteria in the checklist, and the protocol management scheme.

By the end of this three (3) week practical session the participants will be informed to practice these skills at their health facilities for a period of three (3) months. The supervisor will make periodic visits for assessment of their performance (Session 4).

**15 min.**

**C. Learning Objectives 1-6:**

**Practical Experience & Coaching:** Under close supervision, Participants practice the skills of this module.

**3 weeks**

**D. Learning Objectives 1-6:**

**Weekly clinical conference:** Supervisors hold weekly clinical conference with participants to review progress towards meeting learning objectives and any logistical or other issues which may have come up.

**2 hrs.  
per  
confere-  
nce**

**E. Learning Objectives 1-6:**

**Seminar and Summary:** All obstetrical staff is invited to attend the end of three (3) week seminar. Each participant will present a case of septic shock. Each presentation is critiqued against the relevant learning objectives associated with the presentation. The individual and collective learning experience during the three (3) weeks is discussed against the criteria in the learning objectives. Suggestions for strengthening the learning experience are noted and remedial action planned. One participant then summarizes the three (3) week

## LEARNING ACTIVITIES

TIME

practical learning experience against the session learning objectives.

2 hrs.

## ASSESSMENT OF COMPETENCIES

Learning Objectives	Assessment Strategy/Methods
1. Define septic shock in obstetrics according to the protocol	1. Questions, answers and group discussion
2. Identify predisposing risk factors for septic shock in obstetrics according to the protocol	2. Questions, answers and group discussion
3. Provide 1 <sup>st</sup> aid management for septic shock in obstetrics according to the skill checklist	3. Skill checklist
4. Differentiate between the symptoms and signs of initial and late phases of septic shock by physical examination according to the diagnostic table and protocol	4. Outcomes of case study
5. Manage a case of septic shock according to the protocol	5. Outcomes of case study and protocol scheme
6. Identify and request an appropriate surgical intervention for a case of septic shock if needed, according to the protocol	6. Outcomes of case study and protocol scheme

## RESOURCES

- **Module: septic shock in obstetrics**
- **Essential Obstetric Care Manual, protocol: septic shock in obstetrics**
- Overhead Transparency, Handout, and Flip chart of the following:
  - Session purpose & storing
  - Session learning objectives
  - Competent and oriented obstetrical team
  - Pregnant woman in septic shock
  - Clean and well stocked delivery room (according to the criteria in the obstetrics service standards)

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### **Session 4: Diagnose & Manage Septic Shock in Obstetrics**

<b>DEVELOP BASIC COMPETENCY (Practical)</b>
---

**Supervisor-led Session**

**Day:**

**Time:** Three months

**Task:** Prevent, diagnose and manage septic shock in obstetrics

**Competency 1:** Provide 1<sup>st</sup> aid management of septic shock in obstetrics

**Skills**

- 1.1 Define septic shock in obstetrics.
- 1.2 Identify risk factors, which contribute to septic shock in obstetrics.
- 1.3 Provide 1<sup>st</sup> aid management for septic shock in obstetrics.
- 1.4 Differentiate between the signs of initial and late phases of septic shock by physical examination.

**Competency 2:** Manage septic shock in obstetrics

**Skills**

- 2.1 Follow the management protocol of septic shock
- 2.2 Identify and request appropriate surgical interventions for a case of septic shock if needed, as soon as an initial shock management steps have been taken

## **OVERVIEW**

### **Purpose**

The purpose of this three (3) month practical session is for the participants to have the opportunity to master the skills introduced in Sessions 1, 2 & 3 concerning the diagnosis and management of women with obstetrical septic shock.

### **Story**

It is important for the participants to have an adequate opportunity to “practice for mastery” the skills in this session. Since they “develop basic competency” during session 3, they are now prepared to practice these skills with less close supervision on-the-job. They will receive periodic supervision. This will provide them with feedback on their performance. A drop in morbidity and mortality statistics concerning septic shock in obstetrics should be anticipated if participants have mastered the skills associated with this session.

## **LEARNING OBJECTIVES**

By the end of this three (3) months of “practical for mastery” in practical setting, each participant will be competent to do the following according to the criteria in the protocol concerning three (3) women in obstetrical septic shock.

1. Define septic shock in obstetrics according to the protocol.
2. Identify predisposing risk factors for septic shock in obstetrics according to the protocol.
3. Provide 1<sup>st</sup> aid management for septic shock in obstetrics according to the skill checklist.
4. Differentiate between the symptoms and signs of initial and late phases of septic shock by physical examination according to the diagnostic table and protocol.
5. Manage a case of septic shock according to the protocol.
6. Identify and request the appropriate surgical intervention for a case of septic shock if needed, according to the protocol.

**LEARNING  
ACTIVITIES**

**Time**

- A. **Motivate learning:** The supervisor reviews the purpose, story, learning objectives and activities and assessment strategies of this session. The logistics for these three (3) months of practical experience are reviewed. **30 min.**
- B. **Learning Objectives 1-6:**  
**Presentation :** The topic of obstetrical septic shock is discussed. Each participant is expected to diagnose and manage three (3) cases of obstetrical septic shock. **15 min.**
- C. **Learning Objectives 1-6:**  
**Practical Experience :** Each participant should manage the above mentioned cases according to the criteria in the protocol. The three months will be divided into four (4) week blocks. During each four (4) week block, each participant should attempt to assess and manage at least one (1) case of obstetrical septic shock. **4 weeks blocks  
3 months total**
- D. **Learning Objectives 1-6:**  
**Clinical conference:** The supervisor will explain to the participants that a visit every four (4) weeks will be scheduled. During the clinical conference, each participant must present detailed case studies concerning clinical activities performed during the previous four (4) weeks. The participant should prepare a case presentation for each of the six (6) learning objectives.
- The supervisors will present his/her observations of participants "practice for mastery" on-the-job against the criteria in the learning objectives and protocol concerning the diagnosis and management of obstetrical septic shock.
- Any logistical problems and proposed solutions are also discussed during the conference.
- Individual and collective learning experiences during the three (3) weeks are discussed against the criteria in the learning objectives. Suggestions for strengthening the learning experience are noted and remedial action planned as required. **2 hrs. per conference**

**LEARNING  
ACTIVITIES**

**TIME**

**E. Learning Objectives 1-6:**

**Seminar and Summary:** All obstetrical staff is invited to attend the end of three (3) month seminar. Each participant has prepared one (1) or more cases on the diagnosis and management of obstetrical septic shock. Each presentation is critiqued against the criteria in the learning objectives, protocol, and appropriate checklist.

Individual and collective learning experiences during the three (3) months are discussed against the criteria in the learning objectives. Suggestions for strengthening and learning experience are noted and remedial action planned as required.

One participant then summarizes the three (3) month “practical for mastery” practical learning experience against the criteria in the learning objectives.

**2 hrs.**

**ASSESSMENT OF  
COMPETENCIES**

According to the criteria in the protocol and the associated skill checklist

Learning Objectives	Assessment Strategy/Methods
1. Define septic shock in obstetrics according to the protocol	1. Questions, answers and group discussion
2. Identify predisposing risk factors for septic shock in obstetrics according to the protocol	2. Questions, answers and group discussion
3. Provide 1 <sup>st</sup> aid management for septic shock in obstetrics according to the skill checklist	3. Skill checklist
4. Differentiate between the symptoms and signs of initial and late phases of septic shock by physical examination according to the diagnostic table and protocol	4. Outcomes of case study
5. Manage a case of septic shock according to the protocol	5. Outcomes of case study and protocol scheme
6. Identify and request an appropriate surgical intervention for a case of septic shock if needed, according to the protocol	6. Outcomes of case study and protocol scheme

**NB:** Each participant must have met all the criteria in the learning objectives and passed the assessment to be “certified” as “mastering” the skills associated with this session.

## PREPARATION (Session specific)

**Supervisor:** The supervisor must make sure that the facility meets all of the criteria in the obstetrics Services Standards. She has oriented the obstetrics team to their role during this practical learning experience for the participants. The supervisor is prepared to supervise each participant as required and certify in writing that each participant has mastered the skills associated with this three (3) month “practice for mastery” practical learning experience.

**Participant:** Each participant must have met all the criteria in the learning objectives for Session 3 as a prerequisite to starting this session. Each participant **must** be a “self-directed learner” during this “practice for mastery” practical learning experience, by seeking out the required number of cases she must attend as well as supervisory assistance and certification as necessary. Each participant is responsible for being prepared for and attending each Clinical Conference as well as the ending **Seminar & Summary**.

## RESOURCES

- **Module: Recognize and Manage Labor**
- **Essential obstetric Care Resource Manual, protocol: Recognize and Manage Labor**
- Overhead Transparency, Handout, and Flip chart of the following:
  - Session purpose & timing
  - Session learning objectives
- Any of the resources from Session 3, should be used by the supervisor and participants as necessary.

**MODULE**  
**PRE-ECLAMPSIA & ECLAMPSIA**

**March, 1998**

**Editors**

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Mr. Tom Coles

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**Ministry of Health & Population**  
**Healthy Mother/Healthy Child Project**

**&**

**MotherCare Egypt/Project**  
**Cairo, Egypt**

**IN COOPERATION WITH**  
**USAID**

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## MODULE OVERVIEW

Purpose  
Story

## AGENDA & SEQUENCE OF SESSIONS

## TASK ANALYSIS TABLE

## SESSION OUTLINES

### SESSIONS:

#### Develop Basic Competency (classroom)

- 1 Pre-Eclampsia & Eclampsia - Danger Signs & Action to Take
- 2 Diagnose and Management of Pre-Eclampsia/Eclampsia
- 3 Diagnose and Manage Pre-Eclampsia & Eclampsia  
Develop Basic Competency (practical)
- 4 Diagnose and Manage Pre-Eclampsia & Eclampsia  
Practice for Mastery (practical)

## MODULE OVERVIEW

### Purpose

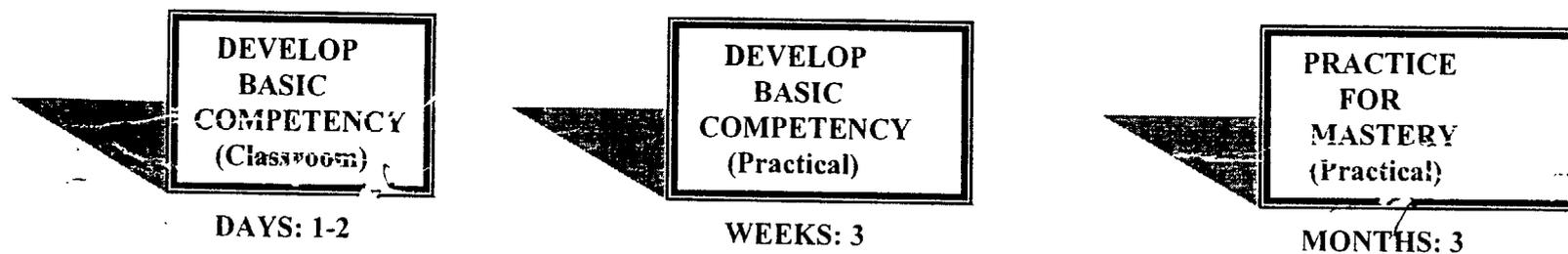
The purpose of this module is to provide facilitators with a sound competency-based training (CBT) methodology. If implemented as designed, it will result in physicians reaching the level of Amastery concerning the competencies and skills required to prevent, diagnose and manage pre-eclampsia and eclampsia.

### Story

The maternal mortality rate (MMR) in Egypt due to hypertensive diseases in pregnancy is 26/100,000. Ninety nine percent (99%) of these deaths were avoidable. Of the ten leading causes of maternal mortality in Egypt, hypertensive disease (pre-eclampsia and eclampsia) is second (15.9%).

Too many of these women die at private and government health facilities due to lack of early detection of hypertensive disease in pregnancy, incompetent performance of physicians in managing these problems, either due to lack of clinical skills, inadequate equipment and supplies or a combination of both. The intent of this training is to rectify this problem and to reduce mortality and morbidity of women due to pre-eclampsia and eclampsia.

AGENDA & SEQUENCE OF SESSIONS



DAY: 1      TIME: 3 hrs. 25 min.  
Session 1: Pre-eclampsia and Eclampsia  
Danger Symptoms & Signs and Action to Take

DAY: 1      TIME: 2 hrs. 40 min.  
Session 2: Diagnose and Manage Pre-Eclampsia and Eclampsia

WEEKS: 3  
Session 3: Diagnose and Manage Pre-Eclampsia and Eclampsia

MONTHS: 3  
Session 4: Diagnose and Manage Pre-Eclampsia and Eclampsia

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**Task:** Prevent, diagnose and manage pre-eclampsia and eclampsia

**Competency 1:** Communicate with the patient the danger signs and action to take with pre-eclampsia / eclampsia

**Skills**

- 1.1 Explain the importance of regular antenatal follow-up visits
- 1.2 Recognize the alarming (danger) signs of pre-eclampsia /eclampsia
- 1.3 Discuss with the patient the alarming (danger) signs of pre-eclampsia /eclampsia and the action to be taken with the appearance of any alarming signs

**Competency 2:** Diagnosis and management of pre-eclampsia & eclampsia

**Skills**

- 2.1 Take and record full history and recognize the symptoms of women developing pre-eclampsia / eclampsia.
- 2.2 Diagnose the degree of severity of the case at risk of pre-eclampsia and eclampsia.
- 2.3 Examine, order and interpret the laboratory investigations of pre-eclamptic and eclamptic case.
- 2.4 Manage appropriately the cases of pre-eclampsia and eclampsia.

**Authors:** Drs. Nevine Hassanein, Mohamed Abou Gabal, Mohsen El Said, Alaa Sultan, George Sanad, Sameh Hosny, Mahmoud Hegazy and Mr. Tom Coles

**Session 1: Pre-Eclampsia & Eclampsia Danger Symptoms, Signs  
& Action to be Taken**

**DEVELOP  
BASIC  
COMPETENCY  
(Classroom)**

**Facilitator-led Session**

**Day:**

**Time:** 2 hrs.

**Task:** Prevent, diagnose and manage pre-eclampsia / eclampsia

**Competency 1:** Communicate with the patient the danger symptoms and signs and action to take with pre-eclampsia / eclampsia

**Skills**

- 1.1 Explain the importance of regular antenatal follow-up visits
- 1.2 Recognize the alarming (danger) symptoms and signs of pre-eclampsia/ eclampsia
- 1.3 Discuss with the patient the alarming (danger) signs of pre-eclampsia /eclampsia and the action to be taken with the appearance of any alarming signs

**OVERVIEW**

**Purpose**

The purpose of this session is to communicate effectively by sharing health messages with Patient, the danger symptoms and signs of pre-eclampsia /eclampsia and the action to be taken so to minimize the potential of maternal and fetal mortality and morbidity.

## Story

**Aswan Governorate:** The mother-in-law reported that her daughter-in-law was weak during her last pregnancy. At the last month of the pregnancy, she complained of severe continuous headache severe epigastric pain, generalized edema of upper and lower limbs and blurring of vision . She went to an obstetrician who did ultrasonography and told her that the infant was living and OK but her blood pressure was high and albumin in urine was plus +++. She was given treatment by means of injections. Then they transferred her to Komombo General Hospital by Ambulance. Cesarean section was conducted, the infant was dead, and concealed accidental hemorrhage was present at the time of cesarean section. The mother died six hours later.

The maternal mortality rate (MMR) due to hypertensive diseases of pregnancy in Egypt is 26/100,000. Ninety nine percent (99%) of these deaths were avoidable. Why?

## LEARNING OBJECTIVES

By the end of this session, each participant should be able to:

1. Communicate effectively with patient the six (6) important reasons for attending the antenatal clinic as listed on an handout.
2. List the alarming (danger) symptoms and signs associated with pregnancy that must be discussed with the patient as listed on the Handout.
3. Discuss with the patient the “plan of action” to be taken at the appearance of any of the alarming (danger) signs of pre-eclampsia /eclampsia as designed in the protocol: Pre-eclampsia/ Eclampsia.

## LEARNING ACTIVITIES

Time

- A. Motivate learning:** The facilitator reviews the session purpose, story, learning objectives, learning activities and assessment strategies. The session purpose and story are presented using an overhead transparency. The session learning objectives are presented using a flip chart. The different learning activities to be used during the session, role play, case study, group discussion and brain storming are reviewed with the group. How the participants will be assessed at the end of the session against the criteria stated in the learning objectives is reviewed.

15 min

**LEARNING  
ACTIVITIES**

**Time**

**B. Learning Objective 1:**

**Brain storming:** The facilitator asks the participant about the 6 reasons for attending the antenatal clinic and write their answers on flip chart and then show them transparency of alarming symptoms and signs and get comparison between transparency and the flip chart.

**Learning Objectives 2 & 3**

**C. Discussion:** The facilitator discuss with the participants the alarming (danger) symptoms and signs of pre-eclampsia/eclampsia, which may happen during the course of pregnancy and are contributing factors to increasing maternal mortality. Then the facilitator introduces the alarming (danger) symptoms and signs during pregnancy that must be discussed with the client as listed on the OHT. And distributed as a Handout.

**10 min.**

**Case Study:** Facilitator notes that early detection and action concerning pre-eclampsia /eclampsia is a major factor in decreasing the maternal and fetal mortality and morbidity rates.

**5 min.**

The facilitator explains the objectives of the case study which are to:

A) Identify (danger) symptoms and signs during pregnancy that must be discussed with the client as listed in the Protocol:

Pre-eclampsia /eclampsia.

B) Discuss with the client the “plan of action” to be taken.

**5 min.**

The facilitator then breaks down the two groups (A & B) and distributes the case study. Each group reads and discusses the case study. The facilitator rotates between the groups.

**Case Study Discussion:** Against the criteria in the handout, Protocol: Pre-eclampsia/eclampsia as well as that listed on an OHT, the group case study findings and patient “plan of action” are discussed.

**30 min.**

**LEARNING  
ACTIVITIES**

**Time**

**Learning Objectives 2 & 3**

- C. Brain Storming:** The facilitator discusses the action to be taken concerning the appearance of any of the (danger) symptoms and signs during pregnancy with the group. For each alarming (danger) sign, the group "brain storms" what action to that the client should take against the criteria on the Flow Chart: Pre-eclampsia/eclampsia, which is referred to on an OHT, according to the protocol and distributed as a handout. **30 min.**
- D. Summary:** At the end of the session, the facilitator asks one of the participants to summarize the session against the criteria in the learning objectives. The facilitator then completes the session summary using the flip chart graphics and overhead transparencies used during the session. **10 min.**

## ASSESSMENT OF COMPETENCE

To start developing “basic competency”, each participant will be assessed against the criteria in the learning objectives while learning activities are being conducted.

Learning Objectives	Assessment Strategy/Methods
1. Effectively communicate with patient about the six (6) important reasons for attending the antenatal clinic, as listed on a handout.	1. Brain storming
2. List the alarming (danger) symptoms and signs during pregnancy that must be discussed with the client patient as listed on the OHT & Handouts.	2. Discussion and outcomes of case study
3. Discuss with the patient the “plan of action” to be taken at the appearance of any of the alarming (danger) symptoms and signs associated with pre-eclampsia/eclampsia as noted on a handout.	3. Brain storming and flow chart discussion

### PREPARATION (Session Specific)

**Facilitator:** The facilitator must prepare all of the materials listed under the following resources.

### RESOURCES

- **Module: Pre-eclampsia & Eclampsia**
- **Essential Obstetric Care Resource Manual, Protocol: Pre-eclampsia & Eclampsia**
- Overhead transparency, Flip Chart, and Handout of the following:
  - Session purpose and story.
  - 6 important reasons for attending Antenatal clinic.
  - Alarming symptoms and signs of Pre-Eclampsia/ Eclampsia
  - Flow- chart: “ Plan of action” Pre-Eclampsia/ Eclampsia
  - Case study. Alarming (Danger) symptoms and signs of Pre-eclampsia/Eclampsia during pregnancy.

## RESOURCES (HANDOUT)

### **Six (6) Important Reasons for Attending the Antenatal Clinic**

1. To build up a trusting relationship
2. To achieve the best possible health status for mother and fetus
3. To obtain base line recording data
4. To identify and manage high-risk pregnancy
5. To give health education subjects
6. To minimize maternal and fetal mortality and morbidity rates

## RESOURCES (HANDOUT & OHT)

### Case Study

#### **Alarming (Danger) symptoms Signs of Pre-Eclampsia/Eclampsia During Pregnancy**

The mother-in-law reported that her daughter-in-law was weak during her last pregnancy. At the last month of her pregnancy, she complained of severe continuous headache, severe epigastric pain, generalized edema of upper and lower limbs, and blurring of vision she went to an obstetrician who did ultrasonography and told her that the infant was living and ok, but her blood pressure was high and albumin in urine was plus +++. She was given treatment by means of injections.

- 1) Identify the danger signs and symptoms.
- 2) Discuss the plan of action to be taken.

## RESOURCES (HANDOUT & OHT)

### Alarming (Danger) Symptoms and Signs of Pre-Eclampsia/Eclampsia During Pregnancy

#### Alarming Symptoms

- 1  Severe continuous headache.
- 2  Blurring of vision.
- 3  Epigastric pains, nausea, vomiting.
- 4  Right hypochondrium pain.
- 5  Seizure

#### Alarming Signs

- 1  Maternal weight gain by > 2 killogram/month.
- 2  Generalized edema of face, upper and lower limbs.
- 3  High blood pressure > 140/90.
- 4  Albumin in urine > plus +++.
- 5  Fundus and retinal changes.
- 6  Hyperreflexia.
- 7  Oliguria (< 400 ml/24 hrs).
- 8  Thrombocytopenia platelet count (< 125,000 /uL).

RESOURCES (HANDOUT & OHT)

## Flow Chart

# Pre-eclampsia and Eclampsia

**DEVELOP  
BASIC  
COMPETENCY  
(Classroom)**

**SESSION OUTLINE  
MODULE: ECLAMPSIA**

**Session 1: Pre-Eclampsia & Eclampsia Danger Signs & Action to Take**

**Key:                    K = Knowledge                    S = Skill                    A = Attitudes**

Session Agenda	Learning Objectives	Assessment of Competencies	Learning Activities	Key Resources
<p>Day: 1 Time: 2 hrs.</p>	<p>1. Communicate effectively with patient the six (6) important reasons for attending the antenatal clinic as listed on a handout</p>	<p>1 AK: Role play, group discussion</p>	<p><b>A. Motivate Learning:</b></p> <ul style="list-style-type: none"> <li>- Purpose of session</li> <li>- Story: The maternal mortality rate (MMR) due to hypertensive diseases of pregnancy is 26/100,000.; 99% of these deaths are avoidable</li> <li>- Review learning objectives, activities and assessment</li> </ul> <p><b>B. Brain Storming:</b></p> <ul style="list-style-type: none"> <li>- Alarming signs of pre-eclampsia and eclampsia</li> </ul> <p><b>C. Role play:</b></p> <ul style="list-style-type: none"> <li>- Two participant performs; six important reasons for regular antenatal clinic visits</li> </ul>	<ul style="list-style-type: none"> <li>- Module</li> <li>- Flip chart or OHT</li> <li>- Purpose, story, learning objectives</li>   <li>- Handout or OHT:</li> <li>- Alarming signs</li> <li>- Role play script</li> <li>- Handout: Skill checklist</li> </ul>

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**Session 1: Pre-Eclampsia & Eclampsia Danger Signs & Action to Take**

**Key: K = Knowledge S = Skill A = Attitudes**

Session Agenda	Learning Objectives	Assessment of Competencies	Learning Activities	Key Resources
	<p>2. List the alarming (danger) symptoms and signs associated with pregnancy that must be discussed with the patient as listed on the Handout.</p> <p>3. Discuss with the patient the “plan of action” to be taken at the appearance of any of the alarming (danger) signs of pre-eclampsia/eclampsia as designed in the protocol: Pre-eclampsia/eclampsia.</p>	<p>2. K: Outcomes of case study.</p> <p>3.K:Brain storming and flow chart discussion</p>	<p><b>D: Discussion:</b></p> <ul style="list-style-type: none"> <li>- Alarming danger signs</li> <li>- Mother’s action to take</li> </ul> <p><b>Case Study:</b></p> <ul style="list-style-type: none"> <li>- Group A &amp; B</li> <li>- Identify alarming danger signs</li> <li>- Action for mother to take</li> </ul> <p><b>Case Study Discussion:</b></p> <ul style="list-style-type: none"> <li>- Group discussion of case study against criteria in protocol</li> </ul> <p><b>E. Brain Storming:</b></p> <ul style="list-style-type: none"> <li>- Group “brain storms” action to take for each alarming sign</li> </ul> <p><b>F. Summary:</b></p> <ul style="list-style-type: none"> <li>- Determine if each participant met the criteria in all of the learning objectives</li> </ul>	<ul style="list-style-type: none"> <li>- Protocol</li> <li>- OHT &amp; handout: Predisposing risk factors</li> <li>- Case study</li> <li>- OHT &amp; handout: Flow Chart, Alarming Danger) signs of Pre-eclampsia &amp; Eclampsia</li> <li>- Wall graphic or OHT: Learning objectives</li> </ul>

**Authors:** Drs.Nevine Hassanein, Drs.Abdel Moneim Abdel Aziz , Mohamed Abou-Gabal, Mohsen El Said, Sedik Ahmed, Alaa Sultan and Mr.Tom Coles

## **Session 2: Diagnosis and Management of Pre-Eclampsia & Eclampsia**

**DEVELOP  
BASIC  
COMPETENCY  
(Classroom)**

**Facilitator-led Session**

**Day:**

**Time : 1 hrs. 45 min.**

**Task :** Prevent, diagnose and manage pre-eclampsia /eclampsia

**Competency 2:** Diagnosis and management of pre-eclampsia

### **Skills**

- 2.1 Take and record full history and recognize the symptoms of women developing pre-eclampsia / eclampsia.
- 2.2 Diagnose the degree of severity of the case at risk of pre-eclampsia and eclampsia.
- 2.3 Examine, order and interpret the laboratory investigations of pre-eclamptic and eclamptic case.
- 2.4 Manage appropriately the cases of pre-eclampsia and eclampsia.

### **OVERVIEW**

#### **Purpose**

The purpose of this session is to focus the attention of participant on how to deal with a case of pre-eclampsia as regards diagnosis and management.

#### **Story**

A 25 years old primigravid woman during her last month of pregnancy complaining of headache and blurring of vision. She went to an obstetrician to seek medical advise, she received medication and went back home. She still complaining, and therefore, her husband

## Story

took her to general hospital because there was no response to medical treatment. At hospital she received medication and C.S. was done after failed induction.

## LEARNING OBJECTIVES

By the end of this session, each participant should be able to:

1. Record correctly the full history and recognize the symptoms of women developing pre-eclampsia/eclampsia following the standard obstetric Record form.
2. Diagnose the severity of cases of pre-eclampsia/eclampsia according to the diagnostic parameters in the protocol.
3. Examine, order and interpret laboratory investigations for cases of pre-eclampsia/eclampsia according to obstetric physical examination, skill checklist and investigation.
4. Manage cases of pre-eclampsia/eclampsia according to the degree of severity following protocol management plans.

## LEARNING ACTIVITIES

Time

- A. **Motivate Learning:** The facilitator reviews the session purpose, story, learning objectives, learning activities and assessment strategies. The session purpose and story are presented using an overhead transparency. The session learning objectives are presented using a flip chart. The different learning activities to be used during the session, are reviewed with the group. How the participants will be assessed at the end of the session against the criteria stated in the learning objectives is reviewed. **10 min.**
- B. **Learning Objective 1:**  
**Presentation:** In preparation for the role-play, the facilitator reviews the standard Obstetric record form with the participants. **5 min.**

**LEARNING  
ACTIVITIES**

**Time**

**Role Play:** Two participants will volunteer to participate in the role play, one will act in the role of a patient who is pregnant and needs to talk to the physician about her concerns. The second participant will take the role of the physician who will actively listen to the patient's concerns, answer questions and recognize the symptoms of pre-eclampsia/eclampsia from the history taken, and then correctly explain to the lady the actual state of her condition. The rest of the group observe the role-play, taking the standard obstetric Record form as guideline. Feedback concerning the role-play recorded on a flip chart, is then discussed.

**25 min.**

**Learning Objective 2:**

- C. **Group activity:** The facilitator divides the participants into four (4) groups, each group is assigned to list the diagnostic parameters of one of the following:

- 1) Mid Pre-Eclampsia
- 2) Moderate Pre-Eclampsia
- 3) Severe Pre-Eclampsia
- 4) Eclampsia

Each group presents the answer on a flip chart. Answers are discussed and followed by facilitator presentation of O.H.T. Concerning the diagnostic parameters of each type of Pre-Eclampsia.

**Learning Objective 3:**

- D. **Brain Storming:** The participants brain storm the needed laboratory investigations in a patient diagnosed as pre-eclamptic/or eclamptic and the interpretation of the laboratory results obtained to diagnose the degree of severity of the case. The group activity is critiqued against the criteria given in the protocol pre-eclampsia.

**30 min.**

**Learning Objective 4:**

- E. **Case Study:** Participants are divided into 4 groups and the facilitator distributes one case study to each group. Each group reads and discusses the case study. The facilitator rotates between the two groups. Then the case study findings are presented on Flip chart by each group and discussed against the criteria in the protocol as well as that listed on overhead transparency. Then the facilitator of management scheme of pre-eclampsia/eclampsia notices that early detection and treatment of pre-eclampsia is a major factor in decreasing the maternal and fetal mortality and morbidity.

**50 min.**

**LEARNING  
ACTIVITIES**

**Time**

- F. Summary:** At the end of the session, the facilitator asks one of the participants to summarize the session against the criteria in the learning objectives. The facilitator then completes the session summary using the flip chart graphics and overhead transparencies used during the session.

**5 min.**

**ASSESSMENT  
OF COMPETENCE**

To start developing “basic competency”, each participant will be assessed against the criteria in the learning objectives while learning activities are being conducted

<b>Learning Objectives</b>	<b>Assessment Strategy/ methods</b>
1. Record correctly the full history and recognize the symptoms of women developing pre-eclampsia/eclampsia following the standard obstetric record form.	1. Role play
2. Diagnose the severity of cases of pre-eclampsia and eclampsia according to the diagnostic parameters in the protocol.	2. Large group discussion and presentation
3. Examine, order and interpret laboratory investigations for cases of pre-eclampsia & eclampsia according to protocol.	3. Brain storming, questions, answers and skill checklist
4. Manage cases of pre-eclampsia/eclampsia according to the degree of severity following protocol management plans.	4. Outcome of case study

**PREPARATION (session specific)**

There is no session specific preparation required.

## RESOURCES

- **Module: Pre-eclampsia & Eclampsia**
- **Essential Obstetric Care Resource Manual, Protocol: Pre-eclampsia /eclampsia**
- Over Head Transparency, Handout, Flip chart of the following:
  - Session purpose and story
  - Diagnostic parameters for mild, moderate and severe cases of Pre-eclampsia
  - Laboratory investigations in cases of pre-eclampsia
  - Case Study
  - Session Learning Objectives

**Standard  
Obstetric Record Form**

## RESOURCES (HANDOUT & OHT)

### Role Play Script

Two participants will participate in a role-play. One will act in the role of a pregnant primigravida, aged 25 years. During her last month of pregnancy she is complaining of severe headache, and edema of lower legs. The second participant will act in the role of the obstetrician who actively listen to her complaints, recognize from her history the symptoms of developing pre-eclampsia/eclampsia and give her medical advice and medical treatment. The facilitator and rest of the group will observe the role-play with reference to the obstetric communication skill checklist. Feedback concerning the role-play is recorded on a flip chart. Participant's feedback is then discussed.

## **Diagnostic Parameters for Pre-Eclampsia**

### **Mild Pre-Eclampsia**

- Weigh gain of more than 4 pounds per month (or one pound per week).
- Blood pressure of 140/90 or a rise in systolic blood pressure of 30 mm Hg and a rise in diastolic blood pressure of 15 mm Hg compared to previous recording.
- Proteinuria not greater than 2 gms/24 hrs.

### **Moderate Pre-Eclampsia**

- Greater tendency to gain weight (more than 4 pounds/month).
- Diastolic blood pressure 90/100 mm Hg.
- Proteinuria of 2-5 gms/24 hrs.
- Edema

### **Severe Pre-Eclampsia**

If the patient has any of the following symptoms not attributable to another cause (except edema alone), she is classified as a severe pre-eclampsia:

- Diastolic blood pressure above 100 mm/Hg.
- Proteinuria greater than 5 grms/24 hrs.
- Edema
- Oliguria (< 500 ml/24 hrs.
- Central nervous system symptoms
- Thrombocytopenia.
- Epigastric pain/liver tenderness.

### **Eclampsia**

#### **Diagnostic parameters for eclampsia**

- A patient with pre-eclampsia who has a convulsion, without another explanation for said (i.e. history of seizure disorder) is eclamptic.

## SKILL CHECKLIST

### Title: Obstetric Examination & Investigations

**Supervisor:** Use this skill checklist as a guide when demonstrating the skill and assessing participants' performance.

**Participants:** Use the skill checklist as a guide when practicing this skill. Your performance will be assessed against the criteria in this checklist.

**Rating:** 1 = Needs Improvement  
2 = Satisfactory

STEPS	RATE	COMMENTS
<b><u>I - Examination:</u></b>		
1. General: 1.1 Pulse 1.2 Blood pressure 1.3 Temperature 1.4 R. R. 1.5 Consciousness 1.6 Chest 1.7 Heart		
2. Abdominal: 2.1 F. L. 2.2 Grips 2.3 Oedema 2.4 Scars 2.5 F.H.S.		
3. Lower limb: Oedema		
4. Weight:		
5. Pelvic: 5.1 Vulva : oedema 5.2 Pelvic capacity 5.3 Cx Dilation & effacement 5.4 Presenting part: position, Station and descent 5.5 Membranes 5.6 Discharge : blood, amniotic fluid, meconium		

# SKILL CHECKLIST

## Title: Obstetric Examination & Investigations

**Supervisor:** Use this skill checklist as a guide when demonstrating the skill and assessing participants' performance.

**Participants:** Use the skill checklist as a guide when practicing this skill. Your performance will be assessed against the criteria in this checklist.

**Rating:** 1 = Needs Improvement  
2 = Satisfactory

STEPS	RATE	COMMENTS
<b>II- Investigations:</b>		
1. CBC		
2. Urinalysis : Albumin (24 hours urine collection)		
3. BUN		
4. Serum creatinine		
5. Uric acid		
6. Coagulation profile		
7. Liver function		
8. E.C.G.		
9. Fundo scopic examination		
10. Chest X-ray		

**NB** Each step must receive a rating of 2. Note corrective action to be taken under "comments" for any step receiving a rating of 1 (needs improvements).

## Laboratory Investigations needed in cases of Pre-Eclampsia & Eclampsia

### Mild Pre-eclampsia:

- C.B.C. + differential
- ABO – RH
- C.U.A. (if there is Proteinuria, get 24 hrs urine for total protein)
- Blood urea
- S. creatinine
- Blood glucose

### Moderate, Severe pre-eclampsia & eclampsia

- All the above
- Prothrombia time
- Partial thromboplastin time
- Bleeding time
- Coagulation time
- Fibrinogen & FDP
- Transaminasis
- Bilirubinus
- Urinary Sediment

## RESOURCES (HANDOUT & OHT)

### Case Study I

Mona is primigravida, completed 32 weeks of her pregnancy. Her legs are oedematous and she put 17 kilos of weight during the course of her pregnancy, 4 of them gained during the last 3 weeks.

When examined, her B.P. was 140/90, pulse 85/min. The fundal level found to be around 30 weeks and fetal heart sounds were audible and regular. Her lower limbs showed pitting oedema.

- What is your preliminary diagnosis?
- What investigations do you ask for?
- What is the plan of action for this case?

## RESOURCES (HANDOUT & OHT)

### Case Study II

Wafaa is primigravid, with history of mild Pre-eclampsia in the first pregnancy. She was not checking her blood pressure after the first delivery and before the second pregnancy, because she was told that the condition was temporary caused by the pregnancy. Now she is 35 weeks gestation, but her thick lower abdomen and painful lower legs disturbed her. The baby is not moving as before and she feels fatigue, lassitude, also sometimes headache. When examined her B.P. was 150/100, lower abdomen oedema (++), lower legs oedema (+++).

- What is your preliminary diagnosis?
- What investigations do you ask for?
- What is the plan of action for this case?

## RESOURCES (HANDOUT & OHT)

### Case Study III

A 25 years old primigravida woman during her last month of pregnancy (36 weeks) complaining of headache, and blurring of vision. She went to an obstetrician to seek medical advice, she received medication and went back home. She is still complaining, and therefore, her husband took her to general hospital, because there was no response to medical treatment. At hospital they found her B.P. 160/100, oedema of lower legs and lower abdomen and on checking her urine they found 4+ Albumin. The fetal heart pulsation was audible and regular.

- What is your preliminary diagnosis?
- What investigations do you ask for?
- What is the plan of action for this case?

## RESOURCES (HANDOUT & OHT)

### Case Study IV

A 25 years old primigravida woman completed her 37<sup>th</sup> week of pregnancy complaining of severe headache, and blurring of vision, epigastric pain and history of a convulsion attack since 1 week. She went to an obstetrician to seek medical advice. She received medication and went back home. She is still complaining and because she is still drowsy, her husband took her to general hospital where she developed convulsion at the emergency room.

- What is your preliminary diagnosis?
- What investigations do you ask for?
- What is the plan of action for this case?

**MANAGEMENT PLAN**  
**MILD PRE-ECLAMPSIA**

**MANAGEMENT PLAN**  
**MODERATE PRE-ECLAMPSIA**

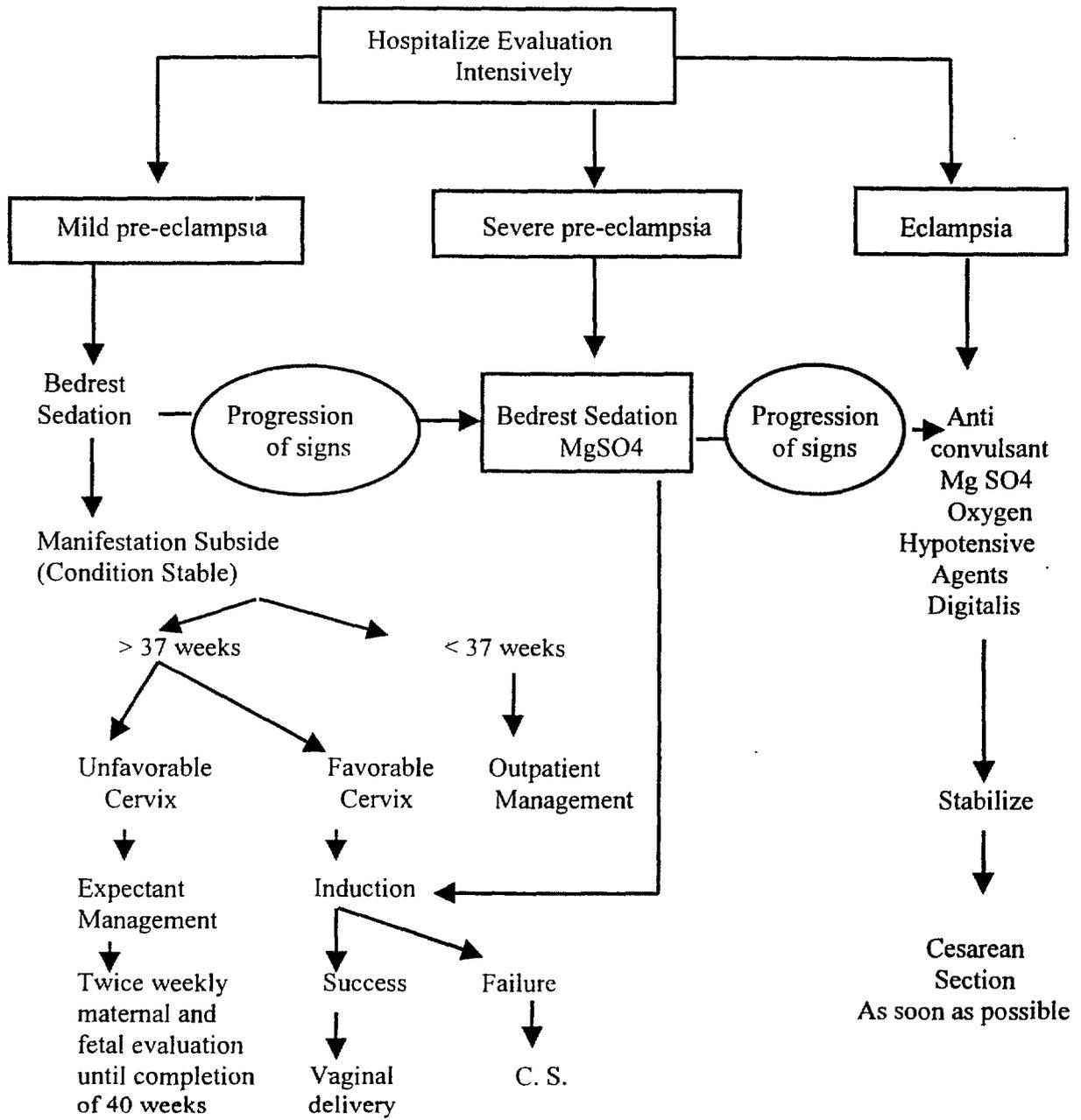
**MANAGEMENT PLAN**  
**SEVERE PRE-ECLAMPSIA**

# ECLAMPSIA

RESOURCE (HANDOUT & OHT)

Management Scheme for Pre-Eclampsia & Eclampsia

Management Scheme for Pre-Eclampsia & Eclampsia



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### **Session 3: Diagnosis and Management of Pre-Eclampsia/Eclampsia**

**Session 1:** Pre-Eclampsia and Eclampsia danger symptoms, signs and action to be taken

**Session 2:** Diagnosis and Management of Pre-Eclampsia and eclampsia

**DEVELOP  
BASIC  
COMPETENCY  
(Practical)**

**Facilitator-led Session**

**Day:**

**Time:** 3 weeks

**Task :** Prevent, diagnose and manage Pre-Eclampsia /Eclampsia

**Competency 1:** Communicate with the patient the danger symptoms and signs and action to take with pre-eclampsia / eclampsia

#### **Skills**

- 1.1 Explain the importance of regular antenatal follow-up visits
- 1.2 Recognize the alarming (danger) symptoms and signs of pre-eclampsia/ eclampsia
- 1.3 Discuss with the patient the alarming (danger) signs of pre-eclampsia /eclampsia and the action to be taken with the appearance of any alarming signs

**Competency 2:** Diagnosis and management of pre-eclampsia

#### **Skills**

- 2.1 Take and record full history and recognize the symptoms of women developing pre-eclampsia / eclampsia.
- 2.2 Diagnose the degree of severity of the case at risk of pre-eclampsia and eclampsia.
- 2.3 Examine, order and interpret the laboratory investigations of pre-eclamptic and eclamptic case.

## Skills

- 2.4 Manage appropriately the cases of pre-eclampsia and eclampsia.

## OVERVIEW

### Purpose

The purpose of this session is to focus the attention of participant on how to deal with a case of eclampsia as regards diagnosis and management.

### Story

A 25 years old primigravid woman during her last month of pregnancy complaining of severe headache, blurring of vision and epigastric pain. She went to an obstetrician to seek medical advise, she received medication and went back home. She still complaining, then become drowsy. Her husband took her to general hospital where she developed convulsions and become comatose. At hospital she received medication followed by termination of pregnancy by C.S. The patient then developed postpartum convulsions, remained comatose and transferred to ICU for few days and died later on.

## LEARNING OBJECTIVES

By the end of this three (3) week practical session, each participant should be able to:

1. Communicate effectively with patient the six (6) important reasons for attending the antenatal clinic as listed on an handout.
2. List the alarming (danger) symptoms and signs associated with pregnancy that must be discussed with the patient as listed on the Handout.
3. Discuss with the patient the “plan of action” to be taken at the appearance of any of the alarming (danger) signs of pre-eclampsia /eclampsia as designed in the protocol: Pre-eclampsia/ Eclampsia.

By the end of this three (3) week practical session, each participant should be able to:

4. Record correctly the full history and recognize the symptoms of women developing pre-eclampsia/eclampsia following the standard obstetric Record form.

**LEARNING  
OBJECTIVES**

5. Diagnose the severity of cases of pre-eclampsia/eclampsia according to the diagnostic parameters in the protocol.
6. Examine, order and interpret laboratory investigations for cases of pre-eclampsia/eclampsia according to obstetric physical examination, skill checklist and investigation.
7. Manage cases of pre-eclampsia/eclampsia according to the degree of severity following protocol management plans.

**LEARNING  
ACTIVITIES**

**Time**

A. **Motivate Learning:** The facilitator reviews the session purpose, story, learning objectives, learning activities and assessment strategies. The session purpose and story are presented using an overhead transparency. The session learning objectives are presented using a flip chart. The different learning activities to be used during the session, are reviewed with the group. How the participants will be assessed at the end of the session against the criteria stated in the learning objectives is reviewed. **5 min.**

**Learning Objectives 1-7:**

B. **Presentation & Discussions:** The supervisor makes a presentation on the skills to be practiced during this session according to the objectives. The participants will be assigned to manage different cases of pre-eclampsia/eclampsia arriving at emergency department, concerning providing 1<sup>st</sup> aid measures taking a history, physical examination and care given to a case of pre-eclampsia/eclampsia following the criteria in the checklist and the protocol management scheme. **15 min.**

By the end of this three (3) week practical session the participants will be informed to practice these skills at their health facilities for a period of three (3) months. The supervisor will make periodic visits for assessment of their performance (Session 4) **15 min.**

C. **Learning Objectives 1-7:**  
**Practical Experience & Coaching:** Under close supervision, participants practice the skills of this module. **3 weeks**

**LEARNING  
ACTIVITIES**

**TIME**

**D. Learning Objectives 1-7:**

**Weekly clinical conference:** Supervisors hold weekly clinical conference with participants to review progress towards meeting learning objectives and any logistical or other issues which may have come up.

**2 hrs.  
per  
confere  
-nce**

**E. Learning Objectives 1-7:**

**Seminar and Summary:** All obstetrical staff is invited to attend the end of three (3) week seminar. Each participant will present a case of pre-eclampsia/eclampsia. Each presentation is critiqued against the relevant learning objectives associated with the presentation. The individual and collective learning experience during the three (3) weeks is discussed against the criteria in the learning objectives. Suggestions for strengthening the learning experience are noted and remedial action planned. One participant then summarizes the three (3) week practical learning experience against the session learning objectives.

**2 hrs.**

**ASSESSMENT  
OF COMPETENCE**

To start developing Abasic competency, each participant will be assessed against the criteria in the learning objectives while learning activities are being conducted

Learning Objectives	Assessment Strategy/Methods
1. Effectively communicate with patient about the six (6) important reasons for attending the antenatal clinic, as listed on a handout.	1. Brain storming
2. List the alarming (danger) symptoms and signs during pregnancy that must be discussed with the client patient as listed on the OHT & Handouts.	2. Discussion and outcomes of case study
3. Discuss with the patient the "plan of action" to be taken at the appearance of any of the alarming (danger) symptoms and signs associated with pre-eclampsia/eclampsia as noted on a handout.	3. Brain storming and flow chart discussion

**ASSESSMENT  
OF COMPETENCE**

Learning Objectives	Assessment Strategy/ methods
4. Record correctly the full history and recognize the symptoms of women developing pre-eclampsia/eclampsia following the standard obstetric record form.	4. Role play
5. Diagnose the severity of cases of pre-eclampsia and eclampsia according to the diagnostic parameters in the protocol.	5. Large group discussion and presentation
6. Examine, order and interpret laboratory investigations for cases of pre-eclampsia & eclampsia according to protocol.	6. Brain storming, questions, answers and skill checklist
7. Manage cases of pre-eclampsia/eclampsia according to the degree of severity following protocol management plans.	7. Outcome of case study

**PREPARATION (session specific)**

There is no session specific preparation required.

**RESOURCES**

- Σ **Module: Pre-eclampsia & Eclampsia**
- Σ **Essential Obstetric Care Resource Manual, Protocol: Pre-eclampsia /Eclampsia**
- Σ Overhead transparency: Session Purpose and Story
- Σ Flip chart: Session Learning Objectives
- Σ Handout and OHT: Skill Checklist, Obstetric Communication and Recording, (History), Session 1
- Σ Handout: Role Play Script
- Σ Handout: Case Study

## RESOURCE (HANDOUT)

### Role Play Script

Three participants will participate in a role play. One will act in the role of a pregnant primigravid, aged 25 years. During her last month of pregnancy, she complained of severe headache, and blurring of vision, edema of her abdomen and her lower legs and epigastric pain. The second will act in the role of the participant will act in the role of the woman's husband who took her to the general hospital because there was no response to medical treatment as well as development of convulsions and semicoma. The third participant will act in the role of the obstetrician who actively listen to the patient and then give the medical advise that obligates transferring her to a hospital.

The facilitator and rest of the group will observe the role-play. Feedback concerning the role-play is recorded on a flip chart. Participants' feedback is then discussed.

## RESOURCE (HANDOUT & OHT)

### Case Study

A 25 years old a primigravid woman completed her 35<sup>th</sup> week pregnancy complaining of severe headache, and blurring of vision, epigastric pain and history of conclusion attack since 1 week. . She went to an obstetrician to seek medical advice. She received medication and went back home. She is still complaining and because she is still drowsy, her husband took her to general hospital where she developed convulsions.

- 1) What are the symptoms and signs that are alarming?
- 2) What is the plan of management in this case?

## **Danger symptoms and signs of Eclampsia**

### **Signs:**

Diastatic B.P. > 100 mm/hg  
Protein > 5 gm/24 hrs.  
Oliguria (<500 ml/24 hrs)  
Thrombocytopenia  
Generalized Abdominal tenderness  
Uterine Contractions  
Retinal changes after fundoscopic examination

### **Symptoms:**

Edema (generalized)  
Epigastric pain  
Liver tenderness  
Convulsion (clizures)  
Blurring of vision  
Headache  
Changes in conduct

## Laboratory Investigations in Eclampsia

- C.B.C & differential count
- ABO – Rh
- Platelet count
- Blood urea
- S. Creatinine
- C.T.
- B.T.
- Partial thromboplastin time
- Prothrombin time
- Blood glucose
- Fibrinogen
- Transaminases
- Bilirubins
- 24 hours urine for total protein
- Urinary sediment

## Management Plan of a case of Eclampsia

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### **Session 4: Diagnose and Manage Pre-Eclampsia and Eclampsia**

**Session 1:** Pre- Eclampsia and Eclampsia Danger Symptoms, Signs and Action to be Taken

**Session 2:** Diagnosis and Management of Pre-Eclampsia & Eclampsia

**Session 3:** Diagnosis and Management of Pre-Eclampsia & Eclampsia

**PRACTICE  
FOR  
MASTERY  
(Practical)**

**Participants-led Session**

**Day:**

**Time:** 6 months

**Task:** Prevent, diagnose and manage pre-eclampsia /eclampsia

**Competency 1:** Communicate with the patient the danger symptoms and signs and action to take with pre-eclampsia / eclampsia

#### **Skills**

- 1.1 Explain the importance of regular antenatal follow-up visits
- 1.2 Recognize the alarming (danger) symptoms and signs of pre-eclampsia /eclampsia
- 1.3 Discuss with the patient the alarming (danger) symptoms and signs of pre-eclampsia /eclampsia and the action to be taken with the appearance of any alarming signs

**Competency 2:** Diagnosis and management of pre-eclampsia/eclampsia

#### **Skills**

- 2.1 Take and record full history and recognize the symptoms of women at risk of developing pre-eclampsia/eclampsia

## **Skills**

- 2.2 Diagnose the degree of severity of the case at risk of pre-eclampsia and eclampsia
- 2.3 Examine, order and interpret the laboratory investigations of pre-eclamptic and eclamptic
- 2.4 Manage appropriately the cases of pre-eclampsia and eclampsia

## **OVERVIEW**

### **Purpose**

The purpose of this six (6) month session is for participants to have the opportunity to “practice for mastery” session specific competencies and skills in a general and distinct hospital concerning pre- eclampsia and eclampsia.

### **Story**

It is important for participant to have the opportunity to practice what they trained for in class room under supervision (supervised practice) and to give practice for mastery of their facilities with periodic supervision from their trainers to get feed back and take corrective action for any mal-practice when practicing skills for mastery. Each participant will be a self directed learner , requiring less supervision. A drop in morbidity and mortality statistics should be anticipated if participants have mastered the required skill.

## **LEARNING OBJECTIVES**

By end of this six month practical session, each participant should be able to do the following with 50 pregnant female:

1. Communicate effectively with patient the six (6) important reasons for attending the antenatal clinic as listed on an handout.
2. List the alarming (danger) symptoms and signs associated with pregnancy that must be discussed with the patient as listed on the Handout.
3. Discuss with the patient the “plan of action” to be taken at the appearance of any of the alarming (danger) signs of pre-eclampsia /eclampsia as designed in the protocol: Pre-eclampsia/ Eclampsia.

**LEARNING  
OBJECTIVES**

By end of this six month practical session, each participant should be able to do the following with 50 pregnant female:

4. Record correctly the full history and recognize the symptoms of women developing pre-eclampsia/eclampsia following the standard obstetric Record form.
5. Diagnose the severity of cases of pre-eclampsia/eclampsia according to the diagnostic parameters in the protocol.
6. Examine, order and interpret laboratory investigations for cases of pre-eclampsia/eclampsia according to obstetric physical examination, skill checklist and investigation.
7. Manage cases of pre-eclampsia/eclampsia according to the degree of severity following protocol management plans.

By the end of this six month practical session, each participant should be able to do the following with three (3) cases of eclampsia:

8. Record correctly the full history and recognize the symptoms of women at risk of developing eclampsia according to history taking sheet.
9. Assess the severity of cases of eclampsia according to the skill checklist.
10. Order and interpret laboratory investigations for cases of eclampsia according to protocol.
11. Treat cases of eclampsia according to protocol.

**LEARNING  
ACTIVITIES**

**Time**

- A. **Motivate Learning:** The supervisor reviews the purpose, story, learning objectives and activities and assessment strategies of this session. The logistics for this six (6) months of practical experience is reviewed.

**15 min.**

**LEARNING  
ACTIVITIES**

**Time**

**Learning Objectives 1-11:**

- B. Presentation:** Based on learning objectives the number of cases to be seen are reviewed. Each participant should assess and manage:
- 50 pregnant women
  - 15 cases with pre-eclampsia, and
  - Three (3) cases with eclampsia over six (6) months.

**15 min.**

**Learning Objectives 1-11:**

- C. Practical Experience:** Each participant should manage the above mentioned cases according to the criteria in the protocol and the appropriate skill checklist.

The six (6) months will be divided into eight (8) week blocks. During each eight (8) week block, each participant should attempt to assess and manage at least:

- 2 cases with pre-eclampsia, and
- One (1) cases with eclampsia.

**8 week  
blocks,  
6 months  
Total**

**Learning Objectives 1-11:**

- D. Clinical Conference:** The supervisor will explain to the participants that a visit every (8) eight weeks will be scheduled.

During the clinical conference, each participant must present a detailed case studies concerning clinical activities performed during the previous eight (8) weeks. The case presentation should address the criteria in the learning objectives.

The supervisors will present his/her observations of participants' "practice for mastery" on-the-job against the criteria in the learning objectives, protocol and appropriate skill checklist concerning pre-eclampsia and eclampsia.

Any logistical problems and proposed solutions are also discussed during the conference.

Individual and collective learning experiences during the eight (8) weeks are discussed against the criteria in the learning objectives. Suggestions for strengthening the learning experience are noted and remedial action planned as required.

**2 hrs. per  
conference**

**LEARNING  
ACTIVITIES**

**Time**

**Learning Objectives 1-11:**

- E. Seminar & Summary: All obstetrical staff are invited to attend the end the six (6) month seminar. Each participant has prepared one (1) or more cases on assessing and managing pre-eclampsia/ eclampsia. Each presentation is critiqued against the criteria in the learning objectives, protocol and appropriate skill checklist.

Individual and collective learning experiences during the six (6) months are discussed against the criteria in the learning objectives. Suggestions for strengthening the learning experience are noted and remedial action planned as required.

One participant then summarizes the six (6) month "practice for mastery" practical learning experience against the criteria in the learning objectives.

**2 hrs.**

**ASSESSMENT OF  
COMPETENCIES**

To start developing "basic competency", each participant will be assessed against the criteria in the learning objectives while learning activities are being conducted.

Learning Objectives	Assessment Strategy/Methods
1. Effectively communicate with patient about the six (6) important reasons for attending the antenatal clinic, as listed on a handout.	1. Brain storming
2. List the alarming (danger) symptoms and signs during pregnancy that must be discussed with the client patient as listed on the OHT & Handouts.	2. Discussion and outcomes of case study
3. Discuss with the patient the "plan of action" to be taken at the appearance of any of the alarming (danger) symptoms and signs associated with pre-eclampsia/eclampsia as noted on a handout.	3. Brain storming and flow chart discussion

**ASSESSMENT OF  
COMPETENCIES**

Learning Objectives	Assessment Strategy/ methods
4. Record correctly the full history and recognize the symptoms of women developing pre-eclampsia/eclampsia following the standard obstetric record form.	4. Role play
5. Diagnose the severity of cases of pre-eclampsia and eclampsia according to the diagnostic parameters in the protocol.	5. Large group discussion and presentation
6. Examine, order and interpret laboratory investigations for cases of pre-eclampsia & eclampsia according to protocol.	6. Brain storming, questions, answers and skill checklist
7. Manage cases of pre-eclampsia/eclampsia according to the degree of severity following protocol management plans.	7. Outcome of case study
8. Record correctly the full history and recognize the symptoms of women at risk of developing eclampsia according to history taking sheet.	8. Direct supervision; fulfillment of the criteria according to protocol
9. Assess the severity of cases of eclampsia according to the skill checklist.	9. Direct supervision; fulfillment of the criteria according to protocol and skill checklist
10. Order and interpret laboratory investigations for cases of eclampsia according to protocol.	10. Direct supervision; fulfillment of the criteria according to protocol
11. Treat cases of eclampsia according to protocol.	11. Direct supervision; fulfillment of the criteria according to protocol

**PREPARATION (session specific)**

**Facilitator:** The facilitator must prepare all of the material listed under the following resources

## RESOURCES

- **Module: Pre-Eclampsia & Eclampsia**
- **Essential Obstetric Care Resource Manual, Protocol: Pre-Eclampsia\ Eclampsia**
- Overhead transparency, Handout, & Flip chart of the following:
  - Session Purpose and Story
  - Session Learning Objectives
  - Obstetric Examination & Investigations
  - Management Scheme for Pre-Eclampsia & Eclampsia

**TRAINING MATERIALS**

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