Followup of Healthcare Providers Trained in Anesthesia for EMERGENCY OBSTETRIC CARE
Prepared by the JHPIEGO/MNH Program

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

The Maternal and Neonatal Health (MNH) Program is committed to saving mothers’ and newborns’ lives by increasing the timely use of key maternal and neonatal health and nutrition practices. The MNH Program is jointly implemented by JHPIEGO, the Johns Hopkins University Center for Communication Programs, the Centre for Development and Population Activities, and the Program for Appropriate Technology in Health.

www.mnh.jhpiego.org

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

www.jhpiego.org

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Measures included here are adapted from The Maternal and Neonatal Health (MNH) assessment package “Followup of Healthcare Providers Trained in Maternal and Neonatal Health.”

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May 2003
Meet all candidates and arrange schedules

Meet with supervisor and conduct **Supervisor Interview**

Meet candidates individually to complete the **Participant Interview** to review:
- progress towards commitments (*Action Plan Progress*)
- personal gaps and challenges (*Action Plan Progress*)
- clinical experience since training and confidence in skills (*Confidence and Experience*)
- log books

Administer **Knowledge Questionnaire, Case Studies** and **Individual Simulation**

Observe **Clinical Skills** on models

Spend at least one full day with each candidate observing clinical practice

Conduct a **Team Activity Clinical Simulation** of shock

Plan training event

Evaluate training event (**Training Skill Performance measures**)  

Provide group feedback and individual feedback

Discuss group plans

Meet with supervisor
SECTION I: SERVICE PROVIDER ASSESSMENT TOOLS

PART A KNOWLEDGE LEVEL
Anesthesia Knowledge Questionnaire
Knowledge Answer Sheet

PART B CLINICAL SKILL RETENTION
Example of how to fill in a Skills Checklist

Key Skills Checklists
- Lumbar Puncture and Spinal Anesthesia
- Newborn Resuscitation
- Cardiopulmonary Resuscitation
- Endotracheal Intubation
- Ketamine Anesthesia

Case Studies
- Eclampsia
- Intra-Operative Collapse
- Obstructed Labor
- Intra-Operative Breathing Difficulty

PART C PARTICIPANT INTERVIEW
Action Plan Progress
Confidence and Experience

PART D SUPERVISOR INTERVIEW
Background Information
Evaluating Anesthetist’s Action Plan Progress

SECTION II: TRAINING SKILLS ASSESSMENT TOOLS

PART E TRAINING SKILL PERFORMANCE
- Methodology Use Checklist
- Classroom Presentation Skills
- Clinical Demonstration Skills
- Clinical Coaching Skills

PART F ADDITIONAL COMMENTS SHEET

APPENDIX ANSWER KEYS
A: Anesthesia Knowledge Questionnaire
B: Eclampsia Case Study
C: Intra-Operative Collapse Case Study
D: Obstructed Labor
E: Intra-Operative Breathing Difficulty
SECTION I:

SERVICE PROVIDER ASSESSMENT TOOLS
Instructions: Circle the letter corresponding to the single best answer to each question.

1. Rapid initial assessment should be carried out:
   a. Only on women who present with abdominal pain and vaginal bleeding
   b. On all women of childbearing age who present with a problem
   c. Only on women who present with abdominal pain
   d. Only on women who present with vaginal bleeding

2. The immediate management of ectopic pregnancy involves:
   a. Observing the woman for signs of improvement
   b. Cross-matching blood and arranging for immediate laparotomy
   c. Making sure that blood is available for transfusion before surgery is performed
   d. All of the above

3. A pregnant woman who has severe anaemia typically presents with:
   a. Difficulty in breathing and weakness
   b. Difficulty in breathing and wheezing
   c. Wheezing and weakness
   d. None of the above

4. For the immediate management of hypovolaemic shock due to postpartum hemorrhage, the choice of fluid for commencing resuscitation is:
   a. 5 % dextrose-water
   b. 5% dextrose-saline
   c. Normal saline
   d. Whole Blood
5. The drug of choice for preventing and treating convulsions in severe pre-eclampsia and eclampsia is:
   a. Diazepam
   b. Calcium gluconate
   c. Thiopentone Sodium
   d. Magnesium Sulphate

6. The best advice for the management of headaches following spinal anaesthesia is to:
   a. Raise the head end of the bed.
   b. Ask the patient to drink plenty of water
   c. Ask the patient to walk
   d. Restrict eating

7. To reduce postoperative hallucination due to ketamine anesthesia administered to pregnant women, diazepam is given:
   a. Before giving ketamine
   b. Immediately after delivery of the fetus
   c. Before commencement of surgery
   d. After regaining consciousness in the postoperative period

8. The ideal anesthetic technique for manual vacuum aspiration for incomplete abortion at 14 weeks gestation is:
   a. Spinal anesthesia
   b. Pudendal block
   c. Paracervical block
   d. Intravenous pethidine and diazepam

9. When anesthesia providers talk with the patient undergoing spinal anesthesia, the patient experiences:
   a. Raised blood pressure
   b. Postoperative depression
   c. Increased anxiety
   d. Reduced anxiety

10. Once a diagnosis of ruptured uterus is made, anesthesia should be:
    a. Administered immediately
    b. Administered only when at least one unit of blood is available
    c. Administered simultaneously with resuscitation efforts
    d. Administered only after replacing the estimated blood lost
11. The local anesthetic agent used for spinal anesthesia during Caesarean section is:
   a. Bupivacain – 15 mg.
   b. Bupivacain – 10 mg.
   c. Lignocaine – 10 mg.
   d. Lignocaine – 15 mg.

12. After receiving a successful spinal anesthesia for Caesarean section which was preceded by a preload of 1000 ml of normal saline, a patient suffers severe hypotension (BP= 70/50 mmHg). The appropriate management should be:
   a. IV Ephedrine 5 mg
   b. IV Adrenaline 0.5 mg
   c. IV Atropine 0.5 mg
   d. IV Hydrocortisone 100 mg.

13. A woman with an unruptured ectopic pregnancy, a pulse of 60 beats/min and a B.P of 100/60 mmHg. needs:
   a. No intervention
   b. Rapid infusion of intravenous fluids
   c. Close monitoring of pulse & B.P
   d. Atropine to increase pulse rate

14. The best choice of anesthesia for a patient suffering from Pregnancy Induced Hypertension (with B.P 170/100 mmHg, Pulse 110/min) for Caesarean section is:
   a. General anesthesia with halothane
   b. Ketamine anesthesia
   c. Spinal anesthesia
   d. Local infiltration anesthesia

15. A woman presenting for Caesarian section with a hemoglobin of 8 gm/dl
   a. Can be given spinal anesthesia.
   b. Should be referred to another hospital
   c. Should be transfused with whole blood before anesthesia
   d. Should only receive Ketamine

16. After administration of spinal anesthesia, if no sensation is felt upto the umbilicus the level of block is at least upto
   a. T2
   b. T5
   c. T8
   d. T10
17. The commonest complication after spinal anesthesia is
   a. Vomiting
   b. Headache
   c. Hypotension
   d. Breathing difficulty

18. The incidence of hypotension during surgery can be reduced by all EXCEPT
   a. Preloading the patient
   b. Tilting the table
   c. Avoiding high level of block
   d. Keeping the patient flat on the table

19. In a shocked patient adequacy of resuscitation is indicated by
   a. Tachycardia
   b. Improved urine output
   c. High level of urea
   d. High level of Hemoglobin

20. If a patient develops anaphylactic reaction the drug of choice is
   a. Adrenaline
   b. Atropine
   c. Ephedrine
   d. Antihistamine

21. If patient reacts to blood administration
   a. Blood should be stopped
   b. Give antihistamine and give blood
   c. Give blood very slowly
   d. Treat the symptoms

22. The approximate dose of Pethidine for IV sedation for a patient weighing 50 kg is
   a. 10 microgram
   b. 50 mg
   c. 500 mg
   d. 1 Gm

23. A patient under spinal anesthesia develops bradycardia. The dose of Atropine you would use is
   a. 0.1 mg
   b. 0.5 mg
   c. 1mg
   d. 5 mg
24. A patient under spinal anesthesia develops cardiac arrest. The ratio of ventilation to chest compression for resuscitation is
   a. 1:2
   b. 2:15
   c. 15:2
   d. 5:15

25. In a patient with full term pregnancy, lateral tilt of the body will
   a. Prevent compression of the aorta
   b. Cause hypotension
   c. Reduce blood supply to the uterus
   d. Cause venous pooling in the lower limbs

26. A woman has lost 500 ml of blood from a hematoma after vaginal tear. How much crystalloid will you replace to compensate the blood lost
   a. 500 ml
   b. 1000ml
   c. 1500ml
   d. 2000ml

27. If the hemoglobin is 10 Gm which fluid will you give for a patient who has bled 500 ml blood?
   a. 5% dextrose
   b. Normal Saline
   c. Albumin
   d. Blood

28. Spinal anesthesia is contraindicated in the following condition
   a. Coagulopathy
   b. Cephalopelvic disproportion
   c. Full stomach
   d. Pre eclamptic toxemia

29. Airway maintenance is best achieved in an unconscious patient by
   a. Mouth to mouth resuscitation
   b. Bag and mask ventilation
   c. Use of an oral airway
   d. Endotracheal intubation

30. The internal diameter of endotracheal tube you would choose for an adult pregnant patient is
   a. 5 mm
   b. 7mm
   c. 9 mm
   d. 11 mm
EXAMPLE OF HOW TO FILL IN A SKILLS CHECKLIST
(To be used by the Evaluator)

Name of provider: John Smith
Name of facility: Practice Hospital, Baltimore, Maryland, USA
Name of evaluator: Mary Brown
Date(s) of assessment: 18 November 2002

Evaluator: Please mark with an “X” if the assessment was conducted on a Client or Anatomic model.

☒ Client ☐ Anatomic Model

Competent (C): knows the steps for the skill and can perform them correctly.

Needs further follow-up and support to achieve competency (N): DOES NOT know the steps for the skill perform them correctly

Directions: Please complete the following checklist. Write the date for the assessment before coaching in the date observed row. For each step/task place a “C” or “N” in the appropriate row. If a row is blank, the space will be count as an “N.” After you have completed the checklist add the “C” in the before coaching column. If necessary, coach the provider then repeat the previous instructions for the after coaching column. Complete the box at the end of the form.

Mark a “C” or “N” in the appropriate column

<table>
<thead>
<tr>
<th>EXAMPLE CHECKLIST</th>
<th>Before Coaching</th>
<th>After Coaching</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dates observed</strong></td>
<td>18 Nov 02</td>
<td>19 Nov 02</td>
</tr>
<tr>
<td><strong>GETTING READY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Prepare the necessary equipment.</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>2. Greet the woman respectfully and with kindness and introduce yourself.</td>
<td>N</td>
<td>C</td>
</tr>
<tr>
<td>3. Offer the woman a seat.</td>
<td>N</td>
<td>C</td>
</tr>
<tr>
<td><strong>TOTAL NUMBER OF STEPS/TASKS MARKED WITH A “C”</strong></td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>
After you have finished the observation, please write:

- After the first observation, the total number of times the provider was coached performing this skill: **3**

- Your assessment of the participant **before coaching** and **after coaching**:

<table>
<thead>
<tr>
<th>Before Coaching:</th>
<th>After Coaching:</th>
</tr>
</thead>
<tbody>
<tr>
<td>___ Competent</td>
<td>X Competent</td>
</tr>
<tr>
<td>X Needs further follow-up and support to achieve competency</td>
<td>___ Needs further follow-up and support to achieve competency</td>
</tr>
</tbody>
</table>

**Comments:** Before coaching, Dr. Smith did not greet the woman respectfully or offer her a seat. We worked together on these critical steps before re-assessing him on the 19th of November. During the assessment after coaching, he adequately completed these skills, and was assessed as competent in this skill.
CHECKLIST FOR LUMBAR PUNCTURE AND SPINAL ANESTHESIA
(To be used by the Evaluator)

Name of provider: _________________________________________________________________
Name of facility:  __________________________________________________________________
Name of evaluator:  ________________________________________________________________
Date(s) of assessment:  ____________________________________________________________________

Evaluator: Please mark with an “X” if the assessment was conducted on a Client or Anatomic model.

☐ Client    ☐ Anatomic Model

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

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

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

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

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

<table>
<thead>
<tr>
<th>CHECKLIST FOR LUMBAR PUNCTURE AND SPINAL ANESTHESIA</th>
<th>CASES</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Many of the following steps/tasks should be performed simultaneously.)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STEP/TASK</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Prepare the necessary equipment for lumbar puncture and spinal anesthesia.</td>
<td></td>
</tr>
<tr>
<td>2. Greet woman respectfully and with kindness and introduce yourself.</td>
<td></td>
</tr>
<tr>
<td>3. Provide continual emotional support and reassurance, as feasible.</td>
<td></td>
</tr>
<tr>
<td>4. Measure and record baseline pulse rate and blood pressure.</td>
<td></td>
</tr>
</tbody>
</table>

SKILL/ACTIVITY PERFORMED SATISFACTORYLY
# CHECKLIST FOR LUMBAR Puncture AND SPINAL Anesthesia

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

<table>
<thead>
<tr>
<th>STEP/TASK</th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>PREPARING THE PATIENT</strong></td>
<td></td>
</tr>
<tr>
<td>1. Pre-load the patient with about 1,000 mL of crystalloid solution.</td>
<td></td>
</tr>
<tr>
<td>2. Place the patient in the lateral decubitus position lying on the edge of the bed and facing away from the operator. <strong>OR</strong> If patient is very obese, sit the patient up with her back at the edge of the table, legs hanging but supported on a stool, arms encircling a pillow. Back should be straight and head flexed onto the chest.</td>
<td></td>
</tr>
<tr>
<td>3. Find the posterior iliac crest and palpate the L4 spinous process, and mark the disc space with appropriate skin marker, if necessary.</td>
<td></td>
</tr>
<tr>
<td>4. Clean the patient’s back with sterile swabs and antiseptic solution. Swab radially outward from the proposed injection site.</td>
<td></td>
</tr>
<tr>
<td>5. Discard the swabs and repeat at least three times, making sure that a sufficiently large area is cleaned.</td>
<td></td>
</tr>
<tr>
<td>6. Allow the solution to dry on the skin.</td>
<td></td>
</tr>
<tr>
<td><strong>SKILL/ACTIVITY PERFORMED SATISFACTORILY</strong></td>
<td></td>
</tr>
<tr>
<td><strong>PRE LUMBAR Puncture TASKS</strong></td>
<td></td>
</tr>
<tr>
<td>1. Put on personal protective barriers.</td>
<td></td>
</tr>
<tr>
<td>2. Wash hands thoroughly and put on high-level disinfected or sterile surgical gloves.</td>
<td></td>
</tr>
<tr>
<td>3. Read the label on the local anesthetic solution to be injected intrathecally, making sure that it is the desired drug within the expiry date.</td>
<td></td>
</tr>
<tr>
<td>4. Draw the local anesthetic solution to be injected intrathecally into the 5 cc syringe, from a single dose ampoule opened by your assistant, taking care not to touch the outside of the ampoule.</td>
<td></td>
</tr>
<tr>
<td>5. Draw up the local anesthetic solution to be used for skin infiltration into the 2 cc syringe, after reading the label on the drug.</td>
<td></td>
</tr>
<tr>
<td><strong>SKILL/ACTIVITY PERFORMED SATISFACTORILY</strong></td>
<td></td>
</tr>
<tr>
<td><strong>POSITIONING AND GETTING PATIENT READY</strong></td>
<td></td>
</tr>
<tr>
<td>1. Position the patient by drawing her knees as close as possible to the chest in the lateral decubitus position, with the back straight and neck flexed making sure that the head rests on a pillow.</td>
<td></td>
</tr>
<tr>
<td>2. Drape the patient.</td>
<td></td>
</tr>
<tr>
<td>3. Locate the previously marked lumbar puncture area or, if necessary, palpate the L4 spinous process one more time and identify the disc space.</td>
<td></td>
</tr>
<tr>
<td>4. Inject a small volume of local anesthetic under the skin with a disposable 25-gauge needle at the proposed puncture site, to anesthetize the skin.</td>
<td></td>
</tr>
<tr>
<td><strong>SKILL/ACTIVITY PERFORMED SATISFACTORILY</strong></td>
<td></td>
</tr>
</tbody>
</table>
# Checklist for Lumbar Puncture and Spinal Anesthesia

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

<table>
<thead>
<tr>
<th>STEP/TASK</th>
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</tr>
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<tbody>
<tr>
<td><strong>Performing the Lumbar Puncture</strong></td>
<td></td>
</tr>
<tr>
<td>1. Insert the introducer if using a 24- to 25-gauge needle between L3 and L4 disc space.</td>
<td></td>
</tr>
<tr>
<td>2. Insert the spinal needle (through the introducer, if applicable) with the stylet in place.</td>
<td></td>
</tr>
<tr>
<td>3. Ensure that the needle is inserted and stays in the midline and that the bevel is directed laterally, advancing with the needle pointing slightly toward the head.</td>
<td></td>
</tr>
<tr>
<td>4. Advance the needle until there is loss of resistance after piercing the ligamentum flavum.</td>
<td></td>
</tr>
<tr>
<td>5. With utmost care, advance the needle further until another loss of resistance is felt as the needle pierces the dura.</td>
<td></td>
</tr>
<tr>
<td>6. Holding the needle steady in place, remove the stylet and cerebrospinal fluid should flow from the needle.</td>
<td></td>
</tr>
<tr>
<td><strong>Skill/Activity Performed Satisfactorily</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Providing Spinal Anesthesia</strong></td>
<td></td>
</tr>
<tr>
<td>1. Immobilize the spinal needle by resting the back of the non-dominant hand firmly against the patient and by using the thumb and index finger to hold the hub of the needle.</td>
<td></td>
</tr>
<tr>
<td>2. Take the 5 cc syringe with the spinal anesthetic agent with the dominant hand and attach the syringe firmly to the hub of the needle.</td>
<td></td>
</tr>
<tr>
<td>3. Aspirate gently to check that the needle tip is still intrathecal and then slowly inject the local anesthetic.</td>
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</tr>
<tr>
<td>4. When the injection is complete, withdraw the spinal needle, introducer (if applicable) and syringe as one.</td>
<td></td>
</tr>
<tr>
<td>5. Apply sterile dressing over the puncture and close it with adhesive tape.</td>
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</tr>
<tr>
<td>6. Immediately keep the patient in a supine position.</td>
<td></td>
</tr>
<tr>
<td>7. Insert a wedge under the patient’s right hip to tilt the uterus to the left. Alternatively, tilt the table to the left.</td>
<td></td>
</tr>
<tr>
<td><strong>Skill/Activity Performed Satisfactorily</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Post Lumbar Puncture Tasks</strong></td>
<td></td>
</tr>
<tr>
<td>1. Before removing gloves dispose of waste materials in a leakproof container or plastic bag.</td>
<td></td>
</tr>
<tr>
<td>2. Place all instruments in 0.5% chlorine solution for decontamination.</td>
<td></td>
</tr>
<tr>
<td>3. If reusing needle or syringe, fill syringe (with needle attached) with 0.5% chlorine solution and submerge in solution for decontamination. If disposing of needle and syringe, place in puncture-proof container.</td>
<td></td>
</tr>
<tr>
<td>4. Remove gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.</td>
<td></td>
</tr>
<tr>
<td>5. Wash hands thoroughly.</td>
<td></td>
</tr>
<tr>
<td><strong>Skill/Activity Performed Satisfactorily</strong></td>
<td></td>
</tr>
</tbody>
</table>
## CHECKLIST FOR LUMBAR PUNCTURE AND SPINAL ANESTHESIA
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<tr>
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</thead>
<tbody>
<tr>
<td><strong>CARE OF THE PATIENT AFTER SPINAL ANESTHESIA</strong></td>
<td></td>
</tr>
<tr>
<td>1. Give oxygen by facemask or intranasal catheter at the rate of 4 L/minute until the birth of the newborn.</td>
<td></td>
</tr>
<tr>
<td>2. Check pulse rate and blood pressure.</td>
<td></td>
</tr>
<tr>
<td>3. Assess the level of block.</td>
<td></td>
</tr>
<tr>
<td>4. Wait for a maximum of 20 minutes if the desired level is not reached.</td>
<td></td>
</tr>
<tr>
<td>5. After the birth of the newborn, give syntocinon 5–10 mg IV to the mother.</td>
<td></td>
</tr>
</tbody>
</table>

### SKILL/ACTIVITY PERFORMED SATISFACTORILY

After you have finished the observation, please write

- After the first observation, the total number of times the provider was coached performing this skill: ______

- Your assessment of the provider **before coaching** and **after coaching**:

<table>
<thead>
<tr>
<th>Before Coaching:</th>
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</tr>
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<tbody>
<tr>
<td>_____ Competent</td>
<td>_____ Competent</td>
</tr>
<tr>
<td>_____ Needs further follow-up and support to achieve competency</td>
<td>_____ Needs further follow-up and support to achieve competency</td>
</tr>
</tbody>
</table>

Comments:

_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
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_____________________________________________________________________________________
CHECKLIST FOR NEWBORN RESUSCITATION
(To be used by the Evaluator)

Name of provider: _________________________________________________________________
Name of facility:  __________________________________________________________________
Name of evaluator:  ________________________________________________________________
Date(s) of assessment:  __________________________________________________________________

Evaluator: Please mark with an “X” if the assessment was conducted on a Client or Anatomic model.

☐ Client  ☐ Anatomic Model

Competent (C): knows the steps for the skill and can perform them correctly.

Needs further follow-up and support to achieve competency (N): DOES NOT know the steps for the skill perform them correctly

Mark a “C” or “N” in the appropriate column

<table>
<thead>
<tr>
<th>CHECKLIST FOR NEWBORN RESUSCITATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEP/TASK</td>
</tr>
<tr>
<td>Dates observed</td>
</tr>
</tbody>
</table>

**GETTING READY**

1. Checks to make sure all supplies are available.

1a. Checks to make sure that emergency equipment is working

2. Quickly wraps or covers the baby, except for the head, face and upper chest.

3. Tells the mother what is happening.
## CHECKLIST FOR NEWBORN RESUSCITATION

<table>
<thead>
<tr>
<th>STEP/TASK</th>
<th>Before Coaching</th>
<th>After Coaching</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RESUSCITATION USING BAG AND MASK</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Positions the head in a slightly extended position to open the airway.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Clears the airway by suctioning the mouth and nose.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Places the mask on the baby’s face so that it covers the chin, mouth and nose.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Ensure mask forms a seal between the mask and the baby’s face.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Checks the seal by ventilating two or three times and observing the rise of the chest.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Ventilates at a rate of 40 breaths per minute for 1 minute.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6a. Stops and quickly assesses if the baby is breathing spontaneously.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. If breathing is normal, and there is no indrawing of the chest and no grunting, puts in skin-to-skin contact with mother.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. If baby is not breathing, or breathing is less than 30 breaths per minute or severe chest indrawing is present, continues ventilating*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Gives oxygen if available and arranges immediate transfer for special care.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>POST-RESUSCITATION TASK</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Performs post-procedure IP steps.</td>
</tr>
</tbody>
</table>

| TOTAL NUMBER OF STEPS/TASKS MARKED WITH A “C” | | |
After you have finished the observation, please write

- After the first observation, the total number of times the provider was coached performing this skill: ______

- Your assessment of the provider **before coaching** and **after coaching**:

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Comments:

_____________________________________________________________________________________
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_____________________________________________________________________________________
CHECKLIST FOR CARDIOPULMONARY RESUSCITATION
(For use by Evaluator)

Name of provider: ________________________________________________________________

Name of facility: __________________________________________________________________

Name of evaluator: ________________________________________________________________

Date(s) of assessment: ____________________________________________________________________

Evaluator: Please mark with an “X” if the assessment was conducted on a Client or Anatomic model.

☐ Client    ☐ Anatomic Model

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

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

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

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

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

CHECKLIST FOR CARDIOPULMONARY RESUSCITATION
(Many of the following steps/tasks should be performed simultaneously.)

<table>
<thead>
<tr>
<th>STEP/TASK</th>
<th>CASES</th>
</tr>
</thead>
<tbody>
<tr>
<td>GETTING READY</td>
<td></td>
</tr>
<tr>
<td>1. SHOUT FOR HELP to urgently mobilize available personnel.</td>
<td></td>
</tr>
<tr>
<td>SKILL/ACTIVITY PERFORMED SATISFACTORILY</td>
<td></td>
</tr>
<tr>
<td>STARTING RESUSCITATION</td>
<td></td>
</tr>
<tr>
<td>1. Clear the airway and inflate the lungs with whatever means available.</td>
<td></td>
</tr>
<tr>
<td>2. Self-inflating bag ventilation (with or without oxygen):</td>
<td></td>
</tr>
<tr>
<td>• Insert oropharyngeal or nasopharyngeal airway tube.</td>
<td></td>
</tr>
<tr>
<td>• Ask assistant to squeeze the bag if using both hands to hold the mask.</td>
<td></td>
</tr>
<tr>
<td>• Give two breaths of 2 seconds each.</td>
<td></td>
</tr>
<tr>
<td>3. Check for major pulse—carotid or femoral. This should not take more than 10 seconds.</td>
<td></td>
</tr>
</tbody>
</table>
## CHECKLIST FOR CARDIOPULMONARY RESUSCITATION

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

<table>
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<tr>
<th>STEP/TASK</th>
<th>CASES</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. If major pulse is absent, start external cardiac compression.</td>
<td></td>
</tr>
</tbody>
</table>

### SKILL/ACTIVITY PERFORMED SATISFACTORILY

**EXTERNAL CARDIAC COMPRESSION**

1. Position yourself at either side of the patient on the operating table or on a stable, flat surface.

2. Give precordial thump.

3. Place heel of hand over lower half of sternum. Place the heel of the other hand on top of the first hand with fingers interlocking. Straighten your arms and lock your elbows.


### SKILL/ACTIVITY PERFORMED SATISFACTORILY

**REASSESSMENT**

1. Check the pulse during compression.

2. After four cycles of compression and ventilation, check the carotid pulse for 10 seconds. Resume cardiopulmonary resuscitation (CPR) if pulse is absent.

3. Continue CPR until spontaneous pulse returns.

4. Abandon CPR if pulse does not return after 30 minutes.

### SKILL/ACTIVITY PERFORMED SATISFACTORILY

**USE OF DRUGS**

1. Seek help to start peripheral IV line without interrupting the CPR.

2. Give adrenaline 1 mg IV if pulse is absent. Repeat if necessary. Repeat every 3–5 minutes.

3. Give atropine sulfate 1–3 mg IV if bradycardia.

4. Give lignocaine, bolus of 1 mg/kg of body weight IV for ventricular arrhythmias.

### SKILL/ACTIVITY PERFORMED SATISFACTORILY
After you have finished the observation, please write

- After the first observation, the total number of times the provider was coached performing this skill: ______

- Your assessment of the provider **before coaching** and **after coaching**:

<table>
<thead>
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<tbody>
<tr>
<td>Competent</td>
<td>Competent</td>
</tr>
<tr>
<td>Needs further</td>
<td>Needs further</td>
</tr>
<tr>
<td>follow-up and</td>
<td>follow-up and</td>
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<tr>
<td>support to</td>
<td>support to</td>
</tr>
<tr>
<td>achieve competency</td>
<td>achieve</td>
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<tr>
<td>competency</td>
<td>competency</td>
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</tbody>
</table>

**Comments:**

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## CHECKLIST FOR ENDOTRACHEAL INTUBATION

(For use by Evaluator)

Name of provider: _________________________________________________________________

Name of facility:  __________________________________________________________________

Name of evaluator:  ________________________________________________________________

Date(s) of assessment:  ____________________________________________________________________

**Evaluator:** Please mark with an “X” if the assessment was conducted on a Client or Anatomic model.

- [ ] Client  
- [ ] Anatomic Model

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

<table>
<thead>
<tr>
<th>Step/Task</th>
<th>CASES</th>
</tr>
</thead>
<tbody>
<tr>
<td>GETTING READY</td>
<td></td>
</tr>
<tr>
<td>1. Prepare the necessary equipment.</td>
<td></td>
</tr>
<tr>
<td>2. If spontaneous respiration is not present, ventilate with bag and mask until equipment is ready.</td>
<td></td>
</tr>
<tr>
<td>3. Provide continual emotional support and reassurance, as feasible.</td>
<td></td>
</tr>
</tbody>
</table>

**Skill/Activity Performed Satisfactorily**
### CHECKLIST FOR ENDOTRACHEAL INTUBATION
(Many of the following steps/tasks should be performed simultaneously.)

<table>
<thead>
<tr>
<th>STEP/TASK</th>
<th>CASES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INTUBATION</strong></td>
<td></td>
</tr>
<tr>
<td>1. Wash hands thoroughly and put on new examination or high-level disinfected surgical gloves.</td>
<td></td>
</tr>
<tr>
<td>2. Give oxygen 6 L/minute by mask until equipment is ready for intubation.</td>
<td></td>
</tr>
<tr>
<td>3. Position the woman’s head on a folded sheet, ensuring her neck is not extended.</td>
<td></td>
</tr>
<tr>
<td>4. If the woman is conscious, give diazepam 5–10 mg IV slowly over 2 minutes.</td>
<td></td>
</tr>
<tr>
<td>5. Ask an assistant to apply pressure to the cricoid against the esophagus.</td>
<td></td>
</tr>
<tr>
<td>6. Open the woman’s mouth and gently insert the laryngoscope over the tongue and toward the back of the throat.</td>
<td></td>
</tr>
<tr>
<td>7. If necessary, suction out any secretions in the throat.</td>
<td></td>
</tr>
<tr>
<td>8. Lift the blade of the laryngoscope upward and forward, using the wrist, to visualize the glottis.</td>
<td></td>
</tr>
<tr>
<td>9. Insert the endotracheal tube and stylet through the glottis into the trachea.</td>
<td></td>
</tr>
<tr>
<td>10. Remove the laryngoscope.</td>
<td></td>
</tr>
<tr>
<td>11. Withdraw the stylet.</td>
<td></td>
</tr>
<tr>
<td>12. Inflate the cuff of the endotracheal tube with 3–5 mL of air.</td>
<td></td>
</tr>
<tr>
<td>13. Hold the endotracheal tube firmly and connect it to the self-inflating bag. Ensure that there is no air leak by keeping a hand on the front of the neck.</td>
<td></td>
</tr>
</tbody>
</table>

### SKILL/ACTIVITY PERFORMED SATISFACTORILY
**ENSURING CORRECT PLACEMENT OF ENDOTRACHEAL TUBE**

<table>
<thead>
<tr>
<th>STEP/TASK</th>
<th>CASES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Press the self-inflating bag 2–3 times rapidly while observing the woman’s chest for inflation.</td>
<td></td>
</tr>
<tr>
<td>2. If the chest inflates while pressing the self-inflating bag, auscultate the chest to confirm that air is entering both lungs equally.</td>
<td></td>
</tr>
<tr>
<td>3. Auscultate over the stomach and ensure absence of air entry into the stomach.</td>
<td></td>
</tr>
<tr>
<td>4. Once the endotracheal tube is properly positioned, use adhesive tape to fix the tube to the woman’s face.</td>
<td></td>
</tr>
<tr>
<td>5. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.</td>
<td></td>
</tr>
<tr>
<td>6. Remove gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.</td>
<td></td>
</tr>
<tr>
<td>7. Wash hands thoroughly.</td>
<td></td>
</tr>
</tbody>
</table>

### SKILL/ACTIVITY PERFORMED SATISFACTORILY
# CHECKLIST FOR ENDOTRACHEAL INTUBATION
(Many of the following steps/tasks should be performed simultaneously.)

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</thead>
<tbody>
<tr>
<td><strong>EXTUBATION</strong></td>
<td></td>
</tr>
<tr>
<td>1. Confirm that the woman is ready for extubation.</td>
<td></td>
</tr>
<tr>
<td>2. Wash hands thoroughly and put on new examination or high-level disinfected surgical gloves.</td>
<td></td>
</tr>
<tr>
<td>3. Remove adhesive tape that holds the tube in position.</td>
<td></td>
</tr>
<tr>
<td>4. Gently open the woman’s mouth and suction out any secretions in the throat.</td>
<td></td>
</tr>
<tr>
<td>5. Deflate the cuff of the endotracheal tube and gently remove the tube.</td>
<td></td>
</tr>
<tr>
<td>6. Give oxygen by mask while ensuring that regular breathing is established.</td>
<td></td>
</tr>
<tr>
<td>7. Before removing gloves, dispose of waste materials in a leakproof container or plastic bag.</td>
<td></td>
</tr>
<tr>
<td>8. Remove gloves and discard them in a leakproof container or plastic bag if disposing of or decontaminate them in 0.5% chlorine solution if reusing.</td>
<td></td>
</tr>
<tr>
<td>9. Wash hands thoroughly.</td>
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</table>

**SKILL/ACTIVITY PERFORMED SATISFACTORYLY**

After you have finished the observation, please write

- After the first observation, the total number of times the provider was coached performing this skill: _______

- Your assessment of the provider **before coaching** and **after coaching**:

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</table>
# CHECKLIST FOR KETAMINE ANESTHESIA

(To be used by the **Evaluator**)

Name of provider: _________________________________________________________________

Name of facility: __________________________________________________________________

Name of evaluator: ________________________________________________________________

Date(s) of assessment: __________________________________________________________________

**Evaluator:** Please mark with an “X” if the assessment was conducted on a Client or Anatomic model.

- [ ] Client
- [ ] Anatomic Model

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

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

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

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

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

---

## CHECKLIST FOR KETAMINE ANESTHESIA

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

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<thead>
<tr>
<th>STEP/TASK</th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>GETTING READY</strong></td>
<td></td>
</tr>
<tr>
<td>1. Review the pre-operative assessment notes.</td>
<td></td>
</tr>
<tr>
<td>2. Prepare the necessary equipment and drugs required for the operation.</td>
<td></td>
</tr>
<tr>
<td>3. Provide continual emotional support and reassurance, as feasible.</td>
<td></td>
</tr>
<tr>
<td>4. Measure and record baseline pulse rate and blood pressure.</td>
<td></td>
</tr>
</tbody>
</table>

**SKILL/ACTIVITY PERFORMED SATISFACTORILY**
## CHECKLIST FOR KETAMINE ANESTHESIA
(Many of the following steps/tasks should be performed simultaneously.)

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<tr>
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<tbody>
<tr>
<td><strong>ADMINISTERING KETAMINE ANESTHESIA</strong></td>
<td></td>
</tr>
<tr>
<td>1. Secure IV line by appropriate cannula and start appropriate IV fluid. (Refer to the <em>Learning Guide for IV Cannulation</em> before proceeding further.)</td>
<td></td>
</tr>
<tr>
<td>2. Give injection atropine sulfate 0.5 mg IV, if not contraindicated.</td>
<td></td>
</tr>
<tr>
<td>3. Give injection ketamine 2 mg/kg body weight IV slowly, as 10 mg/mL solution over 5 seconds.</td>
<td></td>
</tr>
<tr>
<td>4. Give oxygen at 4 L/minute by face mask.</td>
<td></td>
</tr>
<tr>
<td>5. Monitor the pulse rate and blood pressure.</td>
<td></td>
</tr>
<tr>
<td>6. Monitor airway maintenance and spontaneous respiration.</td>
<td></td>
</tr>
</tbody>
</table>

**SKILL/ACTIVITY PERFORMED SATISFACTORILY**

| **MAINTAINING KETAMINE ANESTHESIA**          |       |
| 1. Maintain anesthesia and analgesia by intermittent dose of IV ketamine in dose of 0.25 mg/kg body weight every 10–15 minutes. |       |
| 2. After the birth of the newborn, start ketamine infusion for the patient with 200 mg in 500 mL of dextrose at a rate of 3 mg/kg/hour (approximately 75–130 drops/minute as a separate IV line). |       |
| 3. Give injection diazepam after the birth of the newborn from uterus, 0.1–0.2 mg/kg body weight. |       |
| 4. Monitor airway maintenance and spontaneous respiration throughout the operation. |       |

**SKILL/ACTIVITY PERFORMED SATISFACTORILY**

| **RECOVERY AFTER KETAMINE ANESTHESIA**       |       |
| 1. Discontinue ketamine infusion and give postoperative analgesia suitable for surgery. |       |
| 2. Place patient in the left lateral position and allow her to recover in a quiet place. |       |
| 3. Observe every 30 minutes until the patient is conscious and responding to verbal commands. |       |
| 4. Check for temperature, pulse, blood pressure, and respiration rate. |       |
| 5. If patient is very agitated and distressed, give some more sedation. |       |
| 6. Maintain fluid replacement, depending on amount of blood lost during the operation. |       |

**SKILL/ACTIVITY PERFORMED SATISFACTORILY**
After you have finished the observation, please write

- After the first observation, the total number of times the provider was coached performing this skill: ________

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EmOC Followup Assessment [Anesthetists]
Followup of Healthcare Providers Trained in Anesthesia for Emoc
Part B: Case Studies

ECLAMPSIA

Name of provider: ________________________________________________

Name of facility: ________________________________________________

Name of evaluator: ______________________________________________

Date(s) of assessment: ____________________________________________

Directions

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

Case Study

Mrs. A, a 20-year-old primigravida with a full-term pregnancy, was admitted to the labor ward about 6 hours ago. This is her first visit to the health facility for this pregnancy. Her pulse was 120 beats per minute, her blood pressure was 200/120 mm Hg, and she was unconscious. Her attendants/family gave a history of four or five fits before she came to the health facility.

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

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

2. What particular sign will help you to make your diagnosis?
Diagnosis (identification of problems/needs)

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

- She has no history of pre-existing central nervous system disorder.
- The clinical examination yielded the following findings:
  - Patient responds to deep pain.
  - Repeated monitoring shows pulse rate and blood pressure to be persistently high.
  - On auscultation the chest is clear.
  - Urine output shows 15 mL of urine in 1 hour.

3. What other laboratory tests would you order/perform to plan your intervention for this case?

Planning for Anesthesia and Surgery

4. What would you do to prepare Mrs. A. for surgery?

5. Based on your findings, which anesthetic agent/technique would you choose for Mrs. A., and why?

Monitoring and Evaluation

6. What measures would you take for Mrs. A. during the recovery period?
INTRA-OPERATIVE COLLAPSE

Name of provider: _________________________________________________________________

Name of facility: __________________________________________________________________

Name of evaluator:  _________________________________________________________________

Date(s) of assessment:  _____________________________________________________________________

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

Case Study
Mrs. E. is a 25-year-old pregnant woman, para 1 with a full-term pregnancy, who was suffering
from pregnancy-induced hypertension (PIH). Her PIH was controlled with antihypertensive
drugs. The fetus showed signs of fetal distress and the obstetrician decided to do a cesarean
section for the fetal distress. The anesthesia provider decided on spinal anesthesia for the
operation and administered 12 mg of bupivacaine intrathecally. After the anesthesia was
administered, the patient’s blood pressure drops dramatically and she becomes unconscious.

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

Plan of Action
You have completed your assessment of Mrs. E., and your main findings include the following:
- The patient is not breathing.
- The carotid pulse cannot be palpated.

3. Based on these findings, what is your diagnosis and plan of action?

Monitoring and Evaluation
4. What measures would you take for Mrs. E. during the recovery period?
Followup of Healthcare Providers Trained in Anesthesia for EmOC
Part B: Case Studies

OBSTRUCTED LABOR

Name of provider: _____________________________________________________________

Name of facility: _____________________________________________________________________

Name of evaluator: _________________________________________________________________

Date(s) of assessment: _____________________________________________________________________

Provider Score: ________________%

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

**Case Study**
Mrs. D., 18 years old, primigravida, married for 1 year, was admitted 12 hours ago with labor pain of 20 hours duration. She is of short stature. Her bag of waters ruptured 18 hours ago. The obstetrician diagnosed the case as cephalopelvic disproportion, and a decision was made to perform a lower segment cesarean section (LSCS). You have been asked to perform the anesthetic evaluation of this patient for the LSCS.

**Assessment (history, physical examination, screening procedures/laboratory tests)**
1. What relevant history would you need from Mrs. D. as part of your anesthetic evaluation?

2. What are the salient points relevant to anesthesia provision that should be recorded in your clinical examination?
3. What specific laboratory tests would you order/perform before deciding on the anesthetic agent/technique? Why?

Planning for Anesthesia

4. Based on your findings, which anesthetic agent/technique would you choose for Mrs. D., and why?

Preparation of the Patient for LSCS

5. What necessary steps would you take to ensure the safety of Mrs. D. for the chosen anesthetic technique?

6. What dosage of anesthetic agent would you use for Mrs. D.?

7. What premedication would you use, if any, for this case?

Monitoring and Evaluation

8. What are the main points to take note of during Mrs. D.’s recovery period?
INTRA-OPERATIVE BREATHING DIFFICULTY

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

Case Study
Mrs. K., a 25-year-old pregnant woman, was diagnosed as having pre-eclamptic toxemia and
was posted for cesarean section. Her blood pressure was 150/90 mm Hg. She had no cardiac
murmurs and her lungs were clear on auscultation. Her urine output was satisfactory and she had
no obvious coagulopathy. She has not had any previous anesthesia experience. A spinal
anesthesia was planned for this patient. Mrs. K. was given 1,000 mL of 5% dextrose before
receiving the spinal anesthesia. Five minutes after spinal anesthesia her blood pressure dropped
to 90 mm Hg systolic.

Assessment (history, physical examination, screening procedures/laboratory tests)
1. Based on this history, what do you think caused the abrupt drop in Mrs. K.’s blood pressure?
Mrs. K. was rapidly infused with normal saline to treat the hypotension. She received 4,000 mL of normal saline in the operating room. Soon after the baby is born, Mrs. K. becomes restless and complains of breathing difficulty.

2. What will you include in your initial assessment of Mrs. K.?

Diagnosis (identification of problems/needs)

You have completed your assessment of Mrs. K., and your main findings include the following: After your examination you find that Mrs. K. has a pulse rate of 120 beats per minute and a blood pressure of 160/80 mm Hg. On auscultation there are bilateral basal crepitations.

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

Care Provision (planning and intervention)

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

Monitoring and Evaluation

After 1 hour Mrs. K. appears comfortable. She has passed 2,000 mL of urine. Her lungs have improved but a few crepitations are still present in the lung bases.

5. Based on these findings, what is your continuing plan of care for Mrs. K.?
Followup of Healthcare Providers Trained in Anesthesia for EmOC
Part C: Participant Interview

ACTION PLAN PROGRESS

Name of provider: ________________________________

Name of facility: ________________________________

Name of evaluator: ________________________________

Date(s) of assessment: ________________________________

Instructions to Evaluator: Please use this interview to ask the anesthetist who completed the Emergency Obstetric Care training about their commitment statements.

Evaluator: Please read the following to the interviewee:
I would like to ask you several questions about the training you attended on emergency obstetric care. These questions are about the activities you committed to work on at the end of the training, and changes you have been able to implement. The information will be used by the Ministry of Health and by international organizations to improve inservice training programs in emergency obstetric care – your observations are therefore very important. Your name will not be included in any reports sent to the MOH or other organizations.

Do you have any questions before we start?
<table>
<thead>
<tr>
<th>No</th>
<th>Question</th>
<th>Response</th>
<th>Skip to</th>
<th>Comments</th>
</tr>
</thead>
</table>
| 1  | What was the first commitment?               | Introduce clinical meetings/case discussion........................................ 1
|    |                                              | Introduce infection prevention practice ............................................ 2
|    |                                              | Teach Spinal Anesthesia ....................................................................... 3
|    |                                              | Teach use of Ketamine anesthesia for in EmOC ....................................... 4
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|    |                                              | Improve clinical skills for Primary Health (district hospital) anesthesia provider .... 9
|    |                                              | Other Commitment .............................................................................. 10
| 2  | Have you been able to work on this commitment? | Yes ........................................................................................................... 1
|    |                                              | No ......................................................................................................... 2
| 3  | What steps have you taken to work on this commitment? | Developed proposal for senior staff ..................................................... 1
|    |                                              | Discussed with senior staff ................................................................... 2
|    |                                              | Discussed with co-workers .................................................................... 3
|    |                                              | Planned training for co-workers ........................................................... 4
|    |                                              | Conducted training for co-workers ....................................................... 5
|    |                                              | Other (specify) .................................................................................... 11
| 4  | What helped you work on this commitment?     | Support from supervisor ........................................................................... 1
|    |                                              | Support from co-workers at facility .................................................... 2
|    |                                              | Support from administration ................................................................... 3
|    |                                              | Other (specify) ..................................................................................... 12
| 5  | What type of support do you need to continue to work on this commitment? | Additional training ................................................................................. 1
|    |                                              | Additional supplies .................................................................................. 2
|    |                                              | Additional time ....................................................................................... 3
|    |                                              | Other (specify) ..................................................................................... 13
| 6  | What type of barriers did you encounter (if any)? | Current workload/Lack of time ............................................................... 1
|    |                                              | Lack of support from supervisor ............................................................ 2
|    |                                              | Lack of support from co-workers ............................................................ 3
|    |                                              | Lack of financial resources .................................................................... 4
|    |                                              | Lack of policy/mandate ............................................................................ 5
|    |                                              | Other (specify) ..................................................................................... 14

44 EmOC Followup Assessment [Anesthetists]
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| 7  | What was the second commitment?                                          | Introduce clinical meetings/case discussion.................................................................................................................................................. 1  
|    |                                                                           | Introduce infection prevention practice ............................................................................................................................................................ 2  
|    |                                                                           | Teach Spinal Anesthesia......................................................................................................................................................................................... 3  
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|    |                                                                           | Other Commitment ............................................................................................................................................................................................... 10 |
| 8  | Have you been able to implement this commitment?                        | Yes.......................................................................................................................................................................................... 1  
|    |                                                                           | No ......................................................................................................................................................................................... 2  |
| 9  | What steps have you taken to implement this commitment?                | Developed proposal for senior staff............................................................................................................................................................ 1  
|    |                                                                           | Discussed with senior staff...................................................................................................................................................................... 2  
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| 10 | What helped you to implement this commitment?                          | Support from supervisor ...................................................................................................................................................................... 1  
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|    |                                                                           | Other (specify) ....................................................................................................................................................................................... 4  |
| 11 | What type of support do you need to continue to implement this commitment? | Additional training.......................................................................................................................................................................... 1  
|    |                                                                           | Additional supplies ............................................................................................................................................................................. 2  
|    |                                                                           | Additional time ............................................................................................................................................................................... 3  
|    |                                                                           | Other (specify) ....................................................................................................................................................................................... 4  |
| 12 | What type of barriers did you encounter (if any)?                      | Current workload/Lack of time........................................................................................................................................................... 1  
|    |                                                                           | Lack of support from supervisor.......................................................................................................................................................... 2  
|    |                                                                           | Lack of support from co-workers ................................................................................................................................................... 3  
|    |                                                                           | Lack of financial resources ............................................................................................................................................................... 4  
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<td>Have you been able to implement this commitment?</td>
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<td>15</td>
<td><strong>What steps have you taken to implement this commitment?</strong></td>
<td>Developed proposal for senior staff .............................................. 1&lt;br&gt;Discussed with senior staff ................................................. 2&lt;br&gt;Discussed with co-workers .................................................. 3&lt;br&gt;Planned training for co-workers .......................................... 4&lt;br&gt;Conducted training for co-workers ....................................... 5&lt;br&gt;Other (specify) _______________________________________________</td>
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<td><strong>What helped you to implement this commitment?</strong></td>
<td>Support from supervisor ......................................................... 1&lt;br&gt;Support from co-workers at facility ...................................... 2&lt;br&gt;Support frm administration .............................................. 3&lt;br&gt;Other (specify) _______________________________________________</td>
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<td><strong>What type of support do you need to continue to implement this commitment?</strong></td>
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<td>18</td>
<td><strong>What type of barriers did you encounter (if any)?</strong></td>
<td>Current workload/Lack of time ................................................. 1&lt;br&gt;Lack of support from supervisor ...................................... 2&lt;br&gt;Lack of support from co-workers .................................. 3&lt;br&gt;Lack of financial resources ............................................. 4&lt;br&gt;Lack of policy/mandate ................................................... 5&lt;br&gt;Other (specify) _______________________________________________</td>
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CONFIDENCE AND EXPERIENCE

Please complete the following individual assessment as part of the Emergency Obstetric Care (EmOC) training followup assessment. You may need to talk to other healthcare providers at your facility and gather information from facility registers, logbooks and other records. This assessment addresses questions about the types of services that you as an individual provide. Each member of the training team should complete this form individually.

Name of person completing individual assessment: _____________________________

Date individual assessment was completed: __________/____________/____________

Day        Month                Year

Qualification of person completing assessment: (Mark “X” all that apply):

___ Enrolled nurse                                  ___ Registered nurse
___ Enrolled midwife                               ___ Registered midwife
___ Enrolled community health nurse               ___ Registered community health nurse
___ Comprehensive nurse                           ___ Clinical officer
___ Ob/Gyn                                        ___ General practitioner
___ Medical Officer                                ___ Other – specify: ___________________________________________
1. *EmOC Skills*

For each of the following skills, please mark “X” in the appropriate column for the following questions:

A. Have you performed this skill independently since completing EmOC training?
B. Do you feel confident performing this skill?
C. Have you taught the skill since completing the EmOC training?

*Please mark an “X” for appropriate responses.*

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<tr>
<th>SKILL</th>
<th>A. Performed since completing EmOC</th>
<th>B. Confident in performing the skill</th>
<th>C. Taught skill since completing EmOC</th>
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<tr>
<td>YES</td>
<td>NO</td>
<td>YES</td>
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</table>

**PAIN MANAGEMENT**

1. Perform spinal anaesthesia
2. Perform ketamine anaesthesia
3. Perform endotracheal intubation

**PROCEDURES FOR NEWBORN CARE**

4. Perform normal newborn care
5. Perform newborn resuscitation

**OTHER**

6. Conduct rapid assessment for emergencies
7. Manage shock from bleeding
8. Manage shock from sepsis
9. Perform adult resuscitation
10. Implement infection prevention measures
11. Conduct maternal death reviews
2. EmOC services

12. Is your supervisor aware that you have attended the training on EmOC?
   _____ Yes
   _____ No

16a. If “Yes”, is your supervisor supportive of you training others in EmOC?
   _____ Yes
   _____ No

17. In your opinion, what are the two greatest problems in your facility in providing quality emergency obstetric care? In your opinion, what are the solutions to these problems?

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<th>Problem</th>
<th>Solution</th>
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<td>b.</td>
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Thank you for taking the time to complete this form. Please note any additional comments in the space below. If there is not enough space, please use the back of this form:
Supervisor name: ______________________________________________________________________

Country of residence: __________________________________________________________________

Name of training attended: _____________________________________________________________

Date of training: _____________________________________________________________________

Name and address of facility: __________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

Name of interviewer: __________________________________________________________________

Date interview completed: __________________________

Evaluator: Please read the following to the supervisor:

Your employee, ___________________________, attended training in Emergency Obstetric Care in ___________ . The objectives of this training were to improve knowledge and skills in anesthesia for emergency obstetric care based on international standards and to increase your employee’s abilities to respond to obstetric emergencies.

I would like to ask you questions about how the anesthetist from your facility has performed since completion of the training in order to understand how he/she has used the knowledge and skills learned in the training.

The information you give me will be used by the Ministry of Health and by international organizations to improve in-service training programs in emergency obstetric care—your observations are therefore very important. Your name will not appear on any reports to the MOH or other organization.

Do you have any questions before we start? 

Part I: Background Information

1. What is your job title? __________________________________________________________________

2. How many years have you been working in this position? ____________ Years

3. What is your gender?  □ Male (1)  □ Female (2)

4. Professional cadre:
   □ Physician (1)   □ Nurse/Midwife (4)
   □ Nurse (2)      □ Midwife (5)
   □ Administrator (3)
   □ Other (6) (specify)
5. What year did you graduate from nursing/midwifery/medical school: ________________ Years

6. What is your area of specialty?
   [ ] OB/GYN (1)       [ ] Midwife (4)
   [ ] Nurse (2)        [ ] Nurse/Midwife (5)
   [ ] Pediatrician (3)
   [ ] Other (6) (specify): _____________________________________________________________________

7. Prior to this interview, had you heard of the Emergency Obstetric Care training?
   [ ] Yes (1)         [ ] No (2)       [ ] Don’t know (98)

8a. Do you feel as though the training of the anesthetist from your institution has been beneficial to your institution?
    [ ] Yes (1)        [ ] No (2)       [ ] Don’t know (98)

    Please explain:
    ______________________________________________________________________________________
    ______________________________________________________________________________________
    ______________________________________________________________________________________

8b. Do you think that the emergency obstetric care services have improved in your facility as a result of the anesthetist’s participation in the training? How and why?
    [ ] Yes (1)        [ ] No (2)       [ ] No opinion (98)

    ______________________________________________________________________________________
    ______________________________________________________________________________________
    ______________________________________________________________________________________
EVALUATING ANESTHETIST’S ACTION PLAN PROGRESS

Evaluator: Please complete an Action Plan Progress table (questions 10–28 below) for EACH of the three members of the team from the supervisor’s facility.

Please read the following to the supervisor:
One of the goals of the training to develop regional providers was for them to become leaders in their institutions, countries and regions to make changes to improve emergency obstetric care outcomes. During the training providers identified areas they were interested in improving, both when providing services themselves and within their facilities. At the end of the training, each provider completed a commitment statement. He/she committed to make up to three changes in the areas they were interested.

We are interested in learning about the changes that each of the providers worked on since completing the regional training.

Instructions to Evaluator: Use the information included in the baseline interview with the anesthetist to complete the following questions.

1. In ___________________________ ’s (name of provider) commitment statement, the following were included:
   a. _______________________________________________________________________________________
      _______________________________________________________________________________________
   b. _______________________________________________________________________________________
      _______________________________________________________________________________________
   c. _______________________________________________________________________________________
      _______________________________________________________________________________________

Evaluator: Please read to supervisor: I will now ask you questions about what type of activities ______________________ (name of provider) has been able to implement based on statements outlined in his/her commitment statement above.
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<td>Other Commitment</td>
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<td>Has the provider been able to work on the commitment?</td>
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<td>Developed proposal for senior staff</td>
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<td>Lack of support from co-workers</td>
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<td></td>
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<tr>
<td></td>
<td></td>
<td>Lack of financial resources</td>
<td>4</td>
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<td></td>
<td></td>
<td>Lack of policy/mandate</td>
<td>5</td>
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<td></td>
<td></td>
<td>Other (specify)</td>
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</tbody>
</table>

*EmOC Followup Assessment [Anesthetists]*
<table>
<thead>
<tr>
<th>No</th>
<th>Question</th>
<th>Response</th>
<th>Skip to</th>
<th>Comments</th>
</tr>
</thead>
</table>
| 14 | Circle the appropriate commitment for Provider                           | Introduce clinical meetings/case discussion....................................................................................................................................1
|    |                                                                          | Introduce infection prevention practice .................................................................2
|    |                                                                          | Teach Spinal Anesthesia.................................................................................................3
|    |                                                                          | Teach use of Ketamine anesthesia for in EmOC .........................................................................................................................4
|    |                                                                          | Facilitate practice of CBT at work.............................................................................5
|    |                                                                          | Standardize CPR practice using CBT approach .........................................................6
|    |                                                                          | Update Department (of anesthesia) on “anesthesia for EmOC” ................................7
|    |                                                                          | Develop and implement anesthesia protocols at work ............................................8
|    |                                                                          | Improve clinical skills for Primary Health (district hospital) anesthesia provider ....9
|    |                                                                          | Other Commitment ...........................................................................................10
|    |                                                                          |                                                                                     |         |          |
| 15 | Has the provider been able to work on this commitment?                  | Yes..................................................................................................................1
|    |                                                                          | No ...............................................................................................................2        | 28      |          |
| 16 | What steps has the provider taken to work on this commitment?           | Developed proposal for senior staff ..........1
|    |                                                                          | Discussed with senior staff .................2
|    |                                                                          | Discussed with co-workers .................3
|    |                                                                          | Planned training for co-workers ..............4
|    |                                                                          | Conducted training for co-workers ..........5
|    | (Please circle all that apply)                                          | Other (specify) ________________________                                                                                                      |         |          |
| 17 | What helped the provider to work on this commitment?                    | Support from supervisor .....................1
|    |                                                                          | Support from co-workers at facility .......2
|    |                                                                          | Support from administration .................3
|    | (Please circle all that apply)                                          | Other (specify) ________________________                                                                                                      |         |          |
| 18 | What type of support does the provider need to continue to work on this commitment? | Additional training........................1
|    |                                                                          | Additional supplies ..............................2
|    |                                                                          | Additional time ..................................3
|    | (Please circle all that apply)                                          | Other (specify) ________________________                                                                                                      |         |          |
| 19 | What type of barriers did the provider encounter (if any)?              | Current workload/Lack of time ............1
|    |                                                                          | Lack of support from supervisor ...........2
|    |                                                                          | Lack of support from co-workers ..........3
|    | (Please circle all that apply)                                          | Lack of financial resources ...............4
|    |                                                                          | Lack of policy/mandate ....................5
|    |                                                                          | Other (specify) ________________________                                                                                                      |         |          |

Thank the supervisor for his/her time.
SECTION II:

TRAINING SKILLS ASSESSMENT TOOLS
The purpose of this report is to provide feedback to JHPIEGO on the training demonstrated by the candidate trainer you are observing. Please be as honest and detailed as possible so that we have an accurate picture of his/her strengths as well as areas for improvement.

Evaluator: Note that Training Skills Performance assessment is divided into four sections: 1) Methodology Use Assessment; 2) Classroom Presentation Skills; 3) Clinical Demonstration Skills; and 4) Clinical Coaching Skills. Each participant should provide a clinical skills demonstration. However, time may not permit assessing every participants’ classroom presentation skills. If this is the case, work in pairs or teams and require those not presenting to be observers and to rate the classroom presentation to reflect their understanding of training standards. Thank you very much for your input.

Date: ____________________________

Name of person completing the report: __________________________________________

Name of candidate trainer: ____________________________________________

Course/workshop title: ________________________________________________

Dates and location of course/workshop: ______________________________________

Number of participants: __________

Participants were (check more than one if necessary):
Doctors ______ Nurses ______ Midwives ______ Other (Specify) ____________________

Briefly describe the course/workshop content:

What was the candidate trainer’s level of involvement (e.g., how many sessions did s/he facilitate, was s/he present and involved even when not presenting, etc.)?

Your overall evaluation of this candidate trainer:

S/he is qualified to conduct training without supervision. Yes _____ No _____
## CHECKLIST FOR METHODOLOGY USE

Please complete the following table.

<table>
<thead>
<tr>
<th>Training Methodology</th>
<th>Candidate Trainer Observed Using this Methodology</th>
<th>Candidate Trainer Able to Effectively Use the Methodology</th>
<th>Suggestions for Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Illustrated Lecture</td>
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<tr>
<td>(complete attached checklist)</td>
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<tr>
<td>Role Play</td>
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<tr>
<td>Case Study</td>
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<tr>
<td>Simulation</td>
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<td></td>
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<tr>
<td>Small Group Discussion</td>
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<tr>
<td>Large Group Discussion</td>
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<td></td>
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<tr>
<td>Brainstorming</td>
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<tr>
<td>Demonstration with models</td>
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<tr>
<td>(complete attached checklist)</td>
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<tr>
<td>Coaching</td>
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<tr>
<td>(complete attached checklist)</td>
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<td></td>
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<tr>
<td>Warmup activities</td>
<td></td>
<td></td>
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<tr>
<td>Daily Summaries</td>
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<td></td>
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<tr>
<td>Slides/Videos</td>
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<td></td>
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<tr>
<td>Overhead Projector</td>
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</tr>
</tbody>
</table>

Followup of Healthcare Providers Trained in Anesthesia for EmOC
Part E: Training Skill Performance

I.D. Number: ______________
Please add any additional comments that you feel would assist us.
# CHECKLIST FOR CLASSROOM PRESENTATION SKILLS

For each step or task, indicate whether it was adequately performed by making a tick (✓) in the yes or no column. If the step was not observed (N/O), place a tick (✓) in that column. Please make any additional comments that you feel are needed. NOTE: Those not presenting should observe and provide checklist rating trainer’s performance.

<table>
<thead>
<tr>
<th>STEP/TASK</th>
<th>YES</th>
<th>NO</th>
<th>N/O</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Presents an effective introduction.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2. States the objective(s) as part of the introduction.</td>
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<tr>
<td>3. Asks questions of the entire group.</td>
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<tr>
<td>4. Targets questions to individuals.</td>
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<tr>
<td>5. Asks questions at a variety of levels.</td>
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<tr>
<td>6. Uses participant names.</td>
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<tr>
<td>7. Provides positive feedback.</td>
<td></td>
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<tr>
<td>8. Responds to participant questions.</td>
<td></td>
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<tr>
<td>10. Maintains eye contact.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>11. Projects voice so that all participants can hear.</td>
<td></td>
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<tr>
<td>12. Moves about the room.</td>
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<tr>
<td>13. Uses audiovisuals effectively.</td>
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<tr>
<td>14. Displays a positive use of humor.</td>
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<tr>
<td>15. Presents an effective summary.</td>
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<tr>
<td>16. Provides for application or practice of presentation content.</td>
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</tbody>
</table>

Delivered an effective classroom presentation
**CHECKLIST FOR CLINICAL DEMONSTRATION SKILLS**

_Evaluator:_ All members of each team should be observed doing a clinical demonstration, e.g., postpartum examination.

For each step or task, indicate whether it was adequately performed by making a tick (✓) in the yes or no column. If the step was not observed (N/O), place a tick (✓) in that column. Please make any additional comments that you feel are needed.

<table>
<thead>
<tr>
<th>STEP/TASK</th>
<th>YES</th>
<th>NO</th>
<th>N/O</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Uses trainer’s notes or a personalized reference manual.</td>
<td></td>
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</tr>
<tr>
<td>2. States the objective(s) as part of the introduction.</td>
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</tr>
<tr>
<td>3. Presents an effective introduction.</td>
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<tr>
<td>4. Arranges demonstration area so that participants are able to see each step in the procedure clearly.</td>
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<tr>
<td>5. Never demonstrates an incorrect procedure or shortcut.</td>
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<tr>
<td>6. Communicates with the model or client during demonstration of the skill/activity.</td>
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<tr>
<td>7. Asks questions and encourages participants to ask questions.</td>
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<tr>
<td>8. Demonstrates or simulates appropriate infection prevention practices.</td>
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<tr>
<td>9. When using model, positions model as an actual client.</td>
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<tr>
<td>10. Maintains eye contact with participants as much as possible.</td>
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<tr>
<td>11. Projects voice so that all participants can hear.</td>
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<tr>
<td>12. Provides participants opportunities to practice the skill/activity under direct supervision.</td>
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</tbody>
</table>

**Presented an effective clinical demonstration**
### CHECKLIST FOR CLINICAL COACHING SKILLS

For each step or task, indicate whether it was adequately performed by making a tick (✓) in the yes or no column. If the step was not observed (N/O), place a tick (✓) in that column. Please make any additional comments that you feel are needed.

<table>
<thead>
<tr>
<th>STEP/TASK</th>
<th>YES</th>
<th>NO</th>
<th>N/O</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BEFORE PRACTICE SESSION</strong></td>
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</tr>
<tr>
<td>1. Greets participant.</td>
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<tr>
<td>2. Asks the participant to review her/his performance in previous practice sessions.</td>
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<tr>
<td>3. Asks the participant which steps or tasks s/he would like to work on during the practice session.</td>
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<tr>
<td>4. Reviews any difficult steps or tasks in the learning guide that will be practiced during the session.</td>
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<tr>
<td>5. Works with the participant to set specific goals for the practice session.</td>
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<tr>
<td><strong>DURING PRACTICE SESSION</strong></td>
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</tr>
<tr>
<td>1. Observes the participant as s/he practices the procedure.</td>
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<tr>
<td>2. Provides positive reinforcement and suggestions for improvement as the participant practices the procedure.</td>
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</tr>
<tr>
<td>3. Refers to the learning guide during observation.</td>
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</tr>
<tr>
<td>4. Records notes about participant performance on the learning guide during the observation.</td>
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<tr>
<td>5. Is sensitive to the client when providing feedback to the participant during a clinical session with clients.</td>
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<tr>
<td>6. Provides corrective comments only when the comfort or safety of the client is in doubt.</td>
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<tr>
<td>STEP/TASK</td>
<td>YES</td>
<td>NO</td>
<td>N/O</td>
<td>COMMENTS</td>
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<tr>
<td><strong>AFTER PRACTICE FEEDBACK SESSION</strong></td>
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</tr>
<tr>
<td>1. Greets the participant.</td>
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<tr>
<td>2. Asks the participant how s/he felt about the practice session.</td>
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<tr>
<td>3. Asks the participant to identify those steps s/he did well.</td>
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<tr>
<td>4. Asks the participant to identify those steps where her/his performance could be improved.</td>
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<tr>
<td>5. Refers to my notes on the learning guide.</td>
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<tr>
<td>6. Provides positive reinforcement regarding those steps or tasks the participant performed well.</td>
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<tr>
<td>7. Offers specific suggestions for improvement.</td>
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<tr>
<td>8. Works with the participant to establish goals for the next practice session.</td>
<td></td>
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<tr>
<td><strong>Used effective coaching skills</strong></td>
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</tbody>
</table>

Comments:

_____________________________________________________________________________________
_____________________________________________________________________________________
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Followup of Healthcare Providers Trained in Anesthesia for EmOC
Part F: Additional Comments Sheet

Name of provider: ____________________________________________

Name of facility: ____________________________________________

Name of evaluator: ____________________________________________

Date(s) of interview: ____________________________________________

This sheet will give you, the evaluator, an opportunity to make additional comments about the followup visit and the observed performance of the provider. Filling out this page is optional.

1. In your opinion, how were the provider’s overall clinical skills?
   ____________________________________________
   ____________________________________________
   ____________________________________________
   ____________________________________________

1a. In your opinion, how confident did the provider seem in doing the skills?
   ____________________________________________
   ____________________________________________
   ____________________________________________
   ____________________________________________

1b. In your opinion how was the provider’s knowledge about maternal and neonatal care?
   ____________________________________________
   ____________________________________________
   ____________________________________________
   ____________________________________________

1c. Were there any factors that helped or hindered the provider’s ability to practice the skills learned in the training?
   ____________________________________________
   ____________________________________________
   ____________________________________________
   ____________________________________________
1d. Were there any factors that helped or hinder the provider’s ability to act on the commitments? ____
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________

1e. In your opinion how were the provider’s interactions his/her supervisors, co-workers, the community or the government: ____________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________

2. What feedback did you give to the provider?
__________________________________________________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________

3. What feedback did you give to the supervisor? ________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________

Any other additional comments:
__________________________________________________________________________________________
__________________________________________________________________________________________
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__________________________________________________________________________________________
FOLLOW-UP KNOWLEDGE QUESTIONNAIRE ANSWER KEY

Instructions: Circle the letter corresponding to the single best answer to each question.

1. Rapid initial assessment should be carried out
   a. Only on women who present with abdominal pain and vaginal bleeding
   B. ON ALL WOMEN OF CHILDBEARING AGE WHO PRESENT WITH A PROBLEM
   c. Only on women who present with abdominal pain
   d. Only on women who present with vaginal bleeding

2. The immediate management of ectopic pregnancy involves
   a. Observing the woman for signs of improvement
   B. CROSS-MATCHING BLOOD AND ARRANGING FOR IMMEDIATE LAPAROTOMY
   c. Making sure that blood is available for transfusion before surgery is performed
   d. All of the above

3. A pregnant woman who has severe anaemia typically presents with
   A. DIFFICULTY IN BREATHING AND WEAKNESS
   b. Difficulty in breathing and wheezing
   c. Wheezing and weakness
   d. None of the above

4. For the immediate management of hypovolaemic shock due to postpartum haemorrhage, the choice of fluid for commencing resuscitation is
   a. 5% dextrose-water
   b. 5% dextrose-saline
   C. NORMAL SALINE
   d. Whole Blood

5. The drug of choice for preventing and treating convulsions in severe pre-eclampsia and eclampsia is
   a. Diazepam
   b. Calcium gluconate
   c. Thiopentone Sodium
   D. MAGNESIUM SULPHATE
6. The best advice for the management of headaches following spinal anaesthesia is to
   a. Raise the head end of the bed.
   B. ASK THE PATIENT TO DRINK PLENTY OF WATER
   c. Ask the patient to walk
   d. Restrict eating

7. To reduce postoperative hallucination due to ketamine anesthesia administered to pregnant women, diazepam is given
   a. Before giving ketamine
   B. IMMEDIATELY AFTER DELIVERY OF THE FETUS
   c. Before commencement of surgery
   d. After regaining consciousness in the postoperative period

8. The ideal anesthetic technique for manual vacuum aspiration for incomplete abortion at 14 weeks gestation is
   a. Spinal anesthesia
   b. Pudendal block
   C. PARACERVICAL BLOCK
   d. Intravenous pethidine and diazepam

9. When anesthesia providers talk with the patient undergoing spinal anesthesia, the patient experiences
   a. Raised blood pressure
   b. Postoperative depression
   c. Increased anxiety
   D. REDUCED ANXIETY

10. Once a diagnosis of ruptured uterus is made, anesthesia should be
    a. Administered immediately
    b. Administered only when at least one unit of blood is available
    C. ADMINISTERED SIMULTANEOUSLY WITH RESUSCITATION EFFORTS
    d. Administered only after replacing the estimated blood lost

11. The local anesthetic agent used for spinal anesthesia during Caesarean section is
    a. Bupivacain – 15 mg.
    B. BUPIVACAINE – 10 MG.
    c. Lignocaine – 10 mg.
    d. Lignocaine – 15 mg.
12. After receiving a successful spinal anesthesia for Caesarean section which was preceded by a preload of 1000 ml of normal saline, a patient suffers severe hypotension (BP = 70/50 mmHg). The appropriate management should be

A. IV EPHEDRINE 5 MG
b. IV Adrenaline 0.5 mg
c. IV Atropine 0.5 mg
d. IV Hydrocortisone 100 mg.

13. A woman with an unruptured ectopic pregnancy, a pulse of 60 beats/min and a B.P of 100/60 mmHg needs

a. No intervention
b. Rapid infusion of intravenous fluids
C. CLOSE MONITORING OF PULSE & B.P
d. Atropine to increase pulse rate

14. The best choice of anesthesia for a patient suffering from Pregnancy Induced Hypertension (with B.P 170/100 mmHg, Pulse 110/min) for Caesarean section is:

a. General anesthesia with halothane
b. Ketamine anesthesia
C. SPINAL ANESTHESIA
d. Local infiltration anesthesia

15. A women presenting for Caesarian section with a hemoglobin of 8 gm/dl

A. CAN BE GIVEN SPINAL ANESTHESIA
b. Should be referred to another hospital
c. Should be transfused with whole blood before anesthesia
d. Should only receive Ketamine

16. After administration of spinal anesthesia, if no sensation is felt up to the umbilicus the level of block is at least up to

a. T2
b. T5
c. T8
D. T10

17. The most common complication after spinal anesthesia is

a. Vomiting
b. Headache
C. HYPOTENSION
d. Breathing difficulty
18. The incidence of hypotension during surgery can be reduced by all EXCEPT
   a. Preloading the patient
   b. Tilting the table
   c. Avoiding high level of block
   D. KEEPING THE PATIENT FLAT ON THE TABLE

19. In a shocked patient adequacy of resuscitation is indicated by
   a. Tachycardia
   B. IMPROVED URINE OUTPUT
   c. High level of urea
   d. High level of Hemoglobin

20. If a patient develops anaphylactic reaction the drug of choice is
   A. ADRENALINE
   b. Atropine
   c. Ephedrine
   d. Antihistamine

21. If patient reacts to blood administration
   A. BLOOD SHOULD BE STOPPED
   b. Give antihistamine and give blood
   c. Give blood very slowly
   d. Treat the symptoms

22. The approximate dose of Pethidine for IV sedation for a patient weighing 50 kg is
   a. 10 microgram
   B. 50 MG
   c. 500 mg
   d. 1 Gm

23. A patient under spinal anesthesia develops bradycardia. The dose of Atropine you
    would use is
   a. 0.1 mg
   B. 0.5 MG
   c. 1mg
   d. 5 mg

24. The ratio of ventilation to chest compression for resuscitation is
   a. 1:2
   B. 2:15
   c. 15:2
   d. 5:15
25. In a patient with full term pregnancy, lateral tilt of the body will

   A. PREVENT COMPRESSION OF THE AORTA
   b. Cause hypotension
c. Reduce blood supply to the uterus
d. Cause venous pooling in the lower limbs

26. A woman has lost 500 ml of blood from a hematoma after vaginal tear. How much crystalloid will you replace to compensate the blood lost?

   a. 500 ml
   b. 1000 ml
   C. 1500 ML
d. 2000 ml

27. If the hemoglobin is 10 Gm, which fluid will you give for a patient who has bled 500 ml blood?

   a. 5% dextrose
   B. NORMAL SALINE
c. Albumin
d. Blood

28. Spinal anesthesia is contraindicated in the following condition

   A. COAGULOPATHY
   b. Cephalopelvic disproportion
c. Full stomach
d. Pre eclamptic toxemia

29. Airway maintenance is best achieved in an unconscious patient by

   a. Mouth to mouth resuscitation
   b. Bag and mask ventilation
c. Use of an oral airway
   D. ENDOTRACHEAL INTUBATION

30. The internal diameter of endotracheal tube you would choose for an adult pregnant patient is

   a. 5 mm
   B. 7MM
c. 9 mm
d. 11 mm
ANESTHESIA CASE STUDY ECLAMPSIA ANSWER KEY

Case Study
Mrs. A., a 20-year-old primigravida with a full-term pregnancy, was admitted to the labor ward about 6 hours ago. This is her first visit to the health facility for this pregnancy. Her pulse was 120 beats per minute, her blood pressure was 200/120 mm of Hg, and she was unconscious. Her attendants/family gave a history of four or five fits before she came to the health facility.

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

1. What will you include in your initial assessment of Mrs. A.?
   - Check whether the patient is breathing adequately or not, and whether the airway is clear or not, given that the patient is unconscious.
   - Check her history to rule out any existing central nervous system disorder.
   - Conduct a rapid initial assessment:
     - Check if patient responds to deep pain.
     - Check pulse, blood pressure, and respiratory rate.
     - Auscultate her chest to check for abnormal breath and/or cardiac sounds.
     - Check her history to see if she has been passing urine.
     - Check for protein in her urine.

2. What particular sign will help you to make your diagnosis?
   - Her persistently high blood pressure
   - The presence of protein in her urine
   - Along with her history of headache, convulsions during pregnancy help to establish the diagnosis of eclampsia

Diagnosis (identification of problems/needs)

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

- She has no history of pre-existing central nervous system disorder.
- The clinical examination yielded the following findings:
  - Patient responds to deep pain.
  - Repeated monitoring shows pulse rate and blood pressure to be persistently high.
  - On auscultation the chest is clear.
  - Urine output shows 15 mL of urine in 1 hour.
3. What other laboratory tests would you order/perform to plan your intervention for this case?

- Blood examination: complete blood count, electrolytes, and coagulation profile
- Urine examination: protein, creatinine clearance, uric acid
- Liver function test

**Planning for Anesthesia and Surgery**

4. What would you do to prepare Mrs. A. for surgery?

- Start an IV line with a large gauge cannula, if not already done.
- Administer oxygen.
- Improve intravascular volume until urine output is 30–40 mL/hr.
- Correct coagulopathy, if present.
- Treat hypertension to level not less than 150/90 mm of Hg by injection hydralazine 5–10 mg IV in increments.
- Keep patient in left lateral position to prevent aortocaval compression.
- Start magnesium sulphate therapy.
- Control convulsion with diazepam 5–10 mg. Do not exceed 30 mg.
- Give prophylaxis for acid aspiration.

5. Based on your findings, which anesthetic agent/technique would you choose for Mrs. A., and why?

- Spinal anesthesia if patient properly resuscitated and if no coagulopathy.
- Local infiltration

**Monitoring and Evaluation**

6. What measures would you take for Mrs. A. during the recovery period?

- Continuous monitoring of the patient for the following:
  - Color
  - Pulse
  - Blood pressure
  - Respiration
  - Urine output
  - Pulse oximeter, electrocardiogram if available
- Give supplemental oxygen by face mask.
- Position the patient on her side.
- For magnesium sulphate therapy, monitor the respiration rate, ankle jerk, and urine output.
- Provide analgesia.
- Continue antihypertensive drugs and magnesium sulfate therapy.
- Be prepared to refer the patient to a higher center if she develops complications.
ANESTHESIA CASE STUDY
INTRA-OPERATIVE COLLAPSE ANSWER KEY

Case Study
A 25-year-old pregnant woman, para one with full term pregnancy, was suffering from pregnancy-induced hypertension (PIH). Her PIH was controlled with antihypertensive drugs. The woman developed fetal distress and the obstetrician decided on doing a cesarean section for the fetal distress. The anesthesia provider decided to perform the operation on spinal anesthesia and administered 12 mg of Bupivacaine intrathecally. After the anesthesia was administered, the woman’s blood pressure dropped dramatically and she became unconscious.

Assessment (history, physical examination, screening procedures/laboratory tests)
1. What will be your initial assessment of the woman, and why?
   • The first assessment will be whether the patient is breathing or not and whether the airway is clear or not.
   • The next step will be to assess the carotid pulse.

Because the woman became unconscious it becomes important to first rule out any serious complications that could be life threatening.

Diagnosis
2. What particular aspects of the physical examination will help you make a diagnosis or identify her problems/needs, and why?
   • Based on the finding that the patient is unconscious, not breathing and the absence of carotid pulse, the patient is in a state of cardiac arrest.

Plan of Action
You have completed you assessment and your findings include
   • The patient is not breathing.
   • The carotid pulse cannot be palpated.
3. Based on your findings what is your plan of action?

- Clear and maintain the airway.
- Give oxygen by bag and mask ventilation.
- Start (cardio-pulmonary resuscitation) chest compression with a compression to ventilation ratio of 15:2.
- Ask the obstetrician to deliver the baby as soon as possible.
- Perform a lateral tilt of the operating table, if not already done.
- Rapidly infuse fluids.
- Put the patient on cardiac monitor, if available.
- Defibrillate if ECG shows ventricular fibrillation.
- If not, administer 1 mg of adrenaline IV in strength of 1:10,000.
- Intubate the patient, if not already done, and then ventilate by using 100% oxygen.
- Continue external cardiac compression at a rate of 15:2 compression : ventilation ratio
- Repeat adrenaline intravenously every 3-5 minute during CPR
- Continue CPR until carotid pulse returns

**Monitoring and Evaluation**

4. What measures would you take for this patient during the recovery period?

- Continue Oxygen therapy for the next 24 hours.
- Monitor pulse, blood pressure, level of consciousness and ECG (if available) at 15 minutes interval.
- Give ionotropic agents (dopamine, dobutamine) if systolic pressure <90 mm of Hg.
- Refer the patient to a higher facility for emergency care.
- Monitor ECG if available.
ANESTHESIA CASE STUDY
OBSTRUCTED LABOR ANSWER KEY

Case Study
Mrs. C, 18 years old woman, primi gravida, married for one year, was admitted 12 hours ago with labor pain of 20 hours duration. She is of short stature. Her bag-of-waters ruptured 18 hours ago. The obstetrician diagnosed the case as cephalo-pelvic disproportion, and a decision was made to perform a lower segment cesarean section (LSCS). You have been asked to perform the anesthetic evaluation of this patient for the LSCS.

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

1. What relevant history would you need from this patient as part of your anesthetic evaluation?
   - Be gentle and respectful with the patient while taking her history. Mrs. C is already in a great deal of trouble; do not do or say anything that would cause further pain, both physical or psychological, to the patient or her support person(s).
   - Find out when was the last time Mrs. C. ate food or had anything to drink. Ask her if she is feeling excessively thirsty.

2. What are the salient points relevant to anesthesia provision that should be recorded in your clinical examination?
   - Record her temperature, pulse rate and blood pressure, including the frequency of uterine contractions.
   - Examine her breath-sounds and auscultate her heart for any abnormal sounds or abnormal heart rate.

3. What specific laboratory tests would you order/perform before deciding on the anesthetic agent/technique? Why?
   - Conduct a routine total count and differential count of white blood cells and check her hemoglobin level.
   - Examine her urine for albumin, acetone and sugar.
   - Collect blood samples and send them for grouping and cross matching.
Planning for Anesthesia

4. Based on your findings, which anesthetic agent/technique would you choose for this patient, and why?

- Spinal anesthesia is a good option under cover of antibiotics;
- However, because of the ruptured membrane, there is an increased risk of infection.
- Ketamine is also a good choice for this case because of the following advantages:
  - Less risk of hypotension
  - Airway is maintained
  - Blood pressure and heart rate are maintained

Preparation of the Patient for LSCS

5. What necessary steps would you take to ensure the safety of the patient for the chosen anesthetic technique?

- Start an IV line with a wide bore needle.
- Correct dehydration with Normal Saline solution.

6. What dosage of Ketamine would you use for this patient?

- Induce anesthesia with Ketamine 2 mg/kg body weight by IV bolus. Continue to give intermittent Ketamine at a dose of 0.25 mg/kg body weight every 10 to 15 minutes until the delivery of the baby. Then start IV infusion of Ketamine with a different IV line at a dose of 200 mg in 500 ml of 5% dextrose – 75 to 130 drops per minute.

7. What premedication would you use, if any, for this case?

- Give diazepam 10 mg IV after the birth of the newborn in order to reduce the hallucinogenic reactions after Ketamine anesthesia.

Monitoring and Evaluation

8. What are the main points to take note of during the patient’s recovery period?

- Ensure that the patient is not in too much pain. If her pain is severe, give analgesics to manage the pain.
- Allow the patient to recover in a quiet, low-lit area.
- Monitor her pulse rate and blood pressure. Make sure that the patient is breathing effortlessly.
ANESTHESIA CASE STUDY
INTRA-OPERATIVE BREATHING DIFFICULTY ANSWER KEY

Case Study
Mrs. N, a 25-year-old pregnant woman, is diagnosed to have pre-eclamptic toxemia and is posted for cesarean section. Her blood pressure is 150/90 mmHg. She has not had any previous experience of anesthesia. She has no cardiac murmurs and her lungs are clear on auscultation. Her urine output is satisfactory and she has no obvious coagulopathy. A spinal anesthesia was planned for this patient. Mrs. N receives 1000 ml of 5% dextrose before giving her spinal anesthesia. 5 minutes after spinal anesthesia her blood pressure drops to 90 mmHg systolic.

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

1. Based on this history, what do you think caused the abrupt drop in Mrs. N’s blood pressure?
   - Inappropriate selection of replacement fluid was probably responsible for the abrupt drop in Mrs. N’s blood pressure. Mrs. N should have received normal saline or Ringer’s lactate for pre-loading her for spinal anesthesia. When 5% dextrose is given, only 200 ml will stay in the blood vessels (intra-vascular space).

   Mrs. N was rapidly infused with normal saline to treat the hypotension. She received 4000 ml of normal saline in the operating room. After the baby was delivered from the uterus, Mrs. N becomes restless and complains of breathing difficulty.

2. What will you include in your initial assessment of Mrs. N and why?
   - Auscultate the lung fields for breath sounds and heart sounds.
   - Monitor blood pressure.
   - Take history of bronchial asthma or cardiac disease.
   - Check for cyanosis.
   - Rule out any cardiac cause.

Diagnosis (identification of problems/needs)

After your examination you find that Mrs. N has a pulse rate of 120 per minute and a blood pressure of 160/80 mmHg. On auscultation there is bilateral basal crepitations.
3. Based on these findings, what is Mrs. N’s diagnosis (problem/need)?

- Mrs. N has developed pulmonary edema. She has received 4 liters of normal saline. Once the uterus contracts after delivery of baby, the blood from the uterus also enters the intravascular space, leading to a fluid overload.

**Care Provision (planning and intervention)**

4. Based on your diagnosis what is your plan of care?

- Give frusemide 40 mg IV.
- Give oxygen 6 liters/minute by face mask.
- Raise the head end of the bed.
- Give 3-5 mg of morphine IV.

After one hour Mrs. N appears comfortable. She has passed 2000 ml of urine. Her lungs have improved but a few crepitations are still present in the lung bases.

**Monitoring and Evaluation**

5. What is your continued plan of care?

- Give oxygen by mask 6 liters per minute.
- Reassess after 4 hours.