Women and Infants’ (WIN) Health Project
John Snow, Incorporated

FAMILY- CENTERED
MATERNITY CARE

Facilitator’s Guide

2003
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# Family-Centered Maternity Care Training

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Acknowledgements

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1998 version adapted from “Family-Centered Maternity Care Training of Trainers Curriculum, Ukraine 1996,” written by Patricia A. Paluzzi, CNM, MPH and Pauline Glatleider, CNM, MN.

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The contents and opinions expressed herein are those of the authors and do not necessarily reflect the view of USAID and JSI.
Introduction for Trainers

Format:

Each session starts with the learning objectives, length of session, materials and preparation needed, and teaching methods used. The steps to carry out in the session are described in detail. Information that should be written on a flip chart or distributed to participants is noted.

Participants receive a manual containing the main points of each session, as well as readings on these topics. The Participant’s Manual also contains most of the instructions they will need for group work and other activities (such as case studies). This avoids creating a lot of handouts for activities.

Methodology:

This training is based on the principles of adult learning. Adults learn best when they feel that the topic is relevant to their lives and work, and when they have a chance to apply new skills in a practical setting.

The sessions in the training are based on the Adult Learning Cycle, shown below.
1. In each session, begin by finding out what participants already know and do in regard to the topic. Discussion questions and short activities are included in the session plans to help you with this step.

2. Build on participants’ current knowledge by presenting new information.

3. Give participants an opportunity to practice the new knowledge or skills, through a hands-on activity or discussion.

4. Conclude the session by evaluating what participants have learned about the topic. The session plans include suggested questions or activities to help you assess learning. There are also evaluation activities planned for the end of each day.

**Adult Learning Techniques:**

The following techniques are used in this training.

**Brainstorm** - This technique encourages active and imaginative input from participants and taps the knowledge and expertise of the participants. The trainer’s role is to encourage all participants to say the first thing that comes to their minds and to keep ideas flowing quickly. Brainstorming is used to help focus or clarify activities or generate information that can help introduce or direct a topic.

Process - The trainer asks a question on a topic to be investigated. The participants are asked to draw upon personal experience and opinion and to respond with as many ideas as possible. As participants put forward their ideas, each idea is recorded on the board; none are rejected. When the brainstorm is complete, the group analyzes the information collected.

Advantages - It promotes creativity in finding solutions to problems. It is particularly effective in opening sessions and can be used to establish goals, objectives and norms for training programs.

**Case study** - This technique encourages participants to analyze situations they might encounter and determine how they would respond. A case study is basically a story written to show a detailed description of an event that is followed by questions for participants to discuss. The case study should be designed in such away that the story is relevant to participants and they have enough time to read, think and discuss.

Process - The trainer hands out a case study that describes a relevant situation or problem to be addressed. Participants read the case study. Participants are either broken up into small groups to discuss or may stay in the large group to discuss the story. The instructor facilitates discussion.
**Advantages** - It encourages participants to identify alternative behaviors and solutions to situations and problems they might experience in their work. It can present a great deal of information that participants can refer back to as they discuss and answer questions.

**Demonstration** - This technique is used to allow participants to see how something should be done. A demonstration brings to life some information that could be presented in a lecture, discussion or explanation. For example, a discussion of how to perform neonatal resuscitation may not be nearly as effective as a direct demonstration of how to do it which participants can both see and try for themselves.

**Process** - The facilitator should explain the purpose of the demonstration. Facilitator demonstrates the procedures or new behavior. Participants are encouraged to ask questioned and engage in discussion. The participants practice what has been demonstrated.

**Advantages** - Participant’s active participation in trying the activity shows whether they have correctly understood and makes the new information more memorable.

**Peer Teaching** - This technique is used to help participants learn pieces of information that, when put together, cover a complete topic. It provides each participant with an opportunity to become an “expert” on a bit of information and to share this with each other. The responsibility for learning and teaching remains with the participants.

**Process** - The large group is divided into smaller groups by receiving cards that have two different symbols (such as a number and a letter). The first groups (by number) are each assigned a different aspect of the chosen topic to learn. Each group spends time working together until every member of their group has mastered the topic assigned to the group well enough to teach it to others. One member of each of the original groups now serves as an “expert” for a second group. The second groups are formed by assigning one representative from each of the first study groups to a second group (by letter). The second group stays together until each member has had a chance to teach his or her subject to the group. The entire group meets together to reflect on the process.

**Advantages** - This technique provides an opportunity for people to learn a topic and then immediately afterwards to teach it to others. It is an effective way to give individuals training experience and to bolster participant confidence in their own knowledge and teaching skills.

**Lecture** – The lectures used in this training are mostly short presentations to highlight key points of content. They should incorporate participants’ interactions; the trainer should continuously ask questions of participants to elicit information from them rather than lecturing without a break.
**Process** - Trainer identifies points where participants can be involved through questions and discussion. Practice and time your lecture to make sure that you have not prepared either too little or too much for the time allotted. As you present your lecture, keep an eye on the participants and make sure that you are holding their attention. If people start to lose interest, involve them by asking questions.

**Advantages** - Lectures can provide detailed and specific information in a short amount of time.

**Role plays** - This technique encourages participants to explore solutions to situations. It is a small, often unrehearsed drama where participants are given roles that they act out. Unlike a drama or play, there is no ‘script’ or particular words that participant-actors must say, but there is a description of the situation, the positions they should take, what they might do or opinions they should express.

**Process** - Roles may be set up by the facilitator or participants may make up their own roles. The description of a role play can be given orally or by handout. Participants acting in the role play should be given some time to prepare. Participants act out role play as the character that they are portraying. Facilitator facilitates discussion and analysis of what was seen or felt by participants. ‘Actors’ are given a chance to describe their roles and what they were doing to see if it matches with what participants observed. Participants then discuss how what they saw relates to their own work and situations they encounter.

**Advantages** - Discussions following the role play can center around the role, opinions, and actions of characters as presented by the participants and thus avoid criticism of the participants themselves. This technique is entertaining as well as educational, and improves participants’ skills of expression and observation.

**Small groups** - It is often necessary to break a large training group into small groups in order to facilitate discussion, problem-solving, or team activities and tasks.

**Process** - Participants select or are randomly broken into smaller groups. A specific task is assigned to smaller groups. The purpose of the task is clearly stated and a time limit imposed. How the group’s work is to be presented is clearly defined and shared responsibility for presentation is given to all members of the group. Following these instructions, the task is carried out. The small groups come back together and results are presented to the whole group.

**Advantages** - The smaller the group, the greater the chance of individual participation. The more small groups you have, the better your chances of coming up with interesting information and more solutions to problems (although the report-back time allocated increases with each additional group).
Evaluation Methods:

Evaluating what participants have learned is a critical step in training. Since the FCMC training asks midwives and physicians to adopt new attitudes, new ways of working together, and new clinical practices that may be very different from their current practice, it is very important to check continually how they are reacting to the new material. As much as possible, give participants the opportunity to air their questions, concerns and disagreements with the FCMC methods presented. In this way, you will be able to identify which practices to spend more time on. This will also give participants an outlet so that they feel that their concerns are being heard.

Evaluation activities are suggested for the end of each day of the first week. You may want to use other activities as well. The following are some activities that could be adapted for use in this training.

Review the Day’s Objectives: Ask participants to take a blank piece of paper and to write their answers to the following:

- On a scale of 1 – 5, (with 5 being “maximum possible,”) to what extent were each of the day’s learning objectives met?
- What suggestions do you have for the next day of this training?

Collect the responses and review them before the next day.

Written Evaluations: To evaluate how effective the day was for participants, ask them to take a few minutes to write their thoughts about these questions. Ask:

- What was most useful for you today?
- What was most difficult? What suggestions do you have for overcoming this difficulty?
- What suggestions do you have for tomorrow?

Collect the responses and review them before the next day.

Role-play: Ask participants to role-play an illustration of a valuable lesson that they learned today, or ask them to draw a picture of something valuable that they learned during the day, and then to explain it to the group afterward.

Temperature Check: Find out about people’s “affect,” or how they are feeling. To model an evaluation technique that elicits feedback about feelings, ask participants to write down one or two words that best describe how they are feeling at that moment and then to share it with the rest of the group if they want to.
Guided Imagery: Ask participants to close their eyes and think back to the beginning of the day. Ask them to think about how they arrived at or began the activity you are evaluating. Ask them some of the following questions to give them an opportunity to think about the cognitive, attitudinal, and behavioral aspects of the activity that you are evaluating. Give participants a chance to think about each question as you ask it before moving on to the next question. No responses are required from participants: the guided imagery helps them reflect, not analyze.

- What have you felt during the experience? Did your feelings change from the beginning until the end? What surprised you? Were there any disappointments? How about laughter?

- What new skills did you develop? Did you have a chance to practice them? What was that like?

- Was there a nugget of new information about [the topic] that you gleaned from the activity? How would you describe it to someone who was not here?

Physical Continuum: Ask participants to think about a statement such as: “Today, I experienced significant change in my understanding of infection control.” Ask participants to stand at one end of the room if they strongly agree with the statement, at the other end of the room if they strongly disagree, or to choose a place somewhere in between that represents their feelings. Ask a few participants to discuss why they placed themselves where they did. Note: This is a good technique to use when controversial subjects arise, and it is important for everyone to see how everyone else feels or thinks about a topic. It can be used to clarify values or to help people reflect and share their learning.

Ask them to move to the continuum and to stand at one end of the room if they notice “significant change,” or to place themselves at the other end of the room if they notice “no change.” They can choose a place anywhere in between the two that represents their feelings. Ask a few participants to discuss why they placed themselves where they are.

Paper Fight: Ask each person to take a piece of paper and to write a question on it that will help evaluate how well the day’s (or workshop) objectives have been met. (For example, a participant might write “Name and describe three alternative positions for labor.”) When each person has written a question, ask them to make a ball out of the paper. Then ask them to stand up, facing one another in equally divided teams.

Explain that they will “fight” one another with the paper balls, each team throwing the balls at the other team until the facilitator says “Stop.” The goal is to get as many paper balls on the other team’s side as possible.

When everyone is ready, say, “On your mark, get set, GO!” and watch the paper fight for a few minutes. After about a minute, call “Time!”
Ask the two teams to collect their paper balls and to count the number that are on both sides. The team with the fewest balls on its side “wins.” Instruct the teams to open up their papers and to read the question silently. Then, the “winning” team asks the other team one of the questions, and the other team must correctly answer it to the satisfaction of both teams and the facilitator. Continue, with both teams asking and answering questions in turn until all questions have been asked and answered.

The following are some daily evaluation activities developed by EngenderHealth:

**Daily Feedback Exercise A:**

Ask participants to write a one- or two-sentence response to one or both of these questions. Collect the written responses.
1. What was not clear to you in any of today’s sessions?
2. How could we improve the training tomorrow?

**Daily Feedback Exercise B:**

Read one or more of the statements below, and ask participants to write a few words to finish each statement. Collect the written responses.

1. Tomorrow, I hope that the trainer....
2. I think we are spending too much time on ....
3. I think we are not spending enough time on....
4. At the end of today’s session, I felt (write one word).
5. I wish that the trainer would....

**Daily Feedback Exercise C:**

Give each participant a piece of paper with the three faces below printed on it (a smiling face, a neutral face and a frowning face). Before they leave the room for the day, ask participants to put a mark below the face that best describes how they feel about the day.

😊  😐  🙁
# Family-Centered Maternity Care Curriculum – Training Schedule

## WEEK 1: DIDACTIC

<table>
<thead>
<tr>
<th>TIME</th>
<th>DAY 1</th>
<th>DAY 2</th>
<th>DAY 3</th>
<th>DAY 4</th>
<th>DAY 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00</td>
<td>(For training cohort only)</td>
<td>Host Team</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>11:00</td>
<td>Break</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>(Lecture for large audience)</td>
<td></td>
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<tr>
<td>13:00</td>
<td>Lunch</td>
<td></td>
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<tr>
<td></td>
<td>9. Active Management of the Third Stage of Labor</td>
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</tr>
<tr>
<td>15:45</td>
<td>Break</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>13. Postpartum Care of the Mother</td>
<td></td>
<td></td>
<td>23. Post-Test</td>
</tr>
<tr>
<td>17:45</td>
<td>Evaluation Activity</td>
<td></td>
<td></td>
<td></td>
<td>24. Evaluation and Reflection for Week 1</td>
</tr>
<tr>
<td>18:00</td>
<td>Steering Committee</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### WEEK 2: CLINICAL PRACTICE

<table>
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<th>DAY 3</th>
<th>DAY 4</th>
<th>DAY 5</th>
<th>DAY 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEAMS A-B</td>
<td>TEAMS C-D</td>
<td>TEAMS A-B</td>
<td>TEAMS C-D</td>
<td>TEAMS A-B</td>
<td>ALL TEAMS</td>
</tr>
<tr>
<td>Attend Maternity’s Morning Case Conference</td>
<td>Morning Conference</td>
<td>Morning Conference</td>
<td>Morning Conference</td>
<td>Morning Conference</td>
<td>Prepare for conference</td>
</tr>
<tr>
<td>Change birthing rooms</td>
<td>Change birthing rooms</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attend births and conduct postpartum rounds</td>
<td>Attend births and conduct postpartum rounds</td>
<td>Attend births and conduct postpartum rounds</td>
<td>Attend births and conduct postpartum rounds</td>
<td></td>
<td>TEAMS C-D</td>
</tr>
<tr>
<td>Do learning activities during down time</td>
<td>Do learning activities during down time</td>
<td>Do learning activities during down time</td>
<td>Do learning activities during down time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meet with local staff at end of shift to transfer cases</td>
<td>Meet with local staff</td>
<td>Meet with local staff</td>
<td>Meet with local staff</td>
<td>Meet with local staff</td>
<td>Conference with maternity staff</td>
</tr>
</tbody>
</table>

- Clients describe experience
- Report results of questionnaires
- Trainees describe experience

**Evaluation of Week 2**

### Notes:
- On Days 1-4, each team is on duty for 24 hours and off the next 24 hours. On Day 5, each team gets a 12-hour shift. In total, each team gets 60 hours of clinical practice.
- During each shift, two teams are on duty.
- Clinical Week should start on a Sunday so that the final conference can take place on a Friday.
- 4 teams each include a mix of midwives, physicians and neonatologists, plus 2 co-trainers.
- For learning activities during down time, materials will be provided to trainers, including short stand-alone modules. Topics are suggested for specific days. The modules should be used at the discretion of the trainers and the team, depending on time available between cases.
Learning Objectives

By the end of the FCMC training, participants will be able to:

- define family-centered maternity care.
- describe some of the feelings and events a woman experiences when giving birth in a typical maternity setting, and contrast them with her experience of a family-centered birth.
- explain the benefits of ambulation and position change during labor.
- demonstrate several positions a woman may use during labor.
- demonstrate how to actively encourage a woman to try alternative positions during labor.
- explain the benefits of providing a woman with continuous support by a companion during labor.
- demonstrate the use of nonpharmacologic pain alleviation practices during labor, including movement, counterpressure, superficial heat and cold, touch and massage, music and audio-analgesia, and attention-focusing and distraction.
- explain the evidence regarding the following practices for labor and birth: routine episiotomy, routine enema, shaving of pubic hair, continuous electronic fetal heart rate monitoring, cesarean section, inducing labor, eating & drinking during labor.
- explain the advantages and disadvantages of active management of the third stage of labor.
- demonstrate clinical skills for conducting pelvic exams, managing labor challenges, and neonatal resuscitation.
- explain why the partograph is useful during labor and delivery.
- demonstrate how to record data on and read the partograph.
- explain the meaning of the action and alert lines on the partograph.
- describe the following FCMC practices for newborn care and explain the major evidence supporting them: prevention of hypothermia, skin to skin care, rooming in, and early exclusive breastfeeding.
- list the forms of care a mother needs during the first few hours postpartum.
- list the communication skills required in health care.
- demonstrate how to counsel a family about FCMC.
- list common infections and how to prevent them in the maternity.
- explain the characteristics of puerperal sepsis and how to prevent it.
- describe four infection control practices that are supported by evidence.
- explain how to conduct FCMC practices while still preventing infection.
- explain the importance of evaluation as part of program implementation.
- fill out the FCMC Continuous Quality Improvement forms correctly and explain them to others.
- list conditions that support or impede change.
- explain Lewin’s model of the stages of change.
- list the supports for and obstacles to implementing FCMC in their own maternities.
- write an action plan for implementing FCMC in their own maternities.
## Materials List

<table>
<thead>
<tr>
<th>Session</th>
<th>Materials Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Welcome and Introductions</td>
<td>Host Team Sign-Up Sheet</td>
</tr>
<tr>
<td>2. Pre-Test</td>
<td>Handout: “Pre-Test”</td>
</tr>
<tr>
<td>3. Introduction to FCMC</td>
<td>Video(s) of FCMC birth</td>
</tr>
<tr>
<td></td>
<td>VCR</td>
</tr>
<tr>
<td></td>
<td>ACNM slides</td>
</tr>
<tr>
<td></td>
<td>slide projector</td>
</tr>
<tr>
<td>4. Attitudes toward Maternity Care</td>
<td>none</td>
</tr>
<tr>
<td>5. Alternative Positions for Labor and Birth</td>
<td>chair</td>
</tr>
<tr>
<td></td>
<td>mat or cloth</td>
</tr>
<tr>
<td></td>
<td>ACNM slides</td>
</tr>
<tr>
<td></td>
<td>slide projector</td>
</tr>
<tr>
<td>6. Support during Labor</td>
<td>ACNM Slides</td>
</tr>
<tr>
<td></td>
<td>slide projector</td>
</tr>
<tr>
<td>7. Nonpharmacologic Pain Relief</td>
<td>Towels</td>
</tr>
<tr>
<td></td>
<td>hot water bottle</td>
</tr>
<tr>
<td></td>
<td>cassette player and music</td>
</tr>
<tr>
<td>8. Evidence-based Labor and Birth Practices</td>
<td>cards for group assignments</td>
</tr>
<tr>
<td>9. Active Management of the Third Stage of Labor</td>
<td>none</td>
</tr>
<tr>
<td>10. Clinical Skills Practice</td>
<td>Pelvic model</td>
</tr>
<tr>
<td></td>
<td>doll</td>
</tr>
<tr>
<td></td>
<td>bag and mask</td>
</tr>
<tr>
<td></td>
<td>Handout: “Labor Challenges”</td>
</tr>
<tr>
<td>11. Partograph</td>
<td>Handout: “Partograph”</td>
</tr>
<tr>
<td></td>
<td>overhead of blank partograph or large laminated partograph</td>
</tr>
<tr>
<td>12. Newborn Care</td>
<td>slides or video of FCMC newborn care if available</td>
</tr>
<tr>
<td></td>
<td>transparencies</td>
</tr>
<tr>
<td></td>
<td>slide projector</td>
</tr>
<tr>
<td></td>
<td>VCR</td>
</tr>
<tr>
<td></td>
<td>overhead projector</td>
</tr>
<tr>
<td>13. Postpartum Care of the Mother</td>
<td>Role cards</td>
</tr>
<tr>
<td>14. Childbirth Education</td>
<td></td>
</tr>
<tr>
<td>16. Infection Control and FCMC</td>
<td>Transparencies, overhead projector</td>
</tr>
<tr>
<td>17. Infection Control Case Study</td>
<td>none</td>
</tr>
<tr>
<td>18. Evaluation of FCMC</td>
<td>none</td>
</tr>
</tbody>
</table>
## Implementation

<table>
<thead>
<tr>
<th>Implementation</th>
<th>Handout/Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>19. Strategies for Change</td>
<td>none</td>
</tr>
<tr>
<td>20. Situation Analysis</td>
<td>Handout: “Situation Analysis”</td>
</tr>
<tr>
<td>22. Plan for Clinical Week</td>
<td>Flip charts with Clinical Week teams</td>
</tr>
<tr>
<td>23. Post-Test</td>
<td>Handout: “Post-test”</td>
</tr>
<tr>
<td>24. Evaluation and Reflection</td>
<td>Week 1 Evaluation form</td>
</tr>
</tbody>
</table>

## Clinical Week Modules

<table>
<thead>
<tr>
<th>Clinical Week Modules</th>
<th>Materials Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic supplies and equipment for the week include:</td>
<td>fetascopes&lt;br&gt;sterile single exam gloves&lt;br&gt;sterile gloves (paired) various sizes&lt;br&gt;non-sterile gloves, masks&lt;br&gt;eye shields or goggles&lt;br&gt;lubricant&lt;br&gt;local anesthesia&lt;br&gt;various suture materials&lt;br&gt;sterile needles and syringes&lt;br&gt;neonatal resuscitation bag&lt;br&gt;antibacterial soap</td>
</tr>
<tr>
<td>A. Birthing Rooms</td>
<td>Equipment for birthing room (may include birthing balls, curtains for windows, etc.)</td>
</tr>
<tr>
<td>B. Post-test Review</td>
<td>Participants’ corrected Pre- and Post-tests&lt;br&gt;Answer key for test</td>
</tr>
<tr>
<td>C. Family Counseling on FCMC</td>
<td>none</td>
</tr>
<tr>
<td>D. Clinical Skills Practice</td>
<td>Pelvic model; doll; bag and mask; Handout: “Labor Challenges” (from Day 2)</td>
</tr>
<tr>
<td>E. Review of Scientific Literature</td>
<td>Readings in Participant’s Manual (and any supplementary readings provided by trainers)</td>
</tr>
<tr>
<td>F. Partograph</td>
<td>Notes on labor from a clinical case&lt;br&gt;Partograph from a clinical case&lt;br&gt;Several copies of a blank partograph&lt;br&gt;Partograph exercises (from Day 3)</td>
</tr>
<tr>
<td>G. Infection Control</td>
<td>List of questions from case study (Day 4)</td>
</tr>
<tr>
<td>H. Management of Puerperal Sepsis</td>
<td>Handout: Management of Puerperal sepsis</td>
</tr>
<tr>
<td>I. Preparation for Final Conference</td>
<td>CQI forms filled out over the week&lt;br&gt;Calculators, paper and pencils for planning and analyzing data</td>
</tr>
<tr>
<td>WHO Modules</td>
<td>WHO Modules on OB complications</td>
</tr>
<tr>
<td>Day 6</td>
<td>Evaluation form, Week 2</td>
</tr>
</tbody>
</table>
Session 1: Welcome and Introductions

Time: 1 hour 30 minutes
Materials: Host Team sign-up sheet
Preparation: Write flip charts; post Host Team sign-up sheet
Methods: Small group activity
Learning Objectives: By the end of the session, participants will be able to:
- describe the training schedule and logistical arrangements.

Welcome participants to the training. Present the goal (written on a flip chart):

<table>
<thead>
<tr>
<th>Goal of the FCMC Training:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• to improve the health and well-being of mothers and babies by preparing health practitioners to implement family-centered maternity care (FCMC) practices in their hospitals.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Expectations for participants:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• to implement FCMC practices in their work;</td>
</tr>
<tr>
<td>• to help the maternity administration make organizational changes that support implementation of FCMC;</td>
</tr>
<tr>
<td>• to participate in the evaluation of FCMC implementation by using the evaluation questionnaires, and helping colleagues to do so;</td>
</tr>
<tr>
<td>• to share information informally with colleagues about FCMC.</td>
</tr>
</tbody>
</table>

Tell participants that other invited guests from the maternity and oblast will be joining them for an introductory lecture later in the morning. At that time, they will learn more about the history and purpose of the training. However, to begin with, they will have a chance to meet each other.

Introductions:

Ask participants to pair up with someone they do not know, such as a staff person from another maternity.
- If desired, you may help participants pair up by asking them to form two lines, one for each maternity, and then to pair off in order.
- Alternatively, you can cut up postcards and give out the left half of postcards to people from one maternity, the right half to people from the other maternity. Participants then seek out their “other half” for the introductions.

Ask the pairs to interview each other, taking no more than 10 minutes. They should find out the following information (written on a flipchart) and be prepared to introduce their partners to the class.
1. Name
2. Position [job] and Maternity
3. Past experience with Family-Centered Maternity Care, if any
4. Expectations for this training

(Note: To save time with a large group, you can save time by asking participants to introduce themselves to the group with the answers to these questions; or by asking for one-word answers to question 4.)

Reconvene the class and ask for volunteers to introduce their partners. List participants’ expectations on a flip chart.

When everyone has been introduced, review the listed expectations to explain which ones will be met, and which may not.

**Schedule and Logistics:**

Ask participants to turn to the training schedule in their manuals. Go over the week’s schedule in brief, answering any questions. Go over the first day’s schedule in more detail.

Review the day’s learning objectives (posted on a flip chart and also found in the participants’ manuals).

Make any necessary announcements about logistics (breaks, meals, locations, etc.).

**Host Team and Steering Committee:**

Introduce the idea of the Host Team and Steering Committee. Emphasize that these are mechanisms for providing a “voice” to participants, and that the trainers’ expectations are that most participants will volunteer for one Host Team/Steering Committee over the 5-day period.

The following information is found in the participants’ manuals:

A Host Team is a group of participants that assumes responsibility for helping trainers with the daily management of the Seminar.

The tasks of the Host Team are:
- Help make sure that room is arranged in the mornings
- Conduct icebreakers or energizers after lunch or when energy is low
- Each morning, the Host Team opens the day by reviewing the previous day’s activities and reporting on the results of any end-of-day evaluations that were conducted.
• Host Team members also give feedback to the trainers on behalf of other participants to help them think about adjustments for the next day. This takes place during a daily Steering Committee meeting.

The Steering Committee:
• meets every afternoon for about 30 minutes after the sessions are over.
• Members are the trainers, course organizers/directors, and the Host Team.
• The purpose of the meeting is to find out what facilitators and participants liked about the day’s sessions, and what they would change for upcoming sessions. This includes content, methods and logistics of the training.

Emphasize that Host Team members are important to the Steering Committee because they represent the entire group of participants. They are the “spokespeople” for course participants.

During the Host Team presentation at the start of the day, these representatives report to the class about what was discussed during the previous day’s Steering Committee. If an evaluation activity was carried out, they also summarize the results of the evaluation.

Post a Host Team **Sign-Up Sheet** on the wall, preferably close to the door that most people use to enter and leave the room. Make it as convenient as possible for participants to read and sign the Sheet.
Session 2: Pre-Test

Time: 30 minutes
Materials: Handout: “Pre-Test”
Methods: Test
Learning Objectives: By the end of the session, participants will be able to:
- identify areas of the FCMC curriculum that are unfamiliar to them.

Introduce the Pre-Test. Explain that participants will take the same test again at the end of the week. Then they will have time to go over the answers with trainers during the Clinical Week, so that they can ask questions about any topics that are still unclear.

Explain that this test will be used to:
- help participants identify the areas of FCMC that are unfamiliar and about which they want to learn more;
- allow participants to assess their own learning by comparing results from the pre- and post-tests;
- show trainers the levels of experience in the training cohort, as well as the areas on which they need to spend the most time;
- help course organizers and trainers evaluate the effectiveness of the training;
- Results will NOT be shared with their employers, only with the trainers.

Tell participants not to worry if they do not know some answers or if some terms are unfamiliar. Explain that they will be learning about them over the course of the week.

Distribute the Pre-Test and give participants 20 minutes to complete it individually.

When completed, take up the tests, making sure that participants have written their names on the tests so that they can be returned. On the evening of Day 1, review the tests with all trainers and discuss any areas that need particular attention or less time than expected.
Session 3:
Introduction to Family-Centered Maternity Care: Evidence-Based Medicine

Time: 1 hour 45 minutes
Materials: Video of FCMC birth; ACNM slides
Preparation: Select clips of FCMC births from video and cue tapes to correct place
Methods: Lecture, discussion

Learning Objectives: By the end of the session, participants will be able to:
- state the objectives of the FCMC training
- list the expectations for how participants will use the knowledge and skills they learn in the training.
- define family-centered maternity care.
- define evidence-based medicine
- list resources for learning more about evidence-based maternity care

This introductory lecture is intended for a large audience of maternity administrators and staff, not only for the training participants.

Welcome participants and guests to the training. Optional: invite an administrator from the host maternity to make brief comments.

The past four decades have been a time of significant change for maternity care practices. Simultaneous medical and social dynamics have led to increased attention to the need for a balance between technology and the human element when providing maternity care. The result is an approach to care known as Family-Centered Maternity Care (FCMC).

- FCMC is defined as care which emphasizes the multiple needs of women and uses education and family involvement as major tools for engaging the woman in the process of her own care.
- FCMC is a dynamic model of care with nurse-midwifery philosophy and practice as the foundation.
- FCMC is evidenced-based, using current research that has demonstrated the true effectiveness of maternity care practices.

The first FCMC Training of Trainers curriculum was developed and successfully implemented in Ukraine (1996) through a collaborative effort by MotherCare/John Snow, Inc. and the American College of Nurse-Midwives. The FCMC Training of Trainers (FCMC TOT) curriculum has been adapted and implemented in Moldova (1997) and Ukraine/Crimea (1998). Based on the successful experiences of the FCMC Projects in Ukraine, Moldova and Crimea, FCMC was introduced in Russia in 2000 by the WIN Project.

The Women's and Infants' (WIN) Health Strategy Project in Russia is a USAID-funded project with active support and cooperation from the Russian Ministry of Health.
The objectives of the WIN Project are to increase the access, demand and quality of selected maternal and infant health services. The WIN Project, under the direction of John Snow, Inc., incorporates an integrated approach to meet these health objectives. FCMC is a key element in this approach. The implementation of FCMC practices will give Russian women's health care providers the ability to significantly improve the quality of maternity services and thus the health and well-being of the mothers and babies in their communities.

### Goal of the FCMC Training:
- to improve the health and well-being of mothers and babies by preparing health practitioners to implement family-centered maternity care (FCMC) practices in their hospitals.

### Expectations for participants:
- to implement FCMC practices in their work;
- to help the maternity administration make organizational changes that support implementation of FCMC;
- to participate in the evaluation of FCMC implementation by using the evaluation questionnaires, and helping colleagues to do so;
- to share information informally with colleagues about FCMC.

Explain that the day will begin with a presentation for both training participants and other hospital staff members, providing an overview of family-centered maternity care.

Present the **definition** of FCMC:

**Family-centered maternity care (FCMC)** is care designed to meet the informational, social, emotional, comfort and support needs of normal pregnant women (those without complications or co-existing disease) and their families during pregnancy and childbirth.

FCMC emphasizes education and preparation to enable the pregnant woman to:
- take a knowledgeable, active role in promoting her own health and that of her fetus and baby;
- encourages involvement of the pregnant woman’s family members or other persons of her choice in her preparation for childbirth and motherhood and invites their supportive presence during labor and birth;
- avoids unnecessary use of invasive, uncomfortable and/or restrictive procedures;
- manages birth as a process requiring cleanliness but not sterility;
- encourages women to be active during labor – to sit up, walk assume whatever position is comfortable, change positions frequently, avoiding the supine and lithotomy positions and supporting women to assume squatting or semi-upright positions during second stage contractions;
- provides skin-to-skin contact between the mother and newborn immediately after the birth,
- and supports breast-feeding and rooming-in.
This introduction should be followed by two guest presentations.

1. **WIN:** Short presentation on the **Women and INfants’ (WIN) Health Project** and the progress of the FCMC initiative, given by a WIN staff member. Review the goals of the project, how the FCMC training fits within WIN’s mission, history of the FCMC training, and outcomes so far. It may include the following (available on transparencies):

   - Project goals:
     - Increase access
     - Increase demand
     - Increase quality
       - Overarching principles:
     - Family-centered maternity care
     - Evidence-based care
     - Continuous quality improvement
     - WIN’s goals for FCMC:
     - To integrate FCMC philosophy and practices into the maternity care services at selected WIN facilities.
     - To create FCMC model sites.
     - To create FCMC training sites to disseminate and sustain the initiative
       - FCMC Training of Trainers created a core group of trainers from maternities in Perm, Berezhniki and Vekily Novgorod. This cohort of trainers will facilitate this November training and those in the future.

2. **Regional MCH and FCMC Trends:** Short presentation on maternal and child health and family-centered maternity care in the region, given by a staff member of the host maternity, oblast administration, or other appropriate person. This presentation should give the audience an overview of the status of MCH in the region, and a sense of how FCMC practices have been implemented (or not) thus far in the area.

   Give the following lecture as an overview of FCMC. Use the ACMN photo slides of women giving birth.¹ (The set of slides is numbered, and slide numbers for relevant photos are given in parentheses.)

   "Family-Centered Maternity Care" is care that is designed to meet the informational, social, emotional, comfort and support needs of normal pregnant women and their families during pregnancy and childbirth. [Slide #2]

¹ Information adapted from “Family-Centered Maternity Care” Presentation by Pauline Glatileider, CNM, MN, American College of Nurse-Midwives.
Family-centered care during the prenatal period emphasizes education which enables the woman to take a knowledgeable and active role during her pregnancy in order to promote her own health and that of her fetus. Education is of paramount importance from the first prenatal visit when one explains the process of prenatal care to the last when one reviews the signs and symptoms of labor. Involvement of the mother's family or others of her choice is strongly encouraged. [Slide #3]

A woman should be involved in the decision-making process about her own care. She can be involved in prenatal care by weighing herself and being told her fundal measurements. Significant others (family members and other companions) can be involved in care.

When providing prenatal care, continuity of care with the same provider is an important goal. A consistent relationship between the woman and the midwife or physician develops mutual trust and respect. Listening to a woman's concerns, providing real information and supporting her choices based on her individual needs is a hallmark of this care. [Slide #4]

Oakley and colleagues (1992) reviewed the literature that documented the views and experiences of women who use antenatal services. [Slide #5]

The following were consistently identified as key elements:

a. continuity of care within her community,
b. sensitivity to women's social needs and responsibilities,
c. the importance of listening and giving real information.

Women in the study expressed dissatisfaction with being treated during childbirth as if they were on a “conveyor belt,” part of a “mechanistic process” rather than experiencing an important, individual life event.

[Slide #6] Further, Oakley articulated a summation of women's views as:

a. pregnancy is not an illness;
b. women are human beings;
c. obstetrics should be scientific; and,
d. happiness is an important measure of good obstetrical care.

The time for labor and birth is a day anxiously awaited by all. And while being a relatively small segment of time in a woman's entire life, this is one of the most significant life events which merits respect, support and care. A positive experience during labor and birth can set the stage for successful breast-feeding, maternal-infant bonding, heightened self-esteem and initial confidence in parenting. [Slide #12]

Family centered maternity care during labor and birth has a number of specific components. These range from a specific philosophy to actual practices of care.
Underlying this model of care is the shared belief that birth is a normal and joyous life event. [Slide #13]

Family-centered maternity care encourages institutional policies designed to provide a supportive environment which is private, calm, quiet, with constant attendance by midwife or nurse. [Slide #16]

Role of the midwife:

Clinical experience in the United States and other countries has demonstrated the safety and effectiveness of birthing centers, either within hospitals or free-standing, where normal births are attended by nurse-midwives.

FCMC is one of the hallmarks of midwifery care in the United States. A certified nurse-midwife in the United States is educated in two disciplines - nursing and midwifery. In the U.S., nurse-midwives practice independently within a health care system that provides consultation, collaboration with, or referral to a physician. Nurse-midwives view pregnancy as a normal life event for a woman and her family, rather than as an illness. Thus, family-centered maternity care has always been a part of and supported by midwifery care in the United States.

Midwife-attended births have been shown to be just as safe as those attended by a physician. For example, the nurse-managed in-hospital birth center at Los Angeles County + University of Southern California Women’s Hospital has demonstrated excellent outcomes with less-traditional birthing techniques. The birthing center uses “mixed-risk” criteria for admissions, allowing for the inclusion of some risks such as diabetes, prior cesarean and anemia. Greulich et al studied over 30,000 births attended by nurse-midwives at the birth center from 1981-1992. They found that:

- There were no intrapartum maternal or fetal deaths among all admissions.
- The intrapartum transfer rate averaged 17% and had declined to a low of 7% by 1990.
- The overall primary cesarean birthrate was 1.8% and the operative birthrate was 4%.
- The neonatal intensive care unit admission rate was 1.5%, with a one-week newborn readmission rate of 1.3% among newborns discharged within 12-14 hours.
- 85% of all newborns returned for follow-up care.

Similarly, Rooks et al studied 11,814 women admitted to 84 free-standing birth centers in the United States. They found that:

- 70.7% had minor or no complications;
- 7.9% had serious emergency complications during labor and birth or soon thereafter;
- 15.8% were transferred to a hospital (2.4% emergency transfers)
- The rate of cesarean section was 4.4%;
- No maternal deaths
Overall intrapartum and neonatal mortality rate was 1.3 per 1000 births.

Rates of infant mortality and low Apgar scores were similar to those reported in large studies of low-risk hospital births.

Recipients of family-centered maternity care speak of being empowered throughout the maternity cycle. They speak of the joy and wonder of birth. Women glow with self-confidence and a sense of their newly discovered power-power to care for themselves and their families. Men find an unexpected sense of awe and wonder - of their wives - of the remarkable ability of the human body - and of their own inner strength and gentleness.

[Slide #71]

Ask participants:

- **How do you decide whether a medical practice is effective or not? What convinces you personally that it is a worthwhile thing to do?**

Point out that medical practice has always been based on many different types of information: long-standing practice, tradition, patient or doctor preferences, politics, available resources, etc. However, with information becoming more and more available, medical staff have greater ability to base their policy decisions on scientific research.

Relate responses to the following discussion of evidence-based medicine.

Evidence-based medicine is a branch of medical science that deals with **search, comparison, summarizing** and a wide **dissemination** of **medical evidences and their use for the patient’s benefit**. (Evidence Based Medicine Working Group, 1993).

This is a new approach, direction and **technology of collecting, analysis, summarizing and interpretation of scientific information**. Evidence-based medicine implies an honest, explicable, common sense based **application of the most advanced and up-to-date medical science achievements for the benefit of all patients** (Sackett D.L. et al., 1996).

**The main goal of applying evidence-based medicine** in public health practice is the **improvement of health care quality** with respect to its **safety, efficacy, cost effectiveness** and other important factors.

Evidence-based medicine is a deliberate and coherent **use of interventions whose usefulness has been proved and supported by compelling evidence**.

The evidence-based medicine principles provide an access to scientifically solid and up-to-date information for **optimizing the influence in decision-making of** such common human factors as the physician’s intuition and qualification, authoritative and competent expert opinions, recommendations of trustworthy medical guide-books.

Evidence-based medicine assumes **combining the physician’s personal experience with the best clinical evidence** available in systematized research.
Cochrane Collaboration

Evidence-based medicine is supported and promoted by Cochrane Collaboration – an international non-governmental organization that prepares, maintains and disseminates reliable and up-to-date information on health care interventions. Established in 1992 by J. Chalmers (Chalmers J. et al. 1994), the Cochrane Collaboration currently unites some 3000-member organizations, which cooperate within an international network. The Cochrane Collaboration focuses on the creation of an exhaustive register of all the randomized clinical research, which are needed for systemic reviews of clinical interventions.

- 1973 — British epidemiologist Archie L. Cochrane compiled the first systematic review of clinical interventions.
- The first Cochrane Center was founded in Oxford.

Cochrane Collaboration in figures: 15 centers throughout the world
- 1388 systematic reviews;
- Result: 300 000 randomized clinical studies;
- Critical assessment of systematic reviews published all over the world.

Cochrane Centers

Cochrane Centers support and promote the Cochrane Collaboration contributing institutions. The profile of each center is determined with due account of the interests of the participating institutions and available financial resources. All the centers are supposed to cooperate with each other and support the Cochrane Collaboration. The Centers assist the institutions that intend to compile systemic reviews in different branches of clinical medicine and public health at large. A condition for this collaboration is the publication of systemic reviews in the Cochrane database, which is also disseminated on compact-discs (The Cochrane database of systematic reviews, 1995) and through the Internet. This information can be obtained from the server of the Moscow Center for Evidence-Based Medicine and Pharmacotherapy http://evbmed.fbm.msu.ru/index-r.html and from the official site of the Russian branch of the Cochrane Collaboration http://www.cochrane.ru.

Four Stages in Evidence-based Medicine Practice:
- Formulate clearly the clinical issue/question basing on the patient problem.
- Perform a search of respective articles in the available medical literature.
- Perform a critical assessment of the reliability and usefulness of the information contained therein.
- Use the obtained useful data in clinical practice.

Ask participants to form groups of 2 or 3. They should take 5-10 minutes to answer the following question:
How would you decide that information from a study in the medical literature was reliable?

Reconvene the class and ask for responses. Write answers on a flip chart. Compare to the following grading used by the Evidence-based Medicine Center in Oxford.

**Grading of Reliability of the Information Provided**

A. **High degree reliability** — information is based on the results of a series of independent clinical studies, and the results obtained correspond to those summarized in systematic reviews.

B. **Moderate reliability** — information is based on the results of at least a few independent clinical studies performed for closely related purposes.

C. **Limited reliability** — information is based on the results of one clinical study.

D. **Solid scientific evidence is not available** (no clinical studies performed) — a statement based on expert opinions.

Provide participants with the following handout that gives more detail about grading the reliability of studies.
## Handout: Grading of Recommendation Reliability

<table>
<thead>
<tr>
<th>Recommendation Reliability Grade</th>
<th>Degree of Evidence Convincingness</th>
<th>Course of Treatment/Prevention, Etiology/Damage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1a</td>
<td>Systematic review of randomized controlled studies (trials)</td>
</tr>
<tr>
<td></td>
<td>1b</td>
<td>An individual randomized controlled study (with a narrow confidence interval)</td>
</tr>
<tr>
<td>B</td>
<td>2a</td>
<td>Systematic review of cohort studies</td>
</tr>
<tr>
<td></td>
<td>2b</td>
<td>An individual cohort study</td>
</tr>
<tr>
<td></td>
<td>3a</td>
<td>Systematic review of case-control studies</td>
</tr>
<tr>
<td></td>
<td>3b</td>
<td>An individual case-control study</td>
</tr>
<tr>
<td>C</td>
<td>4</td>
<td>Study cases series</td>
</tr>
<tr>
<td>D</td>
<td>5</td>
<td>An expert opinion without critical assessment or based on physiology, results of a trial or on guidelines</td>
</tr>
</tbody>
</table>

Evidence reliability grade received from different sources diminishes in the following way (Li Wan Po, 1998):

1) randomized controlled clinical study;
2) non-randomized clinical study with concurrent control;
3) non-randomized clinical study with historic data control;
4) cohort study;
5) case-control study;
6) cross-control clinical study;
7) results of clinical observations;
8) descriptions of individual cases.
Evidence-based medicine is not always readily accepted:

**Example 1**
- 12 randomized clinical studies involving over 3000 women patients confirmed effectiveness of corticosteroid therapy in women with premature birth risks (1994).
- However, only 12-18% of women whose newborns weighted 501–1500g after birth had been treated with corticosteroids (USA, 1994).

**Example 2**
- Randomized clinical studies confirmed that a routine use of CT has no advantage as compared to periodic auscultation but results in growing frequency of interventions and, consequently, to morbidity and costs increase (1990).
- But CT is still in wide use even in normal births in maternal clinics all over the world.

Ask:
- What are some of the reasons that maternities do not implement evidence-based practices?

D.A.Grimes’95: five barriers to using evidence-based medicine:
- unreserved acceptance of authoritative opinions;
- adoption of new technologies without critical assessment;
- tendency to agree to current dogmas;
- punctiliousness in medical training;
- dependence of medical practice on uncontrolled presumptions with respect to clinical aspects.

Other issues:
- reluctance to change long-standing practice that is perceived to work well;
- out of date policies are still enforced.

**Appropriate Technologies**
Methods and procedures, equipment that are
- scientifically appropriate,
- adapted to the local needs, and
- accepted by those who apply them.
- Communities can resort to appropriate technologies using the available resources.

**Examples of antenatal and obstetric practices (from the evidence-based medicine viewpoint):**
Electronic monitoring of heart rate in childbirth

- CTG is of no advantage as compared to periodic auscultation but leads to more interventions
  - CTG use – RR 1.49*
  - epidural anaesthesia – RR 1.33*
  - increase – RR 1.26*
  - operative delivery – RR 1.36*
  - evidence confirmed


- CTG is not appropriate in low risk deliveries

Note to facilitator: The detailed study results presented here (e.g. the RR values) may not be a familiar concept to participants. Focus on the major findings of this study and provide the more detailed findings for those participants who ask about them.

Early routine ultrasound screening

- Looks effective
  (if the examiner is experienced) in early diagnostics of fetus developmental anomalies, plural pregnancy and in decreasing labor stimulations in prolonged pregnancies.

- Does not look effective
  Appropriateness (if any) of a routine ultrasound examination has not been established.

Enkin M et al., A guide to effective care in pregnancy and childbirth, 2000

Antepartum care

7 randomized studies - 57418 women:

- 4 antepartum visits to specialists do not worsen the perinatal outcome;
- resource saving;
- women prefer visits to midwives or their family physicians, not to an obstetrician;
- perinatal outcomes do not change.


Three ways to master evidence-based medicine for a busy clinician:


- using evidence-based medicine resume compiled by other medical specialists
  (a book by M.Enking, Reproduction Health Library, WHO RHL, journals of evidence-based medicine – exclude up to 98% of medical literature on clinical issues);

- using evidence-based medicine protocols prepared by other specialists (WHO RHL, www.obgyn.net)
List of recommended clinical publications:

Effective Care in Pregnancy and Labor

Handbook of Effective Care in Pregnancy and Labor

WHO Reproductive Health Library
- 5th edition (2002), contains 70 Cochrane reviews and respective new comments with practical recommendations;
- >15 000 copies of the WHO Library on Reproductive Health disseminated in the developing countries.

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Email: RHL@who.ch
• Enkin provides summary tables listing forms of care that the evidence shows are:

1. beneficial (based on clear evidence from systematic reviews of randomized controlled trials or studies)
2. likely to be beneficial (based on controlled trials or good observational evidence)
3. trade-off between beneficial and adverse effects
4. unknown effectiveness (no data or data of insufficient quality)
5. unlikely to be beneficial (based on controlled trials or good observational evidence)
6. likely to be ineffective or harmful (based on clear evidence from systematic reviews of randomized controlled trials or studies)

Present a summary of a selection of the practices reviewed in Enkin that are relevant to FCMC. Tell participants that those who are staying for the two-week training will learn about the evidence for or against these practices in more detail.

Go over the following key practices that will be covered in the training. Give a brief explanation of each as time allows. Emphasize that this is only a small selection of the practices summarized by Enkin.
### Beneficial Practices

- Emotional and psychological support in labor and birth
- Maternal mobility and choice of position in labor
- Free mobility during labor to augment slow labor
- Consistent support for breast-feeding mothers and unrestricted breast-feeding
- Active versus expectant management of third stage of labor

### Likely Beneficial Practices

- Midwifery care for women with no serious risk factors
- Antenatal classes for women and their partners who want them
- Respecting a woman’s choice of companions during labor and birth
- Presence of a companion on admission to the hospital
- Giving women as much information as they desire
- Alternative methods of pain relief in labor such as: maternal movement and position change, attention focusing and distraction
- Women’s choice of position for second stage of labor and/or giving birth
- Early infant-mother contact

### Practices Unlikely to be Beneficial

- Routine involvement of physicians/obstetricians in the care of all women during pregnancy and childbirth
- Not involving physicians in the care of women with serious risk factors
- Routinely withholding food and drink from women in labor
- Routine intravenous infusion in labor
- Restriction of sibling visits to babies in hospitals
- Routine use of ultrasound for fetal measurement in late pregnancy

### Ineffective or Harmful Practices

- Routine enema in labor
- Routine pubic shave in preparation for delivery
- Electronic fetal monitoring without access to scalp sampling during labor
- Rectal exam for labor progress
- Routine or liberal use of episiotomy for birth
- Routine lithotomy or supine position in second stage of labor
- Limitation of suckling time for breast-feeding
- Routine restriction of mother-infant contact
- Routine hospital nursery care
Video

To make these practices more concrete for the audience, introduce a video of an FCMC birth. Explain that this video will show some of the practices outlined in the lecture.

Before the training, select one or more video clips lasting no more than 10 minutes total, that show different aspects of FCMC care. If video is in English, turn off sound and explain practices as they are shown.

The Impact of Technology on Maternal and Infant Health and Well-being:

- Countries with the greatest use of obstetric technologies are associated with the highest per capita spending.
- Countries with the highest cost and the greatest use of obstetric technologies are associated with the poorest immunization rates.
- Countries with the highest cost and the greatest use of obstetric technologies are NOT associated with the best infant mortality rates.

Give examples from specific countries demonstrating these trends:

Sweden:
- Health care access for all
- Primarily hospital births
- Infant mortality rate is 4/1000 live births
- Maternal mortality rate is 5/100,000 live births
- Boasts a very high rate of prenatal visits (average 14 per pregnancy) conducted by midwives.

Netherlands:
- Health care access for all
- 46% of births attended by midwives
- 32% of births at home
- IMR is 5/1000 live births
- MMR is 7/100,000 live births
- Uses national risk assessment criteria for determining type of provider and site of care

United Kingdom:
- Health care access for all
- Majority hospital births with midwives
- IMR is 6/1000 live births
- MMR is 7/100,000 live births
- undergoing major evaluation and revision of their current MCH practices
United States:
- Inadequate access to health care for a large portion of the population
- Primarily hospital births, 6% midwife-attended
- High use of technology with high cesarean section rates
- In the midst of a major health care reform for policy and provision of care
- IMR is 7/1000 live births
- MMR is 8/100,000 live births

Obstetric technologies:
- Obstetrician specialty care
- High-risk maternity hospital care
- Cesarean section
- Pitocin
- Fetal heart rate monitoring
- Continuous epidural anesthesia

The extensive and routine use of obstetric technologies in normal pregnancy has NOT been associated with the best outcomes.

The routine use of specialized care is associated with more frequent interventions, but NOT with improved outcomes. Data from the Netherlands:

<table>
<thead>
<tr>
<th>Technology</th>
<th>Nurse-midwife care</th>
<th>OB care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cesarean section</td>
<td>5.9%</td>
<td>16%</td>
</tr>
<tr>
<td>Oxytocin use</td>
<td>4.5%</td>
<td>21.3%</td>
</tr>
<tr>
<td>Perinatal mortality</td>
<td>0.7%</td>
<td>0.7%</td>
</tr>
</tbody>
</table>

FCMC for all pregnancies, together with the selective use of specialization and technology, is associated with the best outcomes. Data from the state of California in the United States:

<table>
<thead>
<tr>
<th></th>
<th>Birth Center</th>
<th>State Hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routine care by obstetrician specialist</td>
<td>5%</td>
<td>96%</td>
</tr>
<tr>
<td>Cesarean section</td>
<td>13%</td>
<td>23%</td>
</tr>
<tr>
<td>Hospital stay</td>
<td>1.3 days</td>
<td>2.2 days</td>
</tr>
<tr>
<td>Low birthweight</td>
<td>4.7%</td>
<td>5.9%</td>
</tr>
<tr>
<td>Perinatal mortality</td>
<td>0.8%</td>
<td>1.1%</td>
</tr>
</tbody>
</table>

Discuss the benefits and risks of the following technologies.
Increased cesarean section:
Positive impact: Life-saving for unequivocal indications such as placenta previa and transverse lie.
Negative impact: Despite improved skills and outcome, cesarean sections still have higher morbidity and mortality risks for the mother, including a 2-4 times higher rate of maternal mortality than vaginal birth.

Epidural anesthesia:
Positive impact: Pain relief for women. Recent trials show no significant increase in cesarean rates.
Negative impact: Longer first and second stage labor, increased incidence for fetal malposition, increased use of oxytocin and operative vaginal delivery.

Oxytocin stimulation:
Positive impact: The use of oxytocin to augment labor with PROM, if successful, may subsequently reduce the rate of infection. When accompanied by amniotomy, oxytocin use can reduce morbidity in cases such as post-datism.
Negative impact: Hyperstimulation with oxytocin can lead to reduced fetal oxygenation. There is a correlation with increased jaundice in the newborn.

Risk Assessment

- Risk assessment is a method of evaluating pregnant women for medical or behavioral factors that affect their health status. It may affect management (where and by whom care is given).
- Continuous process performed throughout the prenatal course and during labor and birth.
- Cannot reliably predict which women will develop labor and birth complications.

Show transparencies to illustrate this point:
- 10% of pregnancies are associated with significant complications.
- 75% of Hi-Risk patients are uncomplicated, and 50% of complications occur in patients who were Low-Risk.

Overview of Training Schedule

Conclude the lecture by making an overview of the next two weeks so that staff of the host maternity know what to expect in their maternities:

Midwives, physicians and neonatologists from the participating maternities will attend five full days of classroom-based training during which they will learn about FCMC practices, the evidence supporting them, and how to perform them. Then they will take part in five days of clinical practice in the host maternity.

Briefly explain the arrangements for the clinical week, including:
- The transformation of rooms into birthing rooms;
- The shifts that will be on duty;
- Exemptions that have been arranged with the oblast to allow practices that conflict with san-epi policies;
- Continuing relationship of the WIN Project with the participating maternities after the training.

Some of this information, particularly regarding protocols for transfer of care, should be covered for host maternity clinical staff in a more thorough orientation at another time.
Session 4:  
Attitudes Toward Maternity Care

Time: 1 hour 45 min.  
Materials: none  
Methods: Case study  
Learning Objectives: By the end of the session, participants will be able to:  
- explain their attitudes toward common childbirth practices.  
- describe some of the feelings and events a woman experiences when giving birth in a typical maternity setting, and contrast them with her experience of a family-centered birth.

The scenario used in this session describes a typical childbirth experience through the eyes of the mother. Use this scenario to find out what participants’ attitudes are toward traditional maternity care, and to help them consider how this model of care affects the mother.

Distribute the case study “Through Her Eyes.” Ask participants to form small groups and read the case study together. Give the groups 30 minutes to answer the questions given at the end of the case study.

<table>
<thead>
<tr>
<th>Through Her Eyes</th>
</tr>
</thead>
</table>
| Anna is a 24-year-old woman, gravida 3 para 0 at 38 and 3/7 weeks. She attended 12 antenatal care visits but no antenatal classes. Her husband Misha never accompanied her. She saw several different doctors and midwives on her visits. She was treated for a urinary tract infection at 24 weeks gestation.  
  
Anna arrives at the maternity alone, in the first stage of labor. The midwife takes her admitting history, measures the fundus and listens for the fetal heart rate. Anna is given an enema, shave and antiseptic shower. The physician arrives and gives her a vaginal exam, during which Anna is very tense. The cervix is totally effaced/1cm/ 3/5 station / vertex and posterior. There is no bloody show. The membranes are intact. The physician tells her only that she is early, but she must stay at the hospital.  
  
Anna is admitted to a large room with three other women who do not speak to her. One moans, while the other is silent. Different midwives come to listen to the fetal heart rate and then leave. One midwife stays in the room, but seems to daydream while looking out the window. Anna can hear the sounds of labor and birth from another room – a woman screaming, a baby crying.  
  
A midwife comes in and tells Anna she must go and be examined. A different physician examines her. He tells Anna that the labor is too slow, so she must be given medication to increase her contractions. Anna wonders if something is wrong. |
The hours seem to pass slowly. Her arm aches from being held out straight for the intravenous infusion. Anna hears other women giving birth in other rooms. Her own pain increases. When will this end? She does not understand. She remains silent as the busy staff checks her periodically. She continues to hurt.

Finally she cannot take it anymore and cries out. A midwife and doctor come. They say it is not time. The physician orders some medication for her pain. Anna drifts off. Her back continues to hurt.

Anna pushes with all her might. It is taking so long. She does not recognize the faces around her. The voices pierce through saying “Push, harder!” Anna feels the stretch and burn. Then her baby is out. The baby cries, is put on her chest briefly, and then is suddenly gone. She wonders, “Where is my baby?”

Anna is moved to a narrow stretcher. The midwife brings the baby back, fully swaddled. She squeezes some colostrum from Anna’s breast, and places the baby upside down over Anna’s breast to lick it briefly. She cannot see him well. Then the midwife takes him away again.

In the hallway, Anna has some soup. An ice pack is on her abdomen. It is strangely quiet now. Everyone has given birth. But where is her baby? Where are all the babies?

The midwife says the babies will go to the postpartum rooms with the mothers after the two hour wait. The mothers should rest now and gain some strength. Their babies are wrapped and waiting to go. It won’t be long. Anna lays back. She is next to go to her room.

1. **What do you think Anna is feeling during her labor and birth?**
2. **Is Anna’s experience typical in your maternity? Why or why not?**
3. **What do you think of the care Anna received during her labor and birth? What was good about it? What would you change? Explain why.**

Ask the groups to report back.

To start the discussion, ask the following questions:

1. **What do you think Anna is feeling during her labor and birth?**

Answers may include:

- discomfort and embarrassment (from shave, enema, vaginal exam)
- fear (hears screams from other rooms; doesn’t know if something is wrong when labor is induced)
- anxiety
• confusion (maternity staff do not explain what is happening or why decisions are made)
• powerless (she is not included in decision-making)
• isolation and lack of support (she is there alone; midwife and other women do not talk to her; no continuity in staff caring for her; no consistent presence of midwife or companion)
• pain
• wants to see her baby and doesn’t know where it is

2. Is Anna’s experience typical in your experience? Why or why not?

Listen to the groups’ responses and identify which practices described in the scenario are familiar to them, and which are not.

3. What do you think of the care Anna received during her labor and birth? What was good about it? What would you change? Explain why.

When listening to participants’ responses, encourage them to think about:
• the relationship of Anna to the maternity staff.
• the effectiveness of the interventions that are used (ex: shaving; inducing labor; swaddling) and their effect on the mother.
• Encourage them not to focus on the technical details of the labor management, but rather how the mother experiences this care.

During this discussion, make note of any specific maternity care practices about which participants have strong feelings so that adequate time can be spent on them during the FCMC training.

Tell participants that many of the typical maternity practices described in the scenario have been shown to be unhelpful or even harmful. Family-Centered Maternity Care seeks to help women have a healthier, more fulfilling birth.

Ask participants to compare the scenario they just read with the video they saw of an FCMC birth in the morning. (Show a short clip from the video again if you think it is necessary to refresh participants’ memory.) Ask:
• How was the childbirth experience in the video different from what you have seen in your maternities? List specific practices.

Answers may include:
Family member is allowed in the room; midwife is consistently present; woman encouraged to make choices; her questions are encouraged and answered; no shave or enema; no continuous fetal heart monitor; baby placed on her chest immediately after birth, etc. [Depends on which video is selected.]

• What do you think the mother in this scene was feeling?
Answers may include: joyful; in control; supported; connected to her baby and family; feels pain, but is supported in bearing it.

- What do you think about the care this mother received? What was good and/or bad about it?

Make note of responses to this question to assess participants’ initial attitudes about FCMC. Practices that meet with particular resistance should be noted so that extra time can be spent on them in the training.

Tell participants that over the course of the training, they will examine the practices they have seen in this scenario in more detail, discuss the evidence about their effectiveness, and practice them in the clinical setting.
Session 5:
Alternative Positions for Labor and Birth

Time: 1 hour 45 min.
Materials: Chair; mat or cloth; ACNM slides and slide projector
Preparation: Practice the role play for demonstration
Methods: Demonstration, role play

Learning Objective: By the end of the session, participants will be able to:
- explain the benefits of ambulation and position change during labor.
- demonstrate several positions a woman may use during labor.
- demonstrate how to actively encourage a woman to try alternative positions during labor.

Ask:
- What are some ways that you support a woman during labor and birth in your current practice?

State that in the FCMC model of care, women are also supported in the following ways:
- encouragement and support
- creating a calm atmosphere
- providing non-medicated pain relief
- encouraging woman to try different labor positions
- provide constant supportive presence and companionship

Tell participants that in this session, they will learn about some alternative positions that a woman may use while in labor, and practice helping a woman to try these positions.

Ask:
- What positions may a woman use during the second stage of labor and birth? Which one is the best?

Positions may include squatting, standing, kneeling, side-lying, lunging, hands and knees, and others.

Emphasize that there is no single “best” position; a woman should choose a position that is the most comfortable for her at a given point during labor. However, the supine position has been shown to be potentially harmful and is less preferable than other alternatives.

Summarize the evidence supporting this claim. You may use the ACNM slides to illustrate (numbers given).

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2 Information adapted from “Family-Centered Maternity Care” Presentation by Pauline Glatleider, CNM, MN, American College of Nurse-Midwives.
• **Ambulation facilitates a woman's labor process [slide #19].**

Reed, Miller & Paul (1981) looked at ambulation versus oxytocin for labor enhancement in a small pilot study. They found ambulation to be as effective as oxytocin. [slide #17]

Albers and colleagues (1997) found those women who walked during labor had half the rate of operative delivery (2.7% versus 5.5%).

Most recently, Bloom and colleagues (1998) found no significant improvements for women walking during labor. While this randomized controlled trial did not find improvements from ambulation, during labor no adverse effects were found.

Ambulation also has beneficial effects for the fetus and newborn, including less fetal heart rate decelerations and higher 1 and 5 minute Apgar scores than among women laboring in the recumbent position (Roberts, 1980, Alternative positions for childbirth).

• **Upright or side-lying positions enhance and shorten labor.**

The effects of maternal posture on uterine activity during labor have been studied initially by Caldeyro-Barcia in 1960, 1978 and 1979, Mendez-Bauer in 1975 and 1976, and Miller and Roberts in the 1980s. Results from these investigations have shown that standing and side-lying provide greater intensity and efficiency of uterine contractions.

Caldeyro-Barcia et al found that “when the patient lies on her side (right or left), uterine contractions have a stronger intensity and a lower frequency than when the patient lies on her back.... The effects of the change of position on uterine contractility appear immediately and last for as long as the new position is maintained.... The effects of changes of position are more marked in spontaneous labor than in labor induced with oxytocin infusion.”

An upright position is associated with less use of pain medication and epidural anesthesia (Roberts, 1980).

• **The flat on the back or lithotomy positions have adverse effects on labor progress, the mother and the fetus.**

In five trials, women had significantly shorter labors when allocated to an upright rather than supine position for labor.

The supine position has been shown to adversely affect the fetus and labor progress through interference of the uterine hemodynamics.

An upright, semi-sitting position is associated with a less acidotic newborn than the lithotomy position. (Roberts, 1980).
The squatting position has been shown to enhance the diameter of the pelvic outlet, and is associated with promotion of fetal descent and correction of unfavorable fetal positions. (Roberts, 1980).

Show ACNM slides #40-47 illustrating different positions used during labor.

Refer participants to the illustrations in their manuals, “Maternal positions for labor and birth.” Answer any questions they have about these positions, demonstrating unfamiliar ones with a volunteer.

Explain that it is part of the role of the midwife or other support person during labor to actively help women try different positions.

With a teaching partner or a participant volunteer, conduct a role play to demonstrate how to help a woman during labor. Be sure that all participants can see the role play easily. You may want to use a mat for some positions.

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**Role Play: Alternative Positions for Labor**

| Players: | 1 midwife; 1 woman in labor |
| Time: | 10 minutes |

The midwife attends the woman while she is in the second stage of labor. The midwife encourages the woman to try two or three different positions so that she can find one that is comfortable. The midwife responds to signs from the woman that a position is comfortable or not. He/She clearly explains or demonstrates each position so that the woman can easily understand.

Ask participants to form groups of 3 to role play helping a woman with different positions. (The role play guide shown above is found in their manuals.) One participant will play the role of the midwife, one the role of the mother, and one will be an observer. After the role play, the three each give their feedback about how it went. They should exchange roles at least once. Give the groups 45 minutes.

While the groups are working, circulate and observe their technique, providing constructive criticism where needed.

When the role play is finished, ask:

- What did the “midwife” in your group do well?
- What else could the “midwife” have done to help the woman try positions?

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Maternal positions for labor and birth. Top row, upright positions; second row, sitting positions; third row, kneeling positions; fourth row, second-stage positions. See Table 1 for explanations.

Positions for Labor Illustrations

**Evaluation Activity, Day One:**

15 minutes

Conduct a 15-minute evaluation activity to assess participants’ reactions and learning so far. Use this as an opportunity to monitor participants’ resistance to the new information they are learning, and to allow them to express their reactions to FCMC.

Suggested activity:

Ask participants to write down their response to the following question, written on a flipchart. Give them 5 minutes.

- What do you think about Family-Centered Maternity Care?
- If your maternity were to implement FCMC practices, how would your role change?

Ask a few volunteers to share their answers and expand on them. Try to get responses from people with different opinions.

Make note of particular concerns about implementing FCMC, so that they can be addressed during the appropriate session. Avoid arguing with participants and trying to convince them at this point; instead, remind them that this is the first day and they will be learning more about how to implement FCMC over the course of the next two weeks.
FURTHER READINGS ON DAY 1 TOPICS:

Assign all or some of the following articles and abstracts. It is recommended that participants select readings on topics that interest them, or that they want to understand more thoroughly.

FCMC:
- Young

Positions & Ambulation in Labor and Birth
- Albers
- Ashford
- Bloom
- Bomfim-Hyppolito
- Read

Appropriate Use of Technology:
- Chalmers
- Ramin
- Read

Midwife-attended births:
- Greulich
- Page
- Rooks
- Turnbull
Session 6:  
Support During Labor

Time:  45 min.  
Materials:  ACNM Slides, slide projector  
Methods:  Lecture and discussion  
Learning Objective:  By the end of the session, participants will be able to:  
- explain the benefits of providing a woman with continuous support by a companion during labor.

Ask:  
- Are women giving birth in your maternities allowed to have a companion or family member(s) present? If not, what are the reasons for this policy?  
- What do you think the advantages might be of supportive companionship during labor?

Present the evidence for the presence of a supportive companion during labor.⁴ (ACNM slides can be used as indicated.)

Women have desired and insisted on the presence of a spouse, family and/or friends during labor and birth. In fact, women benefit from constant human support during labor. [Slide #23]

The initial investigation of labor support was done by Sosa and colleagues (1980) in Guatemala with "doulas". The "doula" is a woman assigned to stay with the laboring mother. The "doula" provides emotional and physical support. She does NOT leave the laboring woman's side. Their study consisted of 40 women in labor and looked at the effectiveness of providing support personnel during labor and birth, the length of labor, and the interaction between mother and child, their study's control group had no support personnel. Women in the experimental group had the constant support of a doula.

- Sosa and colleagues found that labors were significantly shorter for women in the doula group. The average time between the women's arrival in the maternity ward and the birth of the child was 19.3 hours for the control group and 8.7 hours for the experimental group. [Slide #24]  
- The control group had significantly more perinatal problems and longer labors (p = 0.001). [Slide #25]  
- The mothers in the doula group were significantly more awake after birth, stroked and talked to the baby more. [Slide #26]

⁴ Information adapted from “Family-Centered Maternity Care” Presentation by Pauline Glalteider, CNM, MN, American College of Nurse-Midwives.
Kennell & Klaus and colleagues writing in JAMA (1991) reported replicating this study in a US hospital. They found similar results. In their study, women who were supported needed fewer epidurals, less augmentation of labor, fewer cesarean and forceps deliveries, shorter hospitalizations for the neonates, fewer sepsis evaluations and maternal fevers. [Slides #27, 28]

A systematic review in the Cochrane Library of 14 trials with 5000 women identifies a number of benefits for women and babies including decreased analgesia use, decreased operative vaginal delivery and cesarean section, decreased neonatal Apgar score < 7, shortened 1st stage of labor and increased satisfaction.

Marshall Klaus, M.D. and co-author of the investigation just reviewed, remarked on the results of this study and lamented the fervor with which health care providers embrace machines but are not as quick to incorporate a simple, human intervention which has been shown to significantly benefit mothers and babies: [Slide #29]

"...Let me note that if I had told you today about a new medication or a new electronic device that would reduce problems of fetal asphyxia and the progress of labor by two-thirds, cut labor length by one-half, and enhance mother-infant interaction after delivery, I expect that there would be a stampede to obtain this new medication or device in every obstetric unit in the United States, NO MATTER WHAT THE COST. Just because the supportive companion makes good common sense does not decrease its importance."

A woman may choose her spouse to be present during labor or she may wish to have other family members, her children and friends present. Facilities should strive to accommodate individual preferences and needs of the laboring woman. Usually, one sees the intensity and connection between the woman and her partner, while the midwife patiently watches and supports them both. It is this kind of support that helps a woman move through the labor process and thus have shorter labors. Labor support can easily be provided in the hospital setting. [Slides #30-33]

Hofmeyr and colleagues (1991) found that support during labor and birth had significant effects on the perception of childbirth and breast-feeding. Women with support during labor had significantly less feeding problems, were significantly more likely to be breast-feeding only, found mothering easier and had flexible feeding intervals. No mothers from the support group stated their babies had a poor appetite. {Slide #54]

Ask participants to reflect on what they have just learned about support during labor. Ask:

- What do you think about these recommendations? Would you implement this in your maternity?
- What would be the benefits of allowing women their choice of companions, or providing support from a doula?
- How might you implement these practices in your maternity? What policies would have to be changed, if any?
Session 7:  
Non-Pharmacologic Pain Relief

Time: 1 hour  
Materials: Towels, hot water bottle, cassette player and music  
Preparation: Practice the demonstration & role play  
Methods: Demonstration, role play  
Learning Objectives: By the end of the session, participants will be able to:  
- demonstrate the use of non-pharmacologic pain alleviation practices during labor, including movement, counterpressure, superficial heat and cold, touch and massage, music and audio-analgesia, and attention-focusing and distraction.

Ask:  
- What does your maternity do to provide pain relief to women in labor?  
- How are women involved in this decision?

Present evidence on the risks associated with pharmacological methods of pain relief.

  Negative impact: Increased use of oxytocin, increased risk of cesarean section and operative delivery.  
  - In a randomized trial comparing epidural to intravenous analgesia, Ramin et al (1995) found that while the epidural provided better pain relief, it was associated with prolonged labor, increased risk of uterine infection, and increased risk of operative / cesarean delivery.

- Other methods

- Women should be given the information to make an informed choice about the type of pain relief to use during birth.

Ask:  
- What are some ways that a midwife, health practitioners or other companion can relieve a woman’s labor pains without using medications?

Listen to responses and add the following if not mentioned:

There are several methods of reducing a woman’s pain without using medication. They include the following:  
- movement  
- position change  
- counterpressure  
- superficial heat or cold  
- touch and massage  
- music and audio-analgesia
• attention focusing and distraction

With a teaching partner or participant volunteer, demonstrate some of these methods.

Ask volunteers to demonstrate any of the techniques with which they are already familiar, doing so in front of the group.

Tell participants to refer to their manuals for the photos and illustrations of pain relief methods (taken from Simpkin 1995, page 166\(^5\)).

If time allows, ask participants to work in pairs to role play some of the techniques. One partner should play the role of a midwife or companion, and the other should be the woman in labor, trading roles at least once. Circulate among the pairs, offering guidance or correcting technique where needed.

If possible, provide the participants with props for their role plays such as towels, hot water bottles and music players.

To conclude the session, reconvene the whole group. Ask:
• How did the “midwife” help the woman with pain control?
• If you were working with women in labor in your own maternity, could you try these techniques? What would be useful or challenging about applying these techniques?

See Pain Relief Illustrations on the next page

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Figure 2. Counterpressure.

Figure 3. Xs mark places for the hands in the double hip squeeze.

Figure 4. Double hip squeeze.

Figure 5. Knee press.
Session 8:
Evidence-based Labor and Birth Practices

Time: 2 hours 30 minutes
Materials: Cards for group assignments
Preparation: Decide on group assignments based on size of class; make cards with letters and numbers to assign groups.
Methods: Peer teaching group work
Learning Objectives: By the end of the session, participants will be able to:
- explain the evidence regarding the following practices for labor and birth: routine episiotomy, routine enema, shaving of pubic hair, continuous electronic fetal heart rate monitoring, C-section and inducing labor, eating & drinking during labor.

Ask participants:
- What is the procedure that a woman typically goes through in your maternities when she is admitted in labor and during birth?

Tell participants they can also look back at the case study from the previous day as a reminder.

List their responses on a flip chart. They may include the following:
- enema
- shave
- antiseptic shower
- withholding of food and drink
- rectal exam to assess labor progress
- analgesia
- continuous electronic fetal heart rate monitoring
- lithotomy position for birth

Tell participants that they will now learn about the evidence from research on some of these practices. They will have the chance to learn about at least one practice in some detail and teach it to other participants.

Peer Teaching Group Work:

Give each participant a card with a number and a letter on it. Instruct them to form groups according to the numbers on their cards.

The groups should be assigned according to the size of the class. For example, if there are 25 participants, there should be 5 groups of 5, with cards as follows.
First Set of Groups:

<table>
<thead>
<tr>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Group 4</th>
<th>Group 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A</td>
<td>2A</td>
<td>3A</td>
<td>4A</td>
<td>5A</td>
</tr>
<tr>
<td>1B</td>
<td>2B</td>
<td>3B</td>
<td>4B</td>
<td>5B</td>
</tr>
<tr>
<td>1C</td>
<td>2C</td>
<td>3C</td>
<td>4C</td>
<td>5C</td>
</tr>
<tr>
<td>1D</td>
<td>2D</td>
<td>3D</td>
<td>4D</td>
<td>5D</td>
</tr>
<tr>
<td>1E</td>
<td>2E</td>
<td>3E</td>
<td>4E</td>
<td>5E</td>
</tr>
</tbody>
</table>

Ask participants to turn to the instructions in their manuals for “Peer Teaching: Labor & Birth Practices.” Their manuals also include Fact Sheets summarizing the evidence about the effectiveness (or ineffectiveness) of several practices. (Fact sheets shown below.)

Assign one practice to each group. Give the groups 50 minutes to read the materials, ask any questions about them, and prepare a short, informal presentation about the information that they can each use individually to teach their peers.

The practices to assign are as follows:

- **Group 1:** Episiotomy
- **Group 2:** Enema
- **Group 3:** Shaving of pubic hair
- **Group 4:** Continuous electronic fetal heart rate monitoring
- **Group 5:** Eating & drinking during labor

The handout describing the activity is as follows:

**Peer Teaching:**
*Labor and Birth Practices*

The purpose of this activity is to provide a brief overview of the evidence regarding some common practices. Your group will be assigned one practice to study. After learning about this practice, everyone will join new groups. Then you will each individually share information with your peers about the practice you studied.

1. Individually or with your group, read through the Fact Sheet for the practice your group was assigned. [10 min]

2. Discuss the evidence about this practice until everyone clearly understands it. If you have questions, call on the trainers for further explanation or refer to the readings provided on this topic. [20 min]

3. Plan a mini-presentation for your next group of participants. You will have 5-10 minutes to present to the next group. You may use flip charts, discussion questions, illustrations or other methods [20 min].
Focus on the following questions:

What are the reasons this practice is commonly used?
What does the research say about this practice?
What are the advantages and disadvantages of this practice?

4. Review, discuss and practice your mini-presentation session if time allows.

5. Join your new group. Take turns making your mini-presentations in the new group.
   [5-10 min. for each presentation]

6. At the end of the exercise, the whole class will come back together to discuss these practices and answer any questions you have.

After the groups have finished preparing, tell them to split up and form new groups according to the letters on their cards, as follows:

Second Set of Groups:

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<thead>
<tr>
<th>Group A</th>
<th>Group B</th>
<th>Group C</th>
<th>Group D</th>
<th>Group E</th>
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<td>1A</td>
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</table>

In their new groups, participants should take turns briefly teaching their group about the practice they have prepared. In this way, each person will make one presentation, and each will also learn about four other practices from other participants. Allow 45 min – 1 hour for the presentations (depending on size of groups).

All participants can refer to the complete set of materials on these practices in their Manuals, as well as additional articles and resources for those who are interested.

When the presentations are complete, reconvene the class. Ask:
- Did you learn anything that surprised you? Why was it surprising?

Review the practices that were presented. Ask for volunteers to summarize the main points about each practice, asking participants to summarize one of the practices they did not teach themselves. Use this review to check how well participants have understood each practice. If necessary, go back over some practices in detail.
Continuous Electronic Fetal Heart Monitoring

**Recommendation:**
- Electronic fetal monitoring without access to fetal scalp sampling during labor is likely to be ineffective.


“In the majority of pregnancies, intrapartum death is prevented equally effectively by intermittent auscultation and by continuous electronic fetal heart-rate monitoring, provided that intrapartum fetal heart-rate abnormalities are promptly recognized and followed by an appropriate clinical response, whatever the monitoring policy. The use of electronic fetal monitoring with fetal scalp sampling is associated with a lower rate of neonatal seizures, but not with a lower rate of serious long-term neurological disability.”

“Continuous electronic monitoring results in an increase in cesarean section rates and postpartum morbidity for the mother, with no compensating benefits to the baby except a decreased incidence of neonatal seizures. Whether or not it should be used will depend on the importance attached to the prevention of seizures. Selective use of electronic fetal monitoring could be based on assessment of risk by clinical history, and possibly by early intrapartum assessment.”

“Despite its practical problems, fetal acid-base assessment is, on the basis of current evidence, an essential adjunct to fetal heart-rate monitoring and should be much more widely used, during the second stage as well as during the first stage of labor. When electronic monitoring is used, both false-positives (false alarms) and false-negatives (a misplaced sense of confidence in the baby’s welfare) are reduced by the use of fetal blood sampling as an adjunct.”


“We investigated the effects of using intrapartum electronic fetal monitoring in all pregnancies as compared with using it only in cases in which the fetus is judged to be at high risk. Predominant risk factors included oxytocin stimulation of labor, dysfunctional labor, abnormal fetal heart rate, or meconium-stained amniotic fluid. This prospective alternate-month clinical trial took place over a 36-month period during which 34,995 women gave birth.”
“Universal monitoring was associated with a small but significant increase in the incidence of delivery by cesarean section because of fetal distress, but perinatal outcomes as assessed by intrapartum stillbirths, low Apgar scores, a need for assisted ventilation of the newborn, admission to the intensive care nursery, or neonatal seizures were not significantly different.

“We conclude that not all pregnancies, and particularly not those considered at low risk of perinatal complications, need continuous electronic fetal monitoring during labor.”
Enemas during Labor

**Recommendation:**
- Routine enema in labor should be discontinued.


“The supposed benefits of bowel preparation were to allow the fetal head to descent, to stimulate contractions and thereby shorten labor, and to reduce contamination at delivery thereby minimizing the risk of infection in mother and baby. The practice is uncomfortable, and not without risk. Cases of rectal irritation, colitis, gangrene, and anaphylactic shock have all been reported.

“Two randomized, controlled trials have evaluated the effects of routinely giving enemas on admission to hospital in labor. Without an enema, the fecal soiling was mainly slight and it was easier to remove than the soiling after an enema. No effects on the duration of labor or on neonatal infection or perineal wound infection were detected.”


- “Whitley and Mack, who studied the incidence of fecal contamination during second-stage labor reported contamination in 59% of the no-enema group and 38% of the enema group; women assigned to the “no-enema” group because of diarrhea within 24 hours before hospital admission had the lowest incidence of contamination (15%). From this report, it appears that fecal contamination is fairly common regardless of whether or not an enema is given.”

- Study by Romney and Gordon (1981): “When 274 women were randomly assigned to enema or no-enema groups, no difference was found in degree of fecal contamination during the first and second stages of labor, and the incidence of gross contamination was similar (34% for the enema group, 38% for no-enemas).

- Contamination after enemas was especially difficult to control, since it was more likely to be fluid.

- Another finding, that the two groups had a similar duration of labor, contradicted the notion that enemas shorten labor.”
Pubic Shaving

**Recommendation:**
- Routine pubic shaving in preparation for childbirth should be discontinued.


- “...This evidence from many sources has convinced us that shaving pubic hair to prevent infection cannot be justified. Shaving compromises the integrity of the skin by inflicting multiple small abrasions, and it is humiliating for women, as well as a cause of itching and burning when the hair grows back. If episiotomy repair is necessary and perineal hair proves troublesome, it can be clipped.

- “In 1922, Johnston and Sidall, who studied both shaved and unshaved women, found puerperal fever in 12.4% of those unshaved and in 16.3% of those shaved, results that favored the elimination of shaving.

- “In 1963, Sweeney found that in 424 patients undergoing curettage or completion of an incomplete abortion, the omission of perineal shaving had no effect whatsoever on subsequent development of urinary, skin or pelvic infections.

- “In Adeleye’s study in 1977, 74 Nigerian women, most of low socioeconomic status, were randomly divided into experimental and control groups. All had the same routine perineal, vulval and vaginal swabbing during the first stage of labor, but 40 were shaved and 34 were not. No increased puerperal morbidity was found in the unshaved group.

- “Romney followed 693 parturients: 228 had their pubic hair shaved completely, 240 had their perineal hair shaved, and 225 were not shaved at all. Romney’s conclusion was that shaving did not affect the incidence of infection and was associated with discomfort and itching in a high percentage of women, something also noted in other studies. Ninety-eight percent of those shaved expressed their disappointment that this had been done.”
Eating and Drinking during Labor

**Recommendation:**
- Food and drink should not be withheld from women in labor.


- “Many clinical practices, especially those that offer midwifery services, are currently instituting policies to allow and encourage eating and drinking in normal labor. To date, there have been no reported rises in maternal mortality with this policy change; neither have there been any reports of detrimental outcomes for mother or infant.
- “Rooks and colleagues... reviewed cases from 11,814 women who ate and drank at will. There was no reported mortality or morbidity from aspiration pneumonia even though there were women who required emergency cesarean sections. Twenty-two percent had eaten solid foods, yet they had no aspiration complications.”


- “The first controlled trial to compare a policy of encouraging women to eat and drink during labor involved 328 women in a Canadian hospital. Women enjoyed being able to control their own oral intake; no other benefits or harmful effects were found.
- “Restricting food and drink during labor may result in dehydration and ketosis....The most common response to the problems of dehydration and ketosis in maternity units where eating during labor is prohibited is the use of intravenous glucose and fluid. ....Infusions of glucose solutions to the mother result in increased blood sugar levels in the baby, and also in a decrease in umbilical arterial blood pH. Excessive insulin production in the fetus occurs when women receive more than 25g glucose intravenously during labor, and this can result in low blood sugar and raised levels of blood lactate in the baby....The use of intravenous glucose and fluids to prevent or combat ketosis and dehydration in the mother may have serious unwanted effects on the baby.”
- “No presently known measures can ensure that a laboring woman’s stomach is empty, or that her gastric juices will have a pH greater than 2.5. Enforced fasting in labor, the use of antacids, or pre-anesthetic mechanical or chemical emptying of the stomach are only partially effective. All of these have unpleasant consequences and are potentially hazardous to the mother, and possibly her baby.
- “The syndrome of aspiration of stomach contents under general anesthesia is rare but serious. It is wise to avoid general anesthesia for delivery whenever possible, and to use a proper anesthetic technique with meticulous attention to the known safeguards when general anesthesia must be used.
Episiotomy

**Recommendation:**
- Routine episiotomy should be discontinued.


- “Although episiotomy has become one of the most commonly performed surgical procedures in the world, it was introduced without strong scientific evidence.” (p295)
- “There is no evidence to support the postulated benefits of liberal use of episiotomy. Controlled trials show that restricted use of episiotomy results in less risk of posterior perineal trauma, less need for suturing perineal trauma, fewer healing complications, and no differences in the risk of severe vaginal or perineal trauma, postpartum perineal pain, dyspareunia, or urinary incontinence. The only disadvantage shown in the restrictive use of episiotomy is an increased risk of anterior perineal trauma. These results are similar for both mediolateral and midline episiotomy.
- “There is no evidence to support the suggestion that liberal use of episiotomy minimizes trauma to the fetal head. Data from the randomized trials show similar distributions of Apgar scores and rates of admission to the special care nursery.”


- “The rationale for routine episiotomy is based on two foundation arguments: that episiotomy reduces perineal trauma and that it prevents subsequent pelvic relaxation. A careful review finds little evidence to support these arguments.
- “We prospectively studied routine use of episiotomy and found that in nulliparous women this procedure predisposed women to third- and fourth- degree lacerations. No third- or fourth-degree laceration occurred when episiotomy was not performed.
- “Buekens et al (1985) investigated the relationship of episiotomy to third-degree perineal tears in 21,278 deliveries.... The authors concluded that routine episiotomy does not prevent trauma to the anal sphincter or rectum.”
- “Snooks et al suggest that pelvic relaxation and urinary or fecal incontinence that develop after vaginal delivery result from ... damage to the pudendal nerve.... Their work does not support midline episiotomy as an effective technique for preventing such damage.”
- “Perineal muscle function was found to be dynamically related to regular exercise done by the individual and not to mode of delivery,” e.g. one year after abdominal delivery, vaginal delivery with episiotomy or intact perineum, forceps delivery or in nulliparous control women [Goudon and Lougue].
Session 9:  
Active Management of the Third Stage of Labor

**Time:** 1 hour  
**Materials:** none  
**Methods:** Brainstorm; lecture and discussion

**Learning Objectives:** By the end of the session, participants will be able to:  
- explain the advantages and disadvantages of active management of the third stage of labor.

Tell participants that they will now discuss:  
- the procedures for physiologic and active management;  
- the advantages and disadvantages of each as demonstrated by the research;  
- how to involve women in decision-making about their care in the 3rd stage.

Ask:  
- How is the 3rd stage of labor typically managed in your maternity?

Make reference to their responses while presenting the following information:

*Adapted from: WHO Essential Antenatal, Perinatal and Postpartum Care Module 15; and JHPIEGO ReproLine, Maternal and Neonatal Health, “Active Management of Third Stage of Labor.”*

The third stage of labor is the separation and expulsion of the placenta and membranes, usually takes about 15–20 minutes. After the baby has been delivered the uterus contracts (after a pause) and separation of the placenta occurs. This is noted by a trickle of blood, and the attendant may observe the cord lengthening as the placenta descends into the lower part of the uterus.

The physiological changes that occur in the third period of labor are designed to facilitate separation and expulsion of the placenta and fetal membranes, and to ensure control of maternal bleeding. The normal blood flow through the placental site is 500–800 ml per minute. Following separation this must stop immediately or serious hemorrhage occurs.

Two methods of 3rd stage management are Active and Physiologic ("expectant").

**Active Management:** Artificial stimulants (ergometrine, syntometrine or equivalent) which induce contractions of the uterus can be given to the mother intramuscularly after the delivery of the anterior shoulder of the baby or after the birth of the baby. This will quicken the third stage of labor and reduce the amount of bleeding. With active management, the placenta and membranes can then be delivered by controlled cord traction, after ensuring that the placenta has separated before traction is exerted on the cord.
Review the procedure for Active management:

- Oxytocin
  - Within 1 minute of birth, palpate abdomen to rule out presence of another baby
  - Give oxytocin
- CCT
  - Await strong uterine contraction (2–3 minutes)
  - Apply controlled cord traction while applying countertraction above pubic bone
  - If placenta does not descend, stop traction and await next contraction

Physiologic Management: Oxytocics are not used; placenta is delivered by gravity and maternal effort; cord is clamped after delivery of the placenta. Traction must not be applied to the cord to assist the delivery. Instead, the cord and placenta should be guided out. There is no need to hurry this process unless there is excessive bleeding, in which case IM ergometrine or IV oxytocin must be given.

The provider should educate the woman about these methods and their advantages and risks, so that she can make an informed choice. Her consent should be obtained for the procedure used, and the provider should explain the process clearly to her as it is performed.

Ask participants to form groups of 2 or 3 and quickly brainstorm a response to the following question (written on a flip chart). Give them 10 minutes.

- What are the advantages and disadvantages of active management? of physiologic management?

Write responses on a flip chart in the form of a table. Responses should include the following:

Active Management:
- Advantages
  - Decreases length of third stage
  - Decreases risk of postpartum hemorrhage
- Disadvantages
  - Requires oxytocics and items needed for injection
  - Requires a birth attendant with skills in:
    - Observation
    - Giving an injection
    - CCT

Physiologic Management:
- Advantages
  - Does not interfere with normal labor process
• Does not require special drugs/supplies
• less likely to make the mother feel unwell with the effect of the drugs.

• Disadvantages
  • Increases length of third stage
  • Increases risk of postpartum hemorrhage (PPH)

Present the evidence comparing the two methods:

Bristol trial: 1695 women, Hinchingbrooke trial: 1512 women. Randomly assigned to active or physiologic management.

Results: With active management:
  • The rate of postpartum hemorrhage was significantly lower in both trials:
    • 5.9% vs. 17.9% in Bristol
    • 6.8% vs. 16.5% in Hinchingbrooke
  • Duration of third stage was reduced.
  • Need for blood transfusion and therapeutic oxytocics was reduced.
  • There was no increase in entrapment of placenta.

Ask:
• What are the reasons that in some maternities, babies are forced to attach to the breast right after birth? Is this done at your maternity?

Response may be that nipple stimulation will stimulate the uterus to contract and speed the third stage. Present the following:

Nipple stimulation:
• Forcing the baby to attach to the breast within minutes after delivery is no longer regarded as appropriate care.
• Breastfeeding should be allowed to occur when the baby shows signs of readiness for a feed.
• Nipple stimulation has not been shown to reduce risk of PPH. Randomized controlled trial of suckling immediately after birth with over 4,000 subjects in Malawi showed no significant difference in frequency of PPH, mean blood loss or retained placenta

Conclude by asking:
• What do you think about active management of labor?
• How can we inform a mother about these methods and their risks and benefits?
Session 10:
Clinical Skills Practice

Time: 1 hour 45 min.
Materials: Pelvic model; doll; bag and mask; Handout: “Labor Challenges”
Preparation: Set up stations for practice
Methods: Demonstration, role play
Learning Objectives: By the end of the session, participants will be able to:
- demonstrate clinical skills for conducting pelvic exams, managing various labor scenarios, and neonatal resuscitation.

This session gives trainers an opportunity to observe participants’ clinical skills, and to think about their strengths, weaknesses and personalities. This information will help trainers to create the groups for the clinical practice week, and to target particular areas needing more work among the group.

Tell participants that they will be practicing different clinical skills in small groups in this session. They will rotate around different stations to practice the following techniques:
- Station 1: Pelvic exam
- Station 2: Labor challenges
- Station 3: Neonatal resuscitation

Give groups 30 minutes at each station. Have different trainers facilitating each station. When a new group arrives, the trainers should give a brief introduction and demonstration, then allow participants to take turns practicing the skill. Emphasize that midwives can conduct each of these techniques independently.

Station 1: Pelvic Exam

Demonstrate how to conduct a pelvic exam using the pelvic model, including how to communicate with the woman, with a volunteer or trainer standing behind the model and playing the part of the woman.

Points to emphasize:
- The woman’s privacy should be maintained; her body should be covered with a gown or sheet.
- Make sure the woman is ready before beginning the exam. Ask her permission before starting.
- Explain what you are doing and why at each step.
- Use a gentle touch.
- Show participants how to examine cervical dilatation and fetal head position in the exam.
- After completing the exam, dispose of gloves properly.
- Midwives can and should be allowed to conduct pelvic exams.
Give each participant a chance to practice the exam and role play the interaction with the woman. After the role play, give the participant feedback.

**Station 2: Labor Challenges**

Discuss potential challenges that may arise during labor. These may include:
- posterior position
- prolonged latent phase of labor
- prolonged active phase
- prolonged second stage
- decreased maternal pain tolerance
- fetal heart rate changes
- maternal or family anxiety

Based on the group’s interest, select one or two and conduct a role play to demonstrate the way to manage the situation. Demonstrate the collaborative interaction between the midwife and physician.

Then ask participants:
- What did you notice about how the role players handled this situation during labor?

Ask participants to take turns role-playing this challenge or other scenarios for the group. Do as many scenes as time allows. After each role play, ask the role players (1) what they think they did well, and (2) what they would like to improve on. Then ask other group members the same question.

The handout on Labor Challenges provides more detailed instructions for these role play scenarios.

**Station 3: Neonatal Resuscitation**

Demonstrate resuscitation with the bag and mask, and then have participants practice. Emphasize that this technique can be performed by the midwife; it is not necessary for a physician to do it. During the demonstration, model collaborative interaction between midwife and physician.

Instructions (excerpted from WHO Essential Antenatal, Perinatal and Postpartum Care):

In **mild neonatal asphyxia** the infant’s breathing is slow, irregular or even absent. The heart rate is >100 beats per minute, the muscular tone is relatively good and there is cyanosis. The baby should be ventilated with a bag and mask for 1–2 minutes and then reassessed. If the baby is breathing regularly and the heart rate is consistently >120 beats per minute, he/she can be given to the mother. If the baby is still breathing irregularly and the heart beat reaches <100 beats per minute, endotracheal intubation and external cardiac massage should be performed. In intermediate situations, with breathing still
irregular and heart rate above 100 beats per minute but below 120 beats per minute, the baby should receive ventilation for a few more minutes and then be reassessed.

The infant should be put in the supine position with the head lowered and tilted slightly backwards (Fig. A). The first breaths require high insufflation pressures (50–70 cm H2O); the first insufflation should be prolonged for at least 5 seconds. When the lungs are filled, ventilation is easier and only 30–40 cm H2O is needed to continue with a frequency rate of 60 cycles per minute. Ineffective insufflation is caused either by inadequate technique or obstructed airways. It is always important to measure heart rate to assess the effect of assisted ventilation and to check the expansion of the thorax at every cycle.

**Fig. A. Position of infant for use of bag and mask**

Ventilate the infant with 100% oxygen for 15 to 30 seconds.

The **severely asphyxiated baby** will make no respiratory efforts during the first 30 seconds of life, the heart rate will be low (<100/min), the muscular tone low and the skin will be grey/pale.

The baby should be treated with bag and mask ventilation for 1–2 minutes and then reassessed. If breathing is still irregular or absent but the heart rate is >100 per minute, continue bag and mask ventilation for another 3–4 minutes and then reassess the baby. If the breathing and heart rate become steadily regular you can give the baby to the mother. If the baby is not breathing at all and the heart rate is <100/min after 1–2 minutes of bag and mask, endotracheal intubation and external cardiac massage are required. If, during
endotracheal intubation and external cardiac massage, the heart does not improve or progressively worsens, use vasoactive drugs.

**Evaluation Activity, Day Two**

15 minutes

Conduct a short evaluation activity to assess participants’ learning and their reaction to what they have learned so far.

**Suggested activity: Physical Continuum:** Ask participants to stand up at the back of the training room. Tell them that you are going to make a statement, and they will respond to it by standing somewhere along a continuum from “Agree” to “Disagree.” If they strongly agree, they should stand at the left end of the wall; if they strongly disagree, they should stand at the right end; or they can place themselves anywhere in the middle according to their opinion.

Statement:

- “We can implement Family-Centered Maternity Care at our maternity.”

After participants have found a place on the continuum, ask people at different points to explain their position.

**FURTHER READINGS ON DAY 2 TOPICS:**

Assign all or some of the following articles and abstracts. It is recommended that participants select readings on topics that interest them, or that they want to understand more thoroughly.

**Support/Companionship in labor:**
- Gordon
- Hodnett
- Hofmeyr
- Kennell
- Klaus
- Langer
- Page
- Scott
- Sosa

**Electronic Fetal Monitoring:**
- Leveno
- Thacker
Eating and drinking:
- Ludka
- O’Reilly
- Scrutton

Enemas and pubic shaving:
- Cuervo
- Mahan

Pain relief
- Ramin
- Simkin

Episiotomy
- Carrol
- Eason
- Tay
- Thorp
Session 11:  
The Partograph

Time: 3 hours 30 minutes
Materials: Overhead of blank partograph or large laminated partograph, overhead projector
Methods: Lecture, discussion, exercises
Learning Objectives: By the end of the session, participants will be able to:
- explain why the partograph is useful during labor and delivery.
- demonstrate how to record data on and read the partograph.
- explain the meaning of the action and alert lines on the partograph.

This session introduces the partograph, providing an overview of its use and what information is recorded on it. It also includes exercises in which participants practice plotting information on the partograph.

To find out what participants already know about the partograph, ask:
- What is a partograph? Who has used one before?
- Why is a partograph used?
- If you have used it, how useful did you find it to be?

Distribute the handout “Partograph” and show participants the sample graph on the first page. Explain that the partograph displays progress in cervical dilatation as a continuous graph, while at the same time displaying as many other features of the state of the mother, the fetus and the labour as possible in graphic form.

If participants are not familiar with the partograph, it may be helpful to compare it to any other graphic tools they use in their maternity to measure cervical dilatation. Point out that the partograph goes beyond this to add much more information.

Present the following evidence about its effectiveness:

- WHO has produced and promoted the partograph since 1987, with a view to improving labor management and reducing maternal and fetal morbidity and mortality.
- It has been tested in a multicenter in Southeast Asia involving over 35,000 women.
- Results: Introduction of the partograph with an agreed labor-management protocol:
  - reduced prolonged labor from 6.4% to 3.4% of labors
  - reduced the proportion of labors requiring augmentation from 20.7% to 9.1%.
  - reduced emergency cesarean sections from 9.9% to 8.3%.
  - reduced intrapartum stillbirths from 0.5% to 0.3%.

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Present the information on the following pages on the use of the partograph and its main components. Use a transparency of a partograph or a large laminated version that can be written on.

To break up the lecture format and to check participants’ understanding, ask questions as you go (suggested questions are included).
Introduction to the partograph

The partograph is probably the simplest and yet the most effective aid to logical management of labour that has ever been devised. The idea of a graphical representation of the progress of a labour seems obvious to us now, yet it was not until the 1960s that it began to be used in obstetric practice.

The underlying principles of the partograph are that it is a method of displaying progress in cervical dilatation as a continuous graph, while at the same time displaying as many other features of the state of the mother, the fetus and the labour as possible in graphic form.

It is this combination of features which makes the partograph so valuable. This value is apparent for all health workers from the least to the most experienced, and for all health care environments from the least to the most sophisticated.

Ask:
- What information is recorded on the partograph?

List responses on a flip chart. Add any of the following types of data that participants did not mention. Do not go over the details of how to record information yet.

**Patient information**

The patient’s name, gravida, para, registration/hospital number, date and time of admission and time of ruptured membranes are written at the top.

**Fetal heart rate**

This is recorded to monitor the condition of the fetus.

**Liquor**

Amniotic fluid is observed and recorded as clear (“C”), blood-stained (“B”) or meconium-stained (“M”). If the membranes are not ruptured, record “I” for intact.

**Moulding**

This is recorded as follows: bones are separated and the sutures can be felt easily (o); bones are just touching each other (+); bones are overlapping (++); bones are overlapping severely (+++).

**Cervical dilatation**

This is the most important observation to monitor progress of labour. The dilatation is plotted with an “X”. The latent phase, active phase, alert and action lines will be explained in detail in the following pages.

**Descent of the head**

This is very important in the monitoring of the progress of labour. The descent is plotted with an “O”.

**Time**

This is recorded using the time of admission as zero time. The actual time of day is recorded below the hours line.
**Contractions**
Along with cervical dilatation and descent of the head, contractions tell the progress of labour. The contractions are recorded under the time line.

**Oxytocin, drugs and intravenous fluids**
These are recorded in the space provided.

**Blood pressure, pulse and temperature**
These are recorded in the space provided.

**Urine**
The amount is recorded every time urine is passed. Albumin and acetone (ketone) are tested if the materials for testing are available.

The first recording of cervical dilatation in active labour is plotted on the appropriate position on the Alert line. Ideally labour should then proceed along the Alert line. If labour is progressing more slowly than this the plot of dilatation against time will tend to move toward the Action line. The Action line on the WHO partograph (there are several different designs of partograph) is four hours to the right of the Alert line. Once the plot has crossed the Action line it becomes appropriate to consider Action.

**The nature and importance of the Action and Alert lines**

**Ask:**

- **How can you use the partograph to identify poor progress in labor?**

The Action and Alert lines are crucially important. The Alert line is the point beyond which progress in cervical dilatation has fallen behind the “desirable” rate of 1 cm per hour. Notice is taken but no action is required. The Action line, by contrast, is the line beyond which action is considered to be required to restore progress to an acceptable level.

The value of these lines lies in the fact that they allow professionals to recognize poor labour function earlier than would be the case if a verbal (as opposed to a graphic) description only were used. They also help to achieve uniformity within and between maternity units.

What is the value of filling in the partograph fully? One simple example is the rapid differentiation between different types of poor cervical progress. Clearly poor progress in the presence of feeble contractions will probably have very different implications from that in the presence of very strong contractions. This will be instantaneously apparent on the partograph. Also the implication of meconium staining is well known and this too can be immediately appreciated, as can the time of recognition of meconium passage. There are countless other simple illustrations of the benefit of filling in the partograph properly.
Using the partograph

When a woman is admitted in labour a complete evaluation of her condition and the condition of her baby is done. This includes a history, physical and pelvic examination. The following information will help you learn how to record, observe and interpret your findings using the partograph.

**PROGRESS OF LABOUR**

**Cervical dilatation**

The first stage of labour is divided into the [*latent*](#) and [*active*](#) phases.

- The [*latent*](#) phase (slow period of cervical dilatation) is from 0–2 cm with gradual shortening of the cervix.
- The [*active*](#) phase (faster period of cervical dilatation) is from 3–10 cm.

Look at [Fig. A](#). Along the left side are the numbers 0–10. Each number/square represents 1 cm dilatation.

![Fig. A](#)

Along the bottom of the graph are 24 squares. Each square represents one hour.

The dilatation of the cervix is recorded with an X. Look at [Fig. A](#) to see the dilatation of the cervix recorded. The first vaginal examination, on admission, is recorded. Vaginal examinations are carried out at least every four hours. Women (particularly multipara women) may need to be checked more frequently in advanced labour.
EXERCISE 1:

Plotting cervical dilatation when the labour is in the active phase on admission

Look at Fig. B.

In the section marked active phase there is an alert line – a straight line from 3–10 cm.

When a woman is admitted in the active phase, the dilatation of the cervix is plotted on the alert line at the place equal to her dilatation, and the clock time written directly under the X in the space for time.

If progress is satisfactory, the plotting of cervical dilatation will remain on or to the left of the alert line.

Ask participants to do the following individually, marking their answers on the handout:
Record the following on the graph in Fig. B:

The time of admission was 15:00, dilatation of the cervix 4 cm. At 17:00, dilatation was 10 cm.

How long was the first stage of labour at the maternity?

Give participants 5 minutes to work. Then ask for volunteers to show their answers and explain them.

ANSWERS TO EXERCISE 1:

![Graph showing the progress of labour](image)

- Dilatation of the cervix was 4 cm, the active phase.
- Dilatation is plotted on the alert line at 4 cm.
- The time of admission was 15:00.
- At 17:00, dilatation was 10 cm.
- Time in the first stage of labour after admission was 2 hours.
EXERCISE 2:

Plotting cervical dilatation when admitted in the latent phase

The latent phase normally may take 8 hours.

When admission is in the latent phase, dilatation of the cervix is plotted on the line marked zero (Fig. C).

Vaginal examination is carried out every 4 hours, if the woman has contractions. If the membranes have ruptured and the woman has no contractions, a very careful vaginal examination is carried out upon admission to determine cervical dilatation, position of the head and to make sure the cord is not prolapsing.

Fig. C

Ask participants to answer the following in pairs. Give the pairs 5 minutes to work, then ask for volunteers to explain their answers.

Find the following in Fig. C:

Admission was at 9:00 and the cervix was 1 cm dilated.
At 13:00, the cervix was 2 cm dilated.
At 17:00, the cervix was 3 cm dilated when she entered the active phase of labour.
At 20:00, the cervix was 10 cm.

How many hours was the latent phase of labour?

How many hours was the active phase of labour?
ANSWERS TO EXERCISE 2:

The latent phase of labour began at admission (9:00) and the cervix was 1 cm dilated.

The latent phase of labour ended at 17:00 when the cervix was 3 cm dilated. The latent phase lasted 8 hours.

The active phase began at 17:00 when the cervix was 3 cm dilated and ended at 20:00 when the cervix was fully dilated. The active phase lasted 3 hours.

EXERCISE 3:

Plotting cervical dilatation from latent to active phase

When dilatation is 0–3 cm, plotting must be in the latent phase area of the graph (Fig. D). When labour goes into the active phase, plotting must be moved by a broken line to the alert line.

Note: TR = transfer of plotted point from the latent phase onto the alert line.
Ask participants to do the following individually, and then take answers from volunteers.

Look at the following information in Fig. D.

Admission time was 14:00 and the dilatation was 2 cm.
At 18:00 the dilatation was 6 cm – active phase.

Move the time and dilatation from latent to active phase on the alert line.
Remember to use a dotted line for the move.

At 22:00 the cervix was 10 cm.

How many vaginal examinations were performed?

How long was the first stage of labour at the maternity?

ANSWERS TO EXERCISE 3:

- Three vaginal examinations were performed at 14:00, 18:00, 22:00.
- First stage of labour was 8 hours, beginning at 14:00 and ending at 22:00.

Ask participants to review the most important points they have learned. Correct any misconceptions, and add the following if not mentioned by participants.

POINTS TO REMEMBER:

- The latent phase is from 0–3 cm dilatation and is accompanied by gradual shortening and thinning (effacement) of the cervix. It should normally not last longer than 8 hours.

- The active phase is from 3–10 cm dilatation which should be at the rate of at least 1 cm/hour.

- When labour progresses well, the dilatation should not cross to the right of the alert line.

- When admission takes place in the active phase, the admission dilatation is immediately plotted on the alert line.

- When labour goes from latent to active phase, plotting of the dilatation is immediately moved from the latent phase area to the active phase area on the alert line.
**Descent of the fetal head**

For labour to progress well, dilatation of the cervix should be accompanied by descent of the head.

For convenience, the width of the five fingers is a guide to the expression in fifths of the head above the brim. A head which is mobile above the brim will accommodate the full width of five fingers (closed) ([Fig. E top](#)).

As the head descends, the portion of the head remaining above the brim, will be represented by fewer fingers (4/5th, 3/5th etc). It is generally accepted that the head is engaged when the portion above the brim is represented by 2 fingers’ width or less ([Fig. E bottom](#)).

Descent of the head should always be assessed by abdominal examination immediately before doing a vaginal examination so that you will know where to expect to feel the head during the vaginal examination.
Fig. E

Head is mobile above brim = 5/5

Head accommodates full width of five fingers above the brim

Head is engaged = 2/5

Head accommodates two fingers above the brim
EXERCISE 4:

To plot descent of the head, on the left side of the graph (Fig. F) see the word “descent” with lines going from 5–0. Descent is plotted with a 0 on the graph.

Ask participants to do Exercise 4 in pairs (5 minutes).

Record the following on the graph:

- On admission at 13:00, the head is 5/5 (five fifths) above the pelvic brim and the cervix is 1 cm dilated.
- After 4 hours, the head is 4/5 (four fifths) above the brim and the cervix is 5 cm dilated.
- Labour is now in the active phase. Cervical dilatation, descent of head and time recordings are transferred to the alert line.
- After 3 hours, the head is 1/5 (one fifth) above the pelvic brim and the cervix is 10 cm dilated.

How long was the first stage of labour in the maternity?
On admission at 13:00, the head is 5/5 (five fifths) above the pelvic brim and the cervix is 1 cm dilated.

After 4 hours, the head is 4/5 (four fifths) above the brim and the cervix is 5 cm dilated. Labour is now in the active phase. Cervical dilatation, descent of the head and time recordings are moved to the active phase.

After 3 hours, the head is 1/5 (one fifth) above the pelvic brim and the cervix is 10 cm dilated.

The first stage of labour in the maternity was 7 hours.

**POINTS TO REMEMBER:**

- Measuring descent of the baby’s head helps the midwife follow the progress of labour.
- An abdominal examination must always be done before a vaginal examination.
Uterine contractions

Good uterine contractions are necessary for progress of labour. Normally contractions become more frequent and last longer as labour progresses.

Recording on the partograph
Below the time line and at the left hand side is written “contractions per 10 mins”.

Fig. H

Squares are numbered from 1–5. Each square represents one contraction so that if 2 contractions are felt in 10 minutes, two squares will be shaded.

The squares below show the key to the three ways the strength of contractions are recorded on the partograph.

- Dots represent mild contractions of less than 20 seconds’ duration.
- Diagonal lines indicate moderate contractions of 20–40 seconds’ duration.
- Solid color represents strong contractions of longer than 40 seconds.
In the **latent phase**, contractions must be 1 or more in 10 minutes, each lasting 20 seconds or more. In the **active phase**, contractions must be 2 or more in 10 minutes, each lasting 20 seconds or more.

**EXERCISE 5:**

**Plotting contractions on a partograph**

![Partograph Diagram](image)

Ask participants to find the following on Fig. I. Take answers from volunteers.

- The woman was admitted at 14:00 in the active phase of labour.
- The cervix was 3 cm dilated, the head was 4/5 (four fifths) above the pelvic brim.
- Contraction were 2 in 10 minutes, each lasting 20–40 seconds.
- At 18:00 the cervix was 7 cm dilated, the head 3/5 (three fifths) and contractions were 4 in 10 minutes, lasting between 20–40 seconds.
- At 21:00 the cervix was 10 cm, the head 0/5 (no fifths), contractions were 5 in 10 minutes, lasting over 40 seconds.
Points to Remember:

- Contractions are observed for frequency and duration.
- The number of contractions in 10 minutes is recorded.
- The three ways of recording the duration of contractions are: under 20 seconds, 20–40 seconds, over 40 seconds.
- Record contractions below the correct time on the partograph.

Condition of the fetus

Fetal heart rate, membranes, liquor (amniotic fluid) and moulding of the fetal skull bones give information about how the baby is doing during the labour.

J. Fetal heart rate

Listening to and recording the fetal heart rate is a safe and reliable way of knowing that the fetus is well.

The fetal heart rate is recorded at the top of the partograph, Fig. J. It is recorded every half hour. Each square represents 30 minutes. The lines for 120 and 160 beats per minute are darker to remind the midwife that these are the normal limits of the fetal heart rate.

Ask a volunteer what the fetal heart rate was at the most recent measurement in Fig. J.
Membranes and liquor (amniotic fluid)

The state of the liquor or amniotic fluid can assist in assessing the fetal condition.

The following observations are recorded on the partograph immediately below the fetal heart rate recordings, Fig. K. The observations are made at each vaginal examination. They are:

*If the membranes are intact:*

Record as the letter “I” for “intact”.

*If the membranes are ruptured and the liquor is:*

− clear, record as the letter “C” for “clear”
− blood-stained, record as the letter “B”
− meconium-stained, record as the letter “M”
− absent, record as the letter “A” for “absent”.

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Listen to the fetal heart rate every five minutes if the liquor:
- has thick green or black meconium
- is absent at the time membranes rupture.

These may be signs of fetal distress (baby is in trouble).

**Ask participants to look at Fig. K and determine:**
- For how long after the partograph was begun were the membranes intact?
- What was the state of the liquor at the last observation?

*Fig. K*
Moulding of the fetal skull bones

Moulding is an important finding as to how well the pelvis will accommodate the fetal head. Record the moulding, look at Fig. L, using the following key:

\[\begin{align*}
& \text{o} = \text{bones are separated and the sutures can be felt easily.} \\
& \text{+} = \text{bones are just touching each other} \\
& \text{++} = \text{bones are overlapping but can be separated easily with pressure from your finger, refer} \\
& \text{+++} = \text{bones are overlapping but cannot be separated easily with pressure from your finger, refer}
\end{align*}\]
POINTS TO REMEMBER:

- Listen to the fetal heart rate immediately after the strongest part of a contraction with the woman lying on her back.
- Recordings of the fetal heart rate are made every half hour in the first stage of normal labour.
- Normally the fetal heart rate is between 120–160 beats/minute.
- Increasing moulding with a high head is a sign of disproportion (baby is too big for mother’s pelvis), refer immediately.

Condition of the mother

All the observations for the condition of the mother are written at the bottom of the partograph. Look at the partograph in Fig. M.

Pulse, blood pressure and temperature
Take the pulse every half hour.

Urine
Ask the mother to pass urine every 2–4 hours. Look at the urine for amount and concentration. The protein and acetone should be tested in hospital and at maternities, if possible.

Drugs and rehydration fluids
Chart these when you give them.

Oxytocin
There is a separate column for oxytocin above the column for rehydration fluids and drugs.

All entries are made on the time line at which the observations are made.

Ask participants to read the partograph in Fig. M and state:
- At the first measurements taken, what was the woman’s pulse? blood pressure? temperature?
- What is your assessment of the mother’s condition overall?
Fig. M

Oxytocin U/L drops/min

Drugs given and IV fluids

Pulse and BP

Temp °C

Urine

protein
acetone
volume

37
37
36.8

200
100
60
Abnormal labour progress

The midwife or doctor can use the partograph to identify complications in labour. When the labour is not normal, the midwife must help the woman to get to someone more skilled who can decide the outcome of a delivery; cesarean section, oxytocin drip, analgesia, rehydration, forceps or vacuum extraction may be necessary to save the mother and her baby.

Prolonged latent phase

When a woman is admitted in labour in the latent phase (less than 3 cm dilated) and remains in the latent phase for the next 8 hours, progress is not normal. She must be transferred to a hospital for further care.

The heavy line drawn on the partograph at the end of eight hours of the latent phase means that the woman needs to be referred to a facility where more skilled help is available (caesarean section, forceps or vacuum extraction etc).

EXERCISE 6:

Prolonged latent phase

Ask participants to do the following exercise in pairs. Then take answers and discuss as a group.

Fill in the following information, using the graph in Fig. N.

- On admission at 7:00 the head was ...................... and the cervix was ....................
- There were ......................... contractions in 10 minutes, lasting .........................
- After 4 hours, at 11:00, the head was ...................... and the cervix was ................
- In the last ten minutes of that half-hour, there were ............. contractions lasting ...........
- 4 hours later at 15:00, the head was still ..................... and the cervix was still ............
- Contractions were ....................... in ten minutes lasting ...........................
- The length of the latent phase was ..........................................................
ANSWERS TO EXERCISE 6:

- On admission at 7:00, the head was 5/5 and the cervix was 1 cm dilated. There were 2 contractions in 10 minutes, lasting 20–40 seconds.
- After 4 hours, at 11:00, the head was 4/5 and the cervix was 2 cm dilated. In the last 10 minutes of that half-hour, there were 2 contractions lasting 20–40 seconds.
- Four hours later at 15:00, the head was still 4/5 and the cervix was still 2 cm dilated. Contractions were 3 in 10 minutes lasting 20–40 seconds.
- The length of the latent phase was 8 hours and not completed. Referral must be immediate in order to allow for a doctor to make a decision on how to assist the woman in labour.
Moving to the right of the alert line

In the active phase of labour, plotting of the cervical dilatation will normally remain on, or to the left of the alert line. When dilatation crosses to the right of the alert line, this is a warning that labour may be prolonged.

When the dilatation moves to the right of the alert line, the mother must be transferred to a hospital, unless she is very near to delivering.

At the action line

The action line is 4 hours to the right of the alert line. If a woman’s labour reaches this line, a decision must be made about the cause of the slow progress and action taken. The decision as to what action should be taken to assist the labour must be made with a doctor, usually in the hospital.

EXERCISE 7:

Ask participants to answer individually, then take answers from volunteers and discuss.

Exercise 7 will demonstrate the importance of the alert and action lines. Look carefully at Fig. O and answer the questions.
- At 8:00 the cervix is ...... dilated on the alert line. The woman may remain in the maternity.

- At 12:00 noon, the cervix is ...... dilated, moving to the right of the alert line. The woman must be transferred.

- At 16:00 the cervix is ...... dilated, at the action line.

A decision must be made by a skilled person as to what action needs to be taken at the hospital.

ANSWERS TO EXERCISE 7:

- At 8:00 the cervix is 3 cm dilated on the alert line. The woman may remain in the maternity.
- At 12:00 noon, the cervix is 6 cm dilated, moving to the right of the alert line. The woman must be transferred to the hospital under the care of a doctor.
- At 16:00 the cervix is 7 cm dilated, at the action line. A decision must be made about what action needs to be taken at the hospital.
POINTS TO REMEMBER:

- All women whose cervical dilatation moves to the right of the alert line must be transferred to hospital, unless delivery is near.
- At the action line, the woman must be re-assessed for lack of progress. A decision must be made on what action needs to be taken.

Group Work:

Ask participants to form groups of 4. Give each group one of the following three exercises (some groups may work on the same exercise). Give the groups 20 minutes to work.

When the groups are finished, ask each to present what they found. Discuss with the whole class. For each exercise, bring out the “Points to Remember” in discussion.

Group Work Exercise A:

Look at the completed partograph of a normal first stage of labour (Fig. P). Answer these questions.

- What was the fetal heart rate on admission?
  What was the fetal heart rate at 13:00?

- When did the membranes rupture?
  What was the condition of the liquor?

- How much moulding of the fetal head was recorded?

- What was the dilatation of the cervix on admission?
  What was the station of the head?

- What was the dilatation of the cervix when the labour transferred from latent to active phase?

- Describe the contractions at 9:00.

- List the vital signs on admission.

- What was the length of labour from admission to full dilatation?
ANSWERS TO GROUP WORK EXERCISE A:

1. 120–130, 120–130.
2. 3:00, 2 hours before admission. Clear.
3. No moulding was recorded.
4. 2 cm, 4/5.
5. 5 cm.
6. 4 contractions in 10 minutes, strong lasting over 40 seconds.
7. B/P 110/70, P 80, T 36.8.
8. 8 hours.

POINTS TO REMEMBER:

- Time of admission is zero time, when the woman comes in the latent phase of labour.
- When the active phase of labour begins all recordings are transferred, plotting the cervical dilatation on the alert line.
- When progress of labour is normal, plotting of the cervical dilatation remains on the alert line or to the left of the alert line.
GROUP WORK EXERCISE B:

Look at the partograph (see Fig. Q) and answer the following questions.

1. On admission to hospital:
   a) What was the clock time?
   b) What was the cervical dilatation?
   c) What phase of labour was the woman in?

- Describe the frequency and duration of the uterine contractions at 7:00.
- At 7:00 what was the fetal heart rate and the state of the membranes?
- What is the purpose of the alert line?

ANSWERS TO GROUP WORK EXERCISE B:

1. 1. a) 3:00   b) 3 cm   c) active phase

2. 4 contractions in 10 minutes, each lasting over 40 seconds, at 7:00

3. Fetal heart rate 130/min
   Membranes were ruptured (liquor clear) at 7:00

4. Acts as a warning that labour in the active phase is delayed when cervical dilatation moves to the right of it; or assists in early detection of delay in labour or warns the attendant of time to transfer a woman to hospital.
GROUP EXERCISE B: Fig. Q

PARTOGRAPH

Name

Date of admission

Gravida

Time of admission

Para

Ruptured membranes

Hospital no.

hours

160

170

160

150

Fetal

heart rate

140

130

120

110

100

Liquor

Moulding

9

8

7

6

5

4

3

2

1

0

Carvix (cm)

[Plot X]

[Plot O]

Descent of head

[Plot X]

Active Phase

Latent Phase

Time

3:00

4:00

5:00

6:00

7:00

8:00

9:00

Contraction

per 10 mins

Oxytocin Un.
drops/min

Drugs given
and IV fluids

Pulse

and

BP

Temp °C

37

37

protein

acetone

volume

100

60

90

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GROUP EXERCISE C:

Recording and plotting on the partograph (see Fig. R)

Mrs. X was admitted in labour at 14:00. On abdominal examination the contractions were 2 in 10 minutes, each lasting 20 seconds. The head was 5/5 above the brim and the fetal heart was 130/min. On vaginal examination the cervix was 2 cm dilated, membranes were intact, no moulding felt.

Her blood pressure was 110/70 mmHg; her pulse 78/min; temperature 36.6°C. She passed 100 ml of urine; protein and acetone were negative.

An abdominal and vaginal examination was carried out on Mrs X at 18:00.

1. Record and plot the following:
   a) Time of examination
   b) Fetal heart rate of 140/min
   c) Membranes ruptured, liquor clear
   d) No moulding
   e) Cervix 5 cm dilated
   f) Descent of the head 3/5 above the brim
   g) Uterine contractions 3 in 10 minutes, each lasting 50 seconds
   h) Blood pressure of 105/70 mmHg; pulse 80/min, temperature 37°C.

2. What is the latest expected time Mrs. X will reach 10 cm dilatation should labour progress satisfactorily?

3. If a vaginal examination is made at 22:00 and the cervix is 7 cm dilated, what would the management be in:
   a) a health centre?
   b) a hospital?
Group Exercise C: Fig. R

**PARTOGRAPH**

<table>
<thead>
<tr>
<th>Name</th>
<th>Gravida</th>
<th>Para</th>
<th>Hospital no.</th>
<th>Date of admission</th>
<th>Time of admission</th>
<th>Ruptured membranes</th>
<th>2 hours</th>
</tr>
</thead>
</table>

- Cervix (cm) [Plot X]
- Descent of head [Plot O]
- Hours 0
- Time
- Contraction per 10 mins
- Oxytocin UI, drops/min
- Drugs given and IV fluids
- Pulse and BP
- Temp °C
- Protein
- Acetone
- Volume

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ANSWERS TO GROUP EXERCISE C:

1. See completed partograph (Fig. S)

2. 23:00

3. a) Immediate transfer to hospital because of delay – moving to the right of the alert line
   b) Careful reassessment of cause of delay and cephalopelvic disproportion
Session 12: Newborn Care

Time: 2 hours 15 min
Materials: Slides or video of FCMC newborn care if available, projector or VCR; transparencies and overhead projector
Methods: Lecture, discussion, small group work
Learning Objectives: By the end of the session, participants will be able to:
- describe the following FCMC practices for newborn care and explain the major evidence supporting them: prevention of hypothermia, skin to skin care, rooming in, and early exclusive breastfeeding.

Ask:
- What newborn care practices are carried out at your maternity?

Ask a participant to read the scenario below, found in their manuals. If available, illustrate it with slides or video clips.

The First Hours

Immediately after Maria gives birth, the midwife places her baby boy on Maria’s abdomen and dries him there. The midwife quickly assesses the baby and sees that he has initiated spontaneous breathing and has a heart rate over 120 per minute. She cleans the baby’s eyes and applies eye prophylaxis. She keeps the baby on his mother’s stomach or next to the mother while these tasks are performed. Then Maria and her baby are wrapped in blankets, maintaining skin to skin contact.

The midwife clamps the cord after one minute. She helps Maria to place the baby on her chest in such a way that he can nurse when ready. The two are left undisturbed, and Maria’s husband stays in the room with them. After about an hour, the baby starts to search for the breast, and the midwife helps Maria to put him in a position on her chest to feed.

Ask participants for their reactions to this model of newborn care. Ask:
- How is this the same or different from the care you are familiar with at your maternity?
- What are the advantages of this type of care for mothers and infants?

Present the following overview of newborn care, making reference to participants’ responses as appropriate. There are transparencies for use with this lecture.
1. Overview: Infant and neonatal mortality

8.1 million infant deaths per year worldwide; 50% occur in neonatal period (first month).

4 million neonatal deaths; 2.8 million occur in the first week of life.

Reasons for deaths:
- Birth asphyxia 21%
- Pneumonia 19%
- Neonatal tetanus 14%
- Congenital anomalies 11%
- Birth injuries 10.6%
- Prematurity 10.3%
- Sepsis 7.2%

Many other infants survive with life-long disabilities. In most countries, more than 80% of neonatal deaths are still concentrated in babies who do not have congenital anomalies and who have adequate weight. Many of these deaths can be prevented by adequate training of personnel in managing asphyxia, preventing hypothermia and infection.

2. Interventions aimed at reducing neonatal mortality

Appropriate care during pregnancy and delivery can substantially reduce newborn deaths. It must be accompanied by special newborn care and measures to reduce deaths and disabilities from postnatal causes such as infections, hypothermia, and poor management of asphyxia. Preventative interventions are simple, inexpensive, attainable and cost-effective. Good neonatal care is not high tech!

Mother-Baby Package recommended interventions for newborns:
- Resuscitation
- Prevention and management of hypothermia
- Early and exclusive breast-feeding
- Prevention and management of infections including ophthalmia neonatorum and cord infections

3. Principles and appropriate technologies for essential newborn care

The following principles, based on evidence through research, have been identified:

A. Identification of women at high risk of obstetrical complications and provision of appropriate care
B. active observation of labor with early identification of complications and fetal distress
C. friendly environment for childbirth and promotion of mother infant bonding
D. maintenance of body temperature
E. initiation of spontaneous respiration
F. prevention and management of infections
G. breast-feeding beginning shortly after birth

For some of the principles listed above, we will discuss the appropriate identified technologies (procedures, tools, devices, and routines) that should be made available for every birth. All these technologies are low-cost and can be implemented without major costs except for upgrading the skills, knowledge and practices of health care workers.

A. Identification of women at high risk of obstetrical complications and provision of appropriate care

B. Active observation of labor with early identification of complications and fetal distress.

Routine use of the partograph is one of the technologies for early recognition of complications. It is important that all providers caring for women at any time record appropriate information on this form and in the mother's records.

C. Friendly environment for childbirth and promotion of mother infant bonding.

The environment in which a woman gives birth can effect both the health and outcomes for both the mother and the infant. The concept of mother-infant bonding is well researched and we know that the labor, birth and postpartum period provide a time-limited sensitive period for the mother to "take-in" and form a strong relationship with her infant. Appropriate technologies to ensure a friendly environment and to promote bonding are:

- The father or another family member should be allowed to assist the woman during labor and birth and to visit her during the hospital stay.
- Unnecessary traumatic procedures for the mother and baby during childbirth should be avoided.
- Traditional practices should be allowed if they do not interfere with good care.
- Early contact between the mother and her baby should be encouraged and any unnecessary procedure that separates the baby from his mother should be avoided.

Controlled trials have found that restriction of interaction between mothers and newborns in the early hours after birth is associated with less maternal affectionate behavior, more feelings of maternal incompetence and lack of confidence, and increased risk of child abuse and neglect among socially deprived, first-time mothers.7

7 Enkin
D. Initiation of spontaneous respiration

Interventions to reduce perinatal asphyxia may be the most cost-effective methods to reduce neonatal mortality and preventing further disabilities. However, in about 50% of cases of babies needing assistance with respiratory effort, this situation cannot be anticipated. Therefore, it is important that at each birth there is the necessary equipment and personnel with the appropriate skills.

In the case of birth asphyxia, encouraging results can be obtained by ventilating with mask or bag and mask, and cardiac massage when bradycardia persists. Health care workers should be trained in the assessment and management of birth asphyxia.

Appropriate technologies are:
- Assessment of the newborn immediately after birth for need of resuscitation
- Resuscitation by bag and mask and other cardiopulmonary resuscitation procedures if spontaneous breathing does not start
- Management of the post-asphyctic newborn

E. Maintenance of body temperature

Hypothermia occurs when the body temperature drops below 36.5° C. (97.7° F). The best prevention for hypothermia for all newborn infants, including preterm and small infants, is to dry the baby and placed it in skin-to-skin contact with the mother. Initiate breastfeeding, keeping the infant in skin-to-skin contact and covering the infant and the mother together.

In a randomized controlled study, Fardia (1980) found that body temperatures of infants given skin-to-skin contact with the mother were higher than those placed under radiant heat. “The earlier skin-to-skin contact was initiated with the mother, and the more continuous it was, the warmer the neonate was maintained.”

There are also advantages of skin to skin or “kangaroo” care for pre-term infants, according to randomized clinical trials (Anderson 1991):
- infants were “warm enough; had adequate oxygenation; had fewer episodes of periodic breathing, apnea and bradycardia; had no increase in infection; had twice as much regular sleep, longer bouts of regular sleep and a fourfold increase in alert inactivity; came out of incubators sooner, went home sooner, and cried less at 6 months.”
- Mothers’ body temperature self-regulated to keep their infants in a thermoneutral range.
- “Mothers more inclined to breast-feed, produced more milk, and breast-fed longer; felt close to their infants; felt confident about monitoring their infants’ health.”
Swaddling does not prevent hypothermia. In fact, it may be harmful. Yurdakok et al (1990) in a study in Turkey found that “babies who had been swaddled for at least three months were four times more likely to have developed pneumonia and upper respiratory infections than babies who were unswaddled.”

Hypothermia is the starting point for the development of multiple health problems including hypoglycemia, poor feeding, acidosis, abnormal clotting, and is at increased risk of respiratory distress and infection. Initially, the baby may lose enough heat to drop his temperature two to four degrees (C) due to evaporation of amniotic fluid from his body. The baby's ability to respond to cold by increased metabolism and heat production is not fully developed at birth. Sick or small babies are increased risk of hypothermia.

Appropriate technologies to prevent and treat hypothermia are:

- Education of staff to apply the concepts of the "WARM CHAIN" immediately after birth: drying the infant, skin-to-skin contact with the mother, covering both of them with a dry, clean blanket.
- Early diagnosis of hypothermia by checking the temperature of the infant at regular intervals.
- Re-warming hypothermic infants: skin-to-skin contact, water filled mattresses, and air heated incubators as necessary.
- Ensure adequate thermal protection during internal transfer or external transport.

F. Prevention and management of infections

Several forms of bacterial infection (neonatal tetanus, sepsis, meningitis, pneumonia, diarrhea) contribute significantly to neonatal mortality. Neonatal infections can be the consequence of contamination during the late stage of pregnancy, during delivery, and during the first days of life.

Ophthalmia neonatorum can be prevented by cleaning the eyes of all newborns immediately after delivery and applying 1% silver nitrate or 1% tetracycline ointment. Also, attention should be paid to prevention and treatment of STDs (gonococcal and chlamydia) in mothers during prenatal care.

Infection prevention practices must be used in caring for the newborn. These include:

- Ensure a clean environment and aseptic techniques during delivery
- Clean hands and gloves at all times
- Clean environment
- Sterilized and/or disinfected equipment and supplies
- Rooming in
- Prevention of overcrowding
- Clean water for staff and family to wash hands

Appropriate technologies to aid in the prevention of infections include:

1) Appropriate cord care
2) Avoiding routines that may facilitate infections such as putting more than one baby in a warmer or incubator, not cleaning incubators and other equipment adequately, etc.
3) Ensuring cleanliness of all personnel caring for newborn babies
4) Keep babies with mothers as much as possible and avoid overcrowded nurseries
5) Prevention ophthalmia neonatorum
6) Clinical observation for early recognition of infections
7) Prompt treatment of local and systemic infections

G. Initiation and support of breast-feeding

Participants should be familiar with the advantages and techniques related to breastfeeding. Ask a volunteer to briefly summarize the reasons why early and exclusive breastfeeding is recommended.

Add the following information if not mentioned:

Early and exclusive breast-feeding is one of the most important contributors to neonatal and infant health as it protects against infant death and morbidity. The benefits are enhanced if breast-feeding starts within one hour of birth, with demand feeding and no supplemental feeds are given.

Ask:
- How can we support breastfeeding during the first few hours after birth?
- How can we help a mother respond to the cues from her baby?

Answers should include the following:

- Giving the baby to the mother to breast-feed shortly after birth
- Promoting breast-feeding on demand 24 hours per day
- Promoting rooming-in (mother and baby are together 24 hours per day)
- Informing mothers about the benefits of breast-feeding and the dangers of artificial feeding
- Showing mothers how to breast-feed and informing them about problems that may arise
- Avoiding any use of breast-milk substitutes and bottle feeding
- Avoiding hospital routines that may interfere with breast-feeding
Newborn Care Group Work:

Divide participants into three or more groups. Assign each group one newborn care practice. They should answer the following questions (written on a flip chart):

1) What are the advantages of this practice for mothers and infants?
2) How could you implement this practice in your maternity? What would be supports and obstacles for doing so?

The practices to assign are as follows:
1. Skin to skin care instead of swaddling to prevent hypothermia
2. Rooming in and encouraging early mother-infant interaction
3. Encouraging spontaneous, unrestricted breastfeeding during the first few hours.

Give the groups 15 minutes to work. Then ask the groups to report back.
- Question 1: Listen to the advantages of each practice listed by participants to check that they have understood the lecture. Correct or make additions as needed.
- Question 2: Respond to the obstacles listed by participants and have the class brainstorm for solutions.
Session 13:  
Postpartum Care of the Mother

Time: 1 hour 15 min.

Materials: Role cards

Preparation: Cut out roles or write out on notecards.

Methods: Individual reflection activity; lecture and discussion

Learning Objectives: By the end of the session, participants will be able to:
- list the forms of care a mother needs during the first few hours postpartum.

Tell participants that they will now discuss the key elements of postpartum care for mothers, focusing on the first few hours after birth.

They will begin the session by putting themselves in the place of the woman. Distribute slips of paper or cards with different roles printed on them. Each participant should imagine that he or she is the woman described on the card, one or two hours after the birth. (Ex: “mother who finished a long and difficult labor 1 hour ago”; “woman whose fetus died intrapartum”; “woman who has just completed a normal birth;” etc.)

Read the following questions aloud and ask participants to think of responses from the point of view of this woman. They may individually write down notes about their answers if they desire.

- What are you feeling right now?
- What are your immediate needs?
- What support do you want from health care providers?

Give participants a few minutes to think about responses after reading each question aloud.

Then ask a few volunteers to share what their role is, and how they responded. Make a note of responses that are common among different roles.

Ask:
- What kind of postpartum care does your maternity provide for women in the first few hours and days after birth?

Relate the following lecture to their responses, focusing on practices that differ from theirs.

Excerpted from Postpartum care of the mother and newborn: a practical guide (WHO/RHT/MSM/98.3)

The time immediately following birth is the long-awaited culmination of pregnancy and the start of a new life, a time during which mother and baby form important bonds.
However, health problems may arise during this period that, if not treated promptly and effectively, can lead to ill-health and even death for mother or infant. Nonetheless, the postpartum period is often neglected by maternity care. The lack of postpartum care ignores the fact that the majority of maternal deaths and disabilities occur during the postpartum period.

The postpartum period, or puerperium, starts about an hour after the delivery of the placenta and includes the following six weeks. Postpartum care should respond to the special needs of the mother and baby during this special phase and should include:

- the prevention and early detection and treatment of complications and disease
- the provision of advice and services on breastfeeding, birth spacing, immunization and maternal nutrition.

Give a brief overview of postpartum complications and disease:

- **Postpartum hemorrhage** is the single most important cause of maternal death. It kills 150,000 women each year and nearly nine out of ten of these deaths take place within four hours of delivery.

- **Puerperal infections** such as sepsis are still major causes of maternal mortality in many developing countries.

- **Eclampsia** is the third most important cause of maternal mortality worldwide. A woman suffering from eclampsia or severe pre-eclampsia the first days postpartum should be hospitalized.

- **Urinary tract problems** such as infections, urine retention or incontinence are common.

- **Pain in the perineum and vulva**, especially if there was tissue damage or an episiotomy during the second stage of labour, is common. The woman’s perineum should be regularly inspected to make sure it is not infected.

- **Psychological problems** in the postpartum period are also not uncommon. These problems can be lessened by adequate social support and support from trained care-givers during pregnancy, labour and postpartum period.

The nutritional status of the woman during adolescence, pregnancy and lactation has a direct impact on maternal and infant health in the puerperium. Women’s intake postpartum should be increased to cover the energy cost of lactation. Preventive and treatment measures include ensuring regular intake of appropriate foods, food fortification, giving supplements to pregnant and lactating women and infants and children.

During the postpartum period women need counseling on contraception. If the mother fully breastfeeds the baby she can, at least for the first six weeks, rely on the contraceptive effect of lactational amenorrhoea (LAM). If after 6 weeks an alternative
contraceptive is required, methods include the progestin-only pill, a depot-medroxyprogesterone acetate (DMPA) injection, an intrauterine device (IUD), or barrier methods such as a diaphragm or condoms. Combined oral contraceptives should be avoided during the first months of lactation.

The postpartum period is an important opportunity to counsel women, their partners and their families about the decision to carry out an HIV test if the opportunity was missed during pregnancy. If a test is positive, counseling needs to be given on possible treatment or preventive measures. In many resource-poor settings, the risks of diarrheal disease or malnutrition due to improper or inadequate preparation of artificial milk outweigh the risk of contracting HIV through breastfeeding. Maternity services should take the necessary preventive measures to protect health care workers and mothers against infection.

All mothers should be immunized with at least two doses of tetanus toxoid to protect both themselves and their newborns. The third dose is given 6 months after the second and the last two doses are given after at least one year or during a subsequent pregnancy. Where there is a high risk of tuberculosis infection, BCG immunization should be given to infants soon after birth. Diphtheria-pertussis-tetanus vaccine is recommended for all children at 6, 10 and 14 weeks. A single dose of oral polio should be given at birth or within the first two weeks of life, and the normal polio immunization schedule should follow at 6, 10 and 14 weeks. Where perinatal transmission of hepatitis B is frequent, the first dose of hepatitis B vaccine should be given as soon as possible after birth and should be followed by further doses at 6 and 14 weeks.

With regard to timing of postnatal visits, there seem to be "crucial" moments when contact with the health system or caregiver could be instrumental in identifying and responding to needs and complications. These can be resumed in the formula (which should not be interpreted rigidly) of "6 hours, 6 days, 6 weeks and 6 months". Table 3 below summarizes the broad lines of care that can be offered at each point of contact during the puerperium. More important than a rigid but unfeasible visiting schedule is the possibility for all women to have access to a health care provider when she needs it. There is a need to provide a solid infrastructure for the provision of a service which is comprehensive, culturally sensitive and which responds to the needs of childbearing women and their families. Elements of this infrastructure include policy, service and care provision, tool development, training and human resource issues, health protection and promotion and research.

Key Practices:

The first hours postpartum are extremely important. During this time caregivers should:

- assess maternal well-being, measure and record blood pressure and body temperature.
- assess for vaginal bleeding, uterine contraction and fundal height regularly.
- identify signs of serious maternal complications, in particular hemorrhage, eclampsia and infections and instigate treatment.
• suture the perineum where necessary.

In the postpartum period, women need:
• information/counseling on
  - care of the baby and breast feeding
  - what happens to their bodies - including signs of possible problems
  - self care - hygiene and healing
  - sexual life
  - contraception
  - nutrition
• support from
  - health care providers
  - partner and family: emotional, psychological
• health care for suspected or manifest complications
• time to care for the baby
• help with domestic tasks
• maternity leave
• social reintegration into her family and community
• protection from abuse/violence.

Women may fear:
• inadequacy
• loss of marital intimacy
• isolation
• constant responsibility of caring for the baby and others

Practices which are demonstrably useful and should be encouraged:
• Careful supervision of urine production of the woman 8-12 hours postpartum
• Regular inspection of the perineum during the first week postpartum
• Strict hygienic measures in the care of infants and mothers by all caregivers
• Rooming-in throughout the hospital stay of mother and baby, also at night
• Psychosocial support of caregivers for postpartum women/couples
• Informing all pregnant and postpartum women about the benefits and management of breastfeeding
• Informing all pregnant and postpartum women about all contraceptive choices in the postpartum period
• Reinforcing that non-hormonal methods (LAM, barrier methods and IUDs) are the best options for lactating mothers
• Initiating progestogen-only methods after 6 weeks postpartum to breastfeeding women, if this is the woman's choice
• Advising against the use of combined oral contraceptives in breastfeeding women in the first 6 months after birth, or until weaning, whichever comes first
Introduction of an IUD either in the immediate (<2 days) postpartum or after 4-6 weeks, if this is the method chosen.

**Role Assignments for Postpartum Exercise**

*Print out this page and cut out each role onto a separate strip; or copy down each role onto a small card. Make enough copies so that each participant has one card. (Some participants may be assigned the same role.)*

You are a mother who finished a long and difficult labor 1 hour ago.

You are a woman whose fetus died intrapartum.

You are a woman who has given birth to a healthy infant.

You are a first-time mother who had an episiotomy and suffered some lacerations during birth.

You are a mother who just gave birth to your third child. Your husband is not at the hospital with you.

You are a first-time mother who is having difficulty breastfeeding.

You are a mother who has puerperal sepsis.

You are a mother who has just given birth to a pre-term infant.

You are a mother who had a cesarean section.

You are an HIV-positive mother.

You are a single mother who gave birth to a second child.

You are a mother whose husband and 8-year-old child are present.
Evaluation Activity, Day Three

15 minutes

Conduct a short evaluation activity to assess participants’ learning and their reaction to what they have learned so far.

Suggested activity: Paper fight

Instruct participants to write down one question on a piece of paper, related to what they have learned today. Then crumple the piece of paper into a ball.

Form two teams, facing each other in a line. At the word “go!” the teams throw their paper balls at each other. They keep throwing the paper balls back at each other until the trainer says “Stop!” a minute later.

After the “fight” is over, teams take turns opening up one of the paper balls on their side of the room and answering the question they find on it. Keep score to see which team can answer the most questions correctly.

Be sure to explain the answers to any questions that the teams cannot answer correctly.
FURTHER READINGS ON DAY 3 TOPICS:

Assign all or some of the following articles and abstracts. It is recommended that participants select readings on topics that interest them, or that they want to understand more thoroughly.

Partograph:
- WHO

Skin to skin care:
- Anderson
- Fardia

Swaddling:
- Yurdakok

Breastfeeding:
- Cunningham
- Halpern
- Hamosch
- Sikorski
- Wellstart

Resuscitation:
- Carrasco
- Ramji
- Yoder
Session 14:
Midwife-Physician Collaboration

Time: 1 hour 45 minutes
Materials: Large laminated partograph or partograph transparency; WHO Managing Complications in Pregnancy and Childbirth Guidebook; several copies of blank partograph
Methods: Role play
Learning Objectives: By the end of the session, participants will be able to:
- demonstrate the process of consultation and collaboration between a physician and midwife during management of labor and birth.

The purposes of this session are to:
- Highlight the midwife’s role in an FCMC birth
- Identify appropriate time for physician consultation
- Discuss the range of appropriate interventions.

In this session, a midwife and physician trainer demonstrate how they would collaborate to manage a labor challenge. Then participants have the opportunity to practice themselves.

The midwife and physician trainer should prepare together for this activity by reviewing the case studies. The specifics of each case should be discussed together. The trainers may select cases that address particular scenarios that need attention with the current participant group. They should decide together on the midwifery care to highlight, the timing for physician consultation, the midwife recommendations, the full range of interventions (e.g. discharge home, ambulation, AROM, oxytocin, etc.), the appropriate choice for this woman, the approach to discuss the intervention(s) with the woman and family, and the follow-up.

Introduce the session by explaining that this activity will focus on some common labor challenges and/or complications through role-play and discussion.

Ask:
- How do midwives and physicians usually interact during labor and birth in your maternity?
- What roles and responsibilities do each of them have?

Introduce the role play. Explain that the trainer playing the role of the midwife will present the case to the physician. Remind participants that the midwife in the role play is attending this woman, providing labor support and care, conducting the vaginal exams, and monitoring the woman and fetus using the partograph. The physician and midwife will discuss the midwifery care provided thus far, the current labor challenge or complication, the appropriate intervention(s) and collaborative plan of care of this woman.
As they watch the role play, instruct participants to focus on:
- the midwifery care provided
- the communication between the midwife and physician
- the appropriate interventions for this woman and collaborative plan of care.

**Role Play:**
**Midwife-Physician Collaboration**
**Time:** 5-10 minutes

The midwife will:
- Present the case to the physician using the laminated partograph.
  - Include the woman’s emotional/psychological response(s)
  - Include the family’s response
- Highlight the midwifery care provided thus far.
- Identify the reason(s) for the physician consultation
- Present and discuss his/her recommendations and rationale with the physician

The physician will:
- Demonstrate active listening while the midwife presents the case
- Refer to the partograph when discussing possible interventions with the midwife
- Discuss the range of interventions and rationale.

Together, the midwife and physician reach consensus on the plan of care, discussion with the woman, time frame and follow-up.

Specific cases are provided below. Select a case that is appropriate for the training participants’ needs.

After the role play is complete, ask the following:
- What specific FCMC practices did the midwife provide?
- Are there other FCMC practices that could have been used? Can you identify some?
- How was the partograph included in the clinical assessment? How did this facilitate the communication and clinical decision making for the midwife and physician?
- Which communication skills helped achieve an effective collaboration between the midwife and physician?
- What do you think about the assessment and plan of care? What would you have done differently and why?
- What knowledge, skill or attitude demonstrated in this role-play could you apply in your own facility?
Next, ask participants to prepare a role play on a labor complication in pairs. One person plays the midwife, and the other plays the physician. Assign each pair one of the cases below, which are found in their manuals (some pairs may work on the same case). Provide copies of blank partographs. Tell them that some pairs will have the chance to perform their role play for the class.

Allow the pairs 30 minutes to:

• read the case;
• decide together on the timing for physician consultation, midwife’s recommendations, range of possible interventions, appropriate choice of intervention for this woman, how to discuss the intervention with the family, and follow-up;
• write up a partograph for the case;
• practice role-playing the discussion between the midwife and physician.

They may refer to the WHO manual on complications if desired.

When the pairs are ready, invite one pair to perform their role play in front of the group. They should write their partograph on the transparency or large laminated partograph before they begin.

After they have performed, ask the role players:

  o What specific FCMC practices did the midwife provide?
  o Are there other FCMC practices that could have been used? Can you identify some?
  o How was the partograph included in the clinical assessment? How did this facilitate the communication and clinical decision making for the midwife and physician?
  o Which communication skills helped achieve an effective collaboration between the midwife and physician?
  o What do you think about the assessment and plan of care? What would you have done differently and why?

Open up the same questions to the participants who observed.

Have as many pairs present as time allows (probably only two).
Case Study A: Posterior Position

Ms. M. is a 22 year old Gravida 1 Para 0 at 40 2/7 weeks admitted at 0600 in early active labor:

- Ms. M. complains of back pain along with uterine contractions; family in attendance and attentive; Ms. M. is coping well.
- Normal maternal and fetal condition (e.g. FHR, maternal vital sign, intake and output).
- Fetal head 3/5 palpable;
- Intact membranes;
- Cervix dilated 4 cm; Probable occiput posterior position;
- 3 contractions in 10 minutes lasting 30 seconds.

At 0900:

- Ms. M. complains of continued back pain with uterine contractions; family is anxious
- Fetal head 2/5 palpable;
- Intact membranes;
- Cervix dilated 5 cm;
- Position is Right Occiput Posterior, fetal head well flexed;
- 3 contractions in 10 minutes, each lasting 30 to 40 seconds.

The alert line on the partograph has been crossed. The midwife will discuss the case with the physician.
Case Study B: Protracted Latent Phase versus Not in Labor

Ms. R. is a 19 year old Gravida 1 Para 0 at 39 1/7 weeks admitted at 10 00:
• Ms. R. complains of uterine contractions since 1900 last night. She has not eaten since last night at 2000. She did not sleep after 0330 this morning.
• Normal maternal and fetal condition.
• Fetal head 3/5 palpable;
• Intact membranes;
• Cervix dilated 2 cm;
• 2 contractions in 10 minutes lasting 30 seconds.

At 1400:
• Ms. R. states uterine contractions are stronger but she is tired; family is anxious.
• Normal maternal and fetal condition.
• Fetal head 3/5 palpable;
• Intact membranes;
• Cervix dilated 2 cm;
• 3 contractions in 10 minutes, each lasting 30 seconds.

At 1800
• Ms. R. states uterine contractions are about the same. She is tired and very hungry.
  Her family wants to know when the baby will be born.
• Normal maternal and fetal condition.
• Fetal head 3/5 palpable;
• Intact membranes;
• Cervix dilated 2 cm;
• 2 contractions in 10 minutes, each lasting < 20 seconds.

The cervical dilation has not changed for 8 hours. Is Ms. R. really in labor? The midwife will discuss the case with the physician.
Case Study C: Protracted Active Phase

Ms. D. is a 28 year old Gravida 2 Para 1 at 39 5/7 weeks admitted at 0700 in early active labor:
- Ms. D. is coping well; her husband, mother and 10 year old daughter are present
- Normal maternal and fetal condition (e.g. FHR, maternal vital sign, intake and output).
- Fetal head 4/5 palpable;
- Intact membranes;
- Cervix dilated 2 cm;
- 2 contractions in 10 minutes lasting 30 seconds.

At 1100:
- Ms. D. is tired and wants to rest. Her family will go home and her husband will return
- Normal maternal and fetal condition (e.g. FHR, maternal vital sign, intake and output).
- Fetal head 4/5 palpable;
- Intact membranes;
- Cervix dilated 4 cm; Fetal position is right occiput transverse
- 3 contractions in 10 minutes, each lasting 30 seconds.

At 1300:
- Ms. D is waiting for her husband to return. She doesn’t want him to miss the birth.
- Normal maternal and fetal condition (e.g. FHR, maternal vital sign, intake and output).
- Fetal head 3/5 palpable;
- Intact membranes;
- Cervical exam deferred;
- 2 contractions in 10 minutes, each lasting 20 to 30 seconds.

At 1500:
- Ms. D.’s husband returned. They are walking together. She appears more relaxed and more uncomfortable with the uterine contractions.
- Normal maternal and fetal condition (e.g. FHR, maternal vital sign, intake and output).
- Fetal head 2/5 palpable;
- Intact membranes;
- Cervix dilated 4 cm; Fetal position is right occiput anterior;
- 3 contractions in 10 minutes, each lasting 30 seconds.

The action line on the partograph is reached. The midwife will discuss the case with the physician.
Case Study D: Prolonged 2nd Stage (Expulsive Phase)

Ms. A. is a 32 year old Gravida 2 Para 1 at 40 2/7 weeks admitted at 0600 at 4 cm. Her labor progressed normally. At 1000 she was 8 cm. At 1200 she is 10 cm; fetal descent at 1/5. The FHR has remained stable at 120 to 145. Estimated fetal weight is 3600 grams. Maternal vital signs are normal. Ms. A. felt the urge to push at 1230.

At 1300:
- Maternal pushing efforts are now spontaneous; Her mother is present as labor support.
- Normal maternal and fetal condition (e.g. FHR, maternal vital sign, intake and output).
- Fetal descent at 0/5 with 0 moulding
- 4 in contractions in 10 minutes, each lasting > 40 seconds.

At 1400:
- Maternal pushing efforts are less effective. Ms. A. states she is too tired and cannot push her baby out. Her mother is crying and asking the midwife to do something.
- Normal maternal and fetal condition (e.g. FHR, maternal vital sign, intake and output).
- Fetal descent slowly continues with 1+ moulding.
- 3 in contractions in 10 minutes, each lasting 30 to 40 seconds.

The second stage is now 90 minutes. Ms. A. is making progress but slowly. The midwife notifies the physician and requests a consultation.
Case Study E: Fetal Heart Rate Changes

Ms. V. is a 24 year old Gravida 2 Para 1 at 38 2/7 weeks admitted at 1330 with spontaneous rupture of membranes at 1300. The fluid is light green. She is in early active labor.

- Ms. V. complains of uterine contractions since 0600 this morning. She ate breakfast this morning. Her husband is present for labor support. She attended childbirth classes with her husband.
- Normal maternal and fetal condition except for meconium stained fluid.
- Fetal head 2/5 palpable;
- Leaking light green fluid with no particles
- Cervix dilated 4 cm;
- 3 contractions in 10 minutes lasting 30 to 40 seconds.

At 1530:
- Ms. V. states the uterine contractions are much stronger. She is perspiring and leaning on her husband. Drinking juice and water in labor
- Normal maternal condition
- FHR auscultated at 90 to 100 with some uterine contractions; return to baseline 130 before uterine contractions end.
- Leaking light green fluid with no particles
- Fetal head 2/5 palpable
- Cervix dilated 6 cm
- 4 contractions in 10 minutes > 40 seconds.

Midwife notifies the physician to discuss the case.

At 1630:
- Ms. V. feels a strong urge to push. Husband is physically and emotionally supportive
- FHR auscultated at 90 with uterine contraction; return to 130 after uterine contraction
- Fetal head descending < 0/5
- Cervix dilated 8 cm
- 5 contractions in 10 minutes lasting > 40 seconds.
Case Study F: Decreased Pain Tolerance

Ms. K. is an 18 year old Gravida 1 Para 0 at 37 0/7 weeks admitted in early active labor at 0100. She had spontaneous rupture of membranes at 2100 with clear fluid. Ms. K.’s sister accompanies her however her sister cannot stay. Ms. K. received regular antenatal care. She did not attend childbirth classes. This pregnancy was unplanned. Ms. K. is crying with every uterine contraction.

On admission at 0100:
- Normal maternal and fetal conditions;
- Fetal head 3/5 palpable;
- Leaking clear fluid;
- Cervix dilated 4 cm;
- 3 contractions in 10 minutes lasting 30 to 40 seconds.

At 0500:
- Normal maternal and fetal condition except Ms. K. continues to cry and states she cannot tolerate the pain any longer. She asks for medicine to stop the pain.
- The midwife has been out of the room for 90 minutes attending another woman’s admission and birth. The intern has completed the labor monitoring on the partograph.
- Fetal head 2/5 palpable;
- Leaking clear fluid;
- Cervix dilated 6 cm;
- 2 contractions in 10 minutes > 40 seconds.

The midwife notifies the physician for a consultation. She returns to Ms. K.’s bedside to resume labor support and monitoring.
Case Study G: Increased Anxiety (Woman and/or Family)

Ms. B. is a 25 year old Gravida 2 Para 0 at 38 2/7 weeks admitted at 0800 in early labor. Ms. B. had a normal antenatal care course. She attended childbirth classes with her husband. Ms. B. wants her husband and mother present for labor support. Her mother had two children by cesarean section and no experience of labor.

On admission at 0800:
- Normal maternal and fetal condition;
- Fetal head 4/5 palpable; Estimated fetal weight is 3400 grams
- Intact membranes
- Cervix dilated 2 cm; cephalic presentation
- 4 contractions in 10 minutes lasting 20 to 30 seconds.

At 1200:
- Normal maternal and fetal condition;
- Fetal head 3/5 palpable;
- Intact membranes
- Cervix dilated 3 cm;
- 3 contractions in 10 minutes lasting 30 seconds;
- The midwife observes Ms. B. is walking alone while her mother is looking out the window. Ms. B.’s husband is not in the room. The midwife stays with Ms. B.

At 1400:
- Normal maternal and fetal condition
- Fetal head 2/5 palpable;
- Intact membranes
- Cervical exam deferred;
- 3 contractions in 10 minutes lasting 30 to 40 seconds;
- Ms. B. is more uncomfortable. Her husband is walking with her but not providing any other labor support. Her mother is looking out the window and crying. The midwife helps Ms. B.’s husband with labor support techniques while praising their mutual efforts. The midwife then brings her attention to Ms. B.’s mother. *(Describe possible options to help Ms. B.’s mother)*

At 1600:
- Normal maternal and fetal condition
- Fetal head 2/5 palpable;
- Intact membranes
- Cervix is 5 cm;
- 4 contractions in 10 minutes lasting > 40 seconds;
- Ms. B. is more uncomfortable. Her husband is slow dancing with her and speaking softly. Her mother is looking out the window and crying.
The alert line is crossed. The midwife notifies the physician for a consultation. The midwife describes the labor progress and family dynamics during the consultation.
Session 15:
Counseling Families about FCMC

Time: 2 hours
Methods: Lecture, demonstration, role play
Learning Objectives: By the end of the session, participants will be able to:
- list the communication skills required in health care.
- demonstrate how to counsel a family about FCMC.
- list the benefits of childbirth education for families.

Tell participants that in this session, they will learn about and practice communication skills.

The idea of counselling:
- *Counselling* is a way of working with people in which you try to understand how they feel and help them to decide what to do.

Counselling skills are useful when you talk to patients or clients in other situations. You may also find them helpful with your family and friends, or your colleagues at work. Practise some of the techniques with them – you may find the result surprising and helpful.

- The skill helps to listen and to show the client that you are interested in him or her. This will encourage the client to tell you more.

Listening and Learning
- Use non-verbal and verbal techniques to encourage a client to talk without asking too many questions
- Respond to a client’s feelings with sympathy

Demonstration Role Plays:

The facilitator and a partner conduct two short role plays to demonstrate listening and learning skills.

Scenario: Both role plays demonstrate the same scenario. A midwife talks to a mother who has just come into the maternity in labour. The midwife tells her about FCMC practices that are available in the maternity.

The pair should practice ahead of time. (A participant can be invited to be the facilitator’s partner if appropriate.)
Role Play #1:

In the first role play, the midwife uses poor communication skills. She stands with her arms crossed or busies herself with writing notes on a pad, doesn’t make eye contact with the mother, acts distracted, asks closed questions, and uses judgmental language.

After the role play is finished, ask participants:
• What did you notice about this interaction?
• What is your assessment of the midwife’s listening skills? How much did she learn about the mother?
• What suggestions for changes in behaviour would you give to the midwife?

Role Play #2:

In the second role play, the midwife uses good communication skills. She asks open-ended questions, uses body language and eye contact to show interest and supportiveness, reflects back what the mother says, and empathises with the mother’s feelings.

Afterward, ask:
• How was this interaction different from the first one?
• What listening skills did the midwife demonstrate?
• How much did she learn from the mother?
• Why is it important to learn information from the mother?

Present the following overview of listening and learning skills, referring back to the role plays for each.

Six listening and learning skills:

Skill 1. Use non-verbal communication

Explanation:
• Non-verbal communication means showing your attitude through your posture, your expression, everything except through speaking.

Demonstration:
• Tell participants that the second role play demonstrated five different kinds of non-verbal communication. Act out each of these positions as you explain it, or ask a volunteer to do so.

Non-verbal communication

1. Posture:
   Hinders: stand with your head higher than the other’s person
   Helps: sit so that your head is level with the client’s
   Write: “Keep your head level” on the flipchart
2. Eye contact:
   Helps: look at the client and pay attention as he/she speaks
   Hinders: look away at something else, or down at your notes
(Note: Eye contact may have different meanings in different cultures. Sometimes when a person looks away it means that he or she is ready to listen. If necessary, adapt this to your own situation)

3. Barriers:
   Hinders: sit behind a table, or write notes while you talk
   Helps: remove the table or the notes

4. Taking time:
   Helps: make the client feel that you have time. Sit down and greet the client without hurrying; then just stay quietly smiling at the client, waiting for him/her to answer
   Hinders: be in a hurry. Greet the client quickly, show signs of impatience, look at your watch

5. Touch:
   Helps: touch the client appropriately
   Hinders: touch the client in an inappropriate way
   (note: if you cannot demonstrate an inappropriate touch, simply demonstrate not touching).

HELPFUL NON-VERBAL COMMUNICATION
- Keep your head level
- Pay attention
- Remove barriers
- Take time
- Touch appropriately

Ask:
- Why and how are these nonverbal communication skills helpful when you are counselling a family about FCMC?

Skill 2. Ask open questions

Ask if a participant can give an example of an open-ended question and a closed question.

Explanation:
- To start a discussion with a client, or to take a history from him/her, you need to ask some questions.
- It is important to ask questions in a way, which encourages a client to talk to you and to give you information. This saves you from asking too many questions, and enables you to learn more in the time available.
Open questions are usually the most helpful. To answer them, a client must give you some information. Open questions usually start with “How? What? When? Why?”

Closed questions are usually less helpful. They tell a client the answer that you expect, and a client can answer them with “Yes” or “No”.

Closed questions usually start with “Are you?” or “Did he?”

Refer back to the role plays for examples.

Closed questions to which a client can answer “yes” or “no”

Comment: The health worker got “yes” and “no” for answers and didn’t learn much. It can be difficult to know what to say next.

Open questions

Comment: The health worker asked open questions. The client could not answer with “yes” or “no”, and he/she had to give some information. The health worker learnt much more.

Give participants some examples of closed questions and ask for volunteers to turn them into open-ended questions.

Example: Closed: “Are you feeling anxious right now about the birth?”
Open: “How are you feeling about the birth right now?”

Starting and continuing a conversation

Comment: The health worker asks an open question, which does not help much. Then she asks two specific questions, and then follows up with an open question. The health worker later learns that the client needs help with prenatal care (family planning).

Ask:

Why and how are these questioning skills helpful when you are counselling a family about FCMC?

Skill 3. Use responses and gestures which show interest

Explanation:

- If you want a client to continue talking, you must show that you are listening, and that you are interested in what the client is saying.
- Important ways to show that you are listening and interested are:
  - with gestures, for example, look at the client, nod and smile
  - with simple responses

Demonstration:
“Nnn”, “Eehh” etc. are part of the language in different countries
Ask:
- *Why and how are these responses and gestures helpful when you are counselling a family about FCMC?*

**Skill 4. Reflect back what the client says**

**Explanation:**
- Health workers sometimes ask clients a lot of factual questions. However, the answers to factual questions are often not helpful. The client may say less and less in reply to each question.
- It is more useful to repeat back or reflect what a client says. It shows that you understand, and the client is more likely to say more about what is important to him/her. It is better to say it in a slightly different way, so that it does not sound as though you are copying the client.

**Demonstration:** Refer back to the role plays.

*Reflecting back*

**Comment:** The health worker reflects back what the client says so the client gives more information.

*Mixing reflecting back with other responses*

**Comment:** The conversation sounds more natural, but the health worker is learning more about how the client feels.

Ask:
- *Why and how is it helpful to reflect back the client’s statements when you are counselling a family about FCMC?*

**Skill 5. Empathise – show that you understand how the client feels**

**Explanation:**
- When a client says something which shows how he/she feels, it is helpful to respond in a way which shows that you heard what the client said, and that you understand the client’s feelings from his/her point of view.
- Empathy is different from sympathy. When you sympathise you are sorry for a person, but you look at it from YOUR point of view.
- You might ask for more facts.
- You could reflect back what the client says.
- It is also helpful to empathise with a client’s good feelings. Empathy is not only to show that you understand the client’s bad feelings.

**Demonstration:** Refer back to the role plays.

**Continuing to ask for facts**
Comment: The health worker asks about facts. She ignores the client’s feelings, so she learns only facts, which are not very helpful.

**Sympathising**

Comment: The health worker sympathises, and turns the attention to her own situation. This is not helpful.

**Reflecting back**

Comment: When the health worker reflects back, the client continues talking, but he/she talks not about his/her feelings.

**Empathising**

Comment: The health worker empathises with the client’s feelings and learns some very important things – without asking direct questions.

**Empathising with a client’s good feelings**

Comment: It is important to make the client feel that you are interested in him/her, even if the client doesn’t have a problem.

Ask:

- *Why and how are these communication skills helpful when you are counselling a family about FCMC?*

**Skill 6. Avoid words, which sound judging**

**Explanation:**

“Judging words” are words like: right, wrong, well, badly, good, enough, properly.

**Demonstration:**

*Using judging words*

Comment: The health worker is not learning anything useful, but she is making the client very worried.

*Avoiding judging words*

Comment: The health worker learnt that she needed to know without making the client worried.

Ask:

- *Why and how is it helpful to avoid judging words when you are counselling a family about FCMC?*

**Summary:**

**LISTENING AND LEARNING SKILLS**

- Use helpful non-verbal communication
• Ask open questions
• Use responses and gestures, which show interest
• Reflect back what the client says
• Empathise – show that you understand how the client feels
• Avoid words which sound judging

Distribute the Communication Observer’s Guide. Briefly go over the behaviors that are listed on the Guide and ensure that everyone understands it. Tell participants that it can be a useful tool for self-assessment or assessment of a colleague in a counseling situation.

Role Play:

Ask participants to turn to the role play instructions in their manuals for “Counseling Families about FCMC.” Ask participants to form groups of 3 to role play the scenario of counseling a family about FCMC upon admission. One participant will play the role of the health provider, one the role of the mother, and one the role of the father. After the role play, the three each give their feedback about how it went. They should exchange roles at least once. Give the groups 45 minutes. The observer in the group should use the Communication Observer’s Guide to structure his/her feedback.

Counseling Families about FCMC

A woman who gave birth to a child three years ago comes to the maternity in labor with her husband. A midwife admits them and talks to them about the FCMC approach. She explains how the FCMC approach will be different from what the woman experienced with the birth of her first child. The midwife uses good counseling skills.

Guidelines for the midwife:

• Start by greeting the woman and helping her feel comfortable.
• Elicit the woman’s history.
• Explain what the woman should expect to encounter in an FCMC birth, and how it is different from procedures she has experienced in the past.
• Demonstrate empathy with the client.
• Incorporate the father into the conversation.
• When the mother has a contraction, support her. Wait to continue the interview until the contraction is over.

Reconvene the class. Ask:
• Give an example of one way that a group member communicated well in this role play.
• Give an example of a communication technique that was difficult to use and why.

Childbirth Education
Conclude the session with a discussion of childbirth education. Note that preparing families for a FCMC birth should ideally start during antenatal classes.

Ask:
- What are some of the benefits of childbirth education?

Reinforce the following responses:
- Familiarizes the woman with what to expect in the normal process of labor and birth.
- Gives the woman an understanding of medical procedures and emergencies that could occur;
- Reduces the woman’s anxiety and helps her relax, facilitating labor and birth.
- May reduce the woman’s need for pain medication during labor and birth.
- Teaches the woman and her partner positions and comfort measures to use.
- Gives woman the information and tools she needs to participate in decisions about her labor and birth.

Ask:
- What kind of childbirth education does your maternity provide? What topics does it include?

If possible, invite a trainer or participant with experience of an innovative childbirth education program to describe their model to the group.

Review some of the main topics that should be covered in childbirth education, such as:
- Changes the mother can expect in her body during each trimester
- Labor: the process of labor, how to recognize the signs of labor, what to do at home in early labor, when to go to the hospital
- Positions and pain relief measures a woman and her partner can use in labor
- Hospital procedures they can expect
- Questions to ask hospital caregivers
- Early contact with the baby
- Postpartum recovery
- How to take care of herself, her family, and the baby
- Breastfeeding
- Relaxation techniques

Ask:
- How can we integrate information about the FCMC approach into childbirth education?

Listen to responses and add the following if not mentioned:
- Families should receive the message early on that they will be welcome at the maternity (companion allowed in delivery room, siblings allowed to visit).
- The woman should be informed about her choices in terms of pain relief and medication, labor positions, etc. If she knows ahead of time what her options are, she will be better able to make informed choices during childbirth.
- If a woman has given birth before, she may be expecting procedures not recommended in the FCMC approach, such as enema and pubic shave. Explain this different approach and answer any questions she has about the reasons for the difference.
## Communication Observer’s Guide

<table>
<thead>
<tr>
<th>Communication Skills</th>
<th>Usually</th>
<th>Sometimes</th>
<th>Rarely</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nonverbal:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relaxes</td>
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<td></td>
<td></td>
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<tr>
<td>Opens up to client; nonjudgmental</td>
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<td></td>
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<tr>
<td>Leans forward toward client</td>
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<tr>
<td>Establishes eye contact</td>
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<tr>
<td>Sits squarely (and smiles)</td>
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<tr>
<td><strong>Verbal:</strong></td>
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<td></td>
<td></td>
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<tr>
<td>Clarifies</td>
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<tr>
<td>Listens</td>
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<tr>
<td>Encourages and praises client</td>
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<tr>
<td>Acknowledges</td>
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<tr>
<td>Reflects and repeats</td>
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</tr>
<tr>
<td><strong>Counseling Process (steps):</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greets client and family warmly</td>
<td></td>
<td></td>
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<tr>
<td>Asks open-ended and probing questions</td>
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<tr>
<td>Tells clients about the benefits of FCMC</td>
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<tr>
<td>Helps woman to make her own decision</td>
<td></td>
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</tr>
<tr>
<td>Explains anticipated processes (admission, labor, etc.)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Return visits, referral, follow-up explained</td>
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</tbody>
</table>

**Observer’s Comments:**
Session 16: Infection Control and Guidelines for Maternity Hospitals

Time: 1 hour  
Materials: Cards for game  
Methods: Brainstorm; lecture and discussion; game  
Learning Objectives: By the end of the session, participants will be able to:  
- Define infection control.  
- List at least 5 infection control practices that have been proven to be effective, and at least 5 common practices that have been proven ineffective.

Ask:
- *What is infection control?*

Relate responses to the following definition:

Infection Control (IC) is a set of organizational, preventive and epidemic control interventions based on respective test results and aimed to prevent the incidence and spread of nosocomial infections (NI).

New Preventive Services

**Level 1: Standard precautions** (applicable to all patients).  
**Level 2: Procedures contingent on infection transmission routes** (patients with documented or suspected bacilli production).

To find out what participants currently know and do about IC in their maternities, ask a participant to read aloud the following scenario:

<table>
<thead>
<tr>
<th><strong>Scenario:</strong></th>
</tr>
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</table>
| Katya comes into the maternity with her husband. They are both wearing their personal clothes and shoes from home. She is in labor.  
What infection control procedures should the maternity conduct during each stage of Katya’s stay at the maternity to make sure that she and her baby do not transmit or receive any infections? |

Ask participants to form small groups of 2 or 3 with the people sitting near them. Give them 5-10 minutes to brainstorm all the IC procedures that the maternity would follow.
Go around the groups and ask each to name one procedure that has not yet been listed by a previous group. List the responses on a flip chart. Go around the groups until no new procedures are named.

Then tell participants that they will discuss which of these procedures are effective according to scientific evidence, and which ones are not. The following game will help the facilitator to determine what participants already know about evidence-based infection control practices, and what misconceptions they may have.

**Game:**

Divide the participants into three or four teams. Each team will take turns answering a question on a card. Each card lists an infection control practice. The team must decide whether or not the practice shown on the card has been proven effective through research. They have 1 minute to decide on their answer as a group. If the team answers correctly, they receive a point. The teams take turns until all the cards have been used.

Cards and answers are provided at the end of this session.

When the game is finished, review the New Obstetric Procedures for IC listed below. Relate this list to the practices already discussed by participants in the scenario and game. Have participants identify any of the practices in their own maternities that are not supported by the evidence. Spend time in particular talking about the practices about which participants gave incorrect answers in the game, and clarify any misconceptions participants may have about best practice in infection control.

**New Obstetric Procedures for IC**

**Reception**
- Provide cleansing: perineum shaving, cleansing enema or shower only at patients’ discretion.
- Allow patients to use their personal underwear and bedclothes while permitting partners-in-labour to wear their personal clothes (but must bring a pair of clean shoes to be worn inside the MH).
- Perform thorough ventilation of room rather than UV.

**Antenatal Pathology Department**
- Perform cleansing: perineum shaving, cleansing enema, shower only at patients’ discretion.
- Administer enema using only disposable tips.
- Allow patients to use their personal underwear and bedclothes while partners in labour may wear their personal clothes (but must bring a pair of clean shoes to be worn inside the MH).
• Perform thorough ventilation of room rather than UV.

Delivery Room (personal items)

• Allow patients to wear personal underwear and socks (instead of overshoes) while partners in labour may wear clean personal underwear (or disposable clothes) (but must bring a pair of clean shoes to be worn inside the MH).
• Do not include perineum shaving and cleansing enema in antenatal preparation.
• Allow patient to choose partners in labour (husbands, mothers, sisters, relatives or friends).
• Ensure uninterrupted support by partner during labor (moral, special massage aimed at pain control, stimulation of a patient’s eupnea, emotional support).

Neonatal care:

• Place the newborn baby immediately after the delivery on his/her mother’s abdomen and wipe him/her with a warm nappy (skin contact). Put a wool cap on the baby’s head and wool booties on baby’s feet.
• Cross-clamp the umbilical cord only after pulsation is stopped; ensure that the termination of pulsation is determined by the nurse holding the umbilical cord in her hands. Perform gonorrhea prevention when the newborn is on his/her mother’s abdomen.
• Use tetracycline ointment only for babies born to mothers with gonorrhea, or a gonorrhea record, or not examined previously.

Postnatal Care Department (a mother-and-baby ward)

• Do not treat patient’s breasts with antibiotics.
• Keep mothers and their babies in the same ward (rooming-in).
• Manage perineal scars without antibiotics (only good personal hygienic practice).
• Wash the newborn with tap water.
• Do not allow any routine treatment of baby’s eyes.
• Do not treat and leave to heal dry the umbilical cord’s stump.
• Ensure that the ward is spacious enough.
• Allow mothers and their babies to use their personal clothes.
• Do not allow medical staff wear masks and caps.
• Perform examination only using disposable gloves.
• Allow mothers and their babies to sleep in one bed. The bed must be flat and wide enough, Adic Levina beds will be best choice for this purpose.

Intensive Treatment Ward (ICW)

• Allow parents to visit the newborn baby.
• Allow to fit out the wards additionally in a home-like manner (window blinds, toys, etc.).
• Special pre-term baby management should be employed (Kangaroo method).
• Wash the baby in tap water for sanitation.
• Do not allow routine treatment of baby’s eyes.
• Leave the umbilical cord’s stump untreated to heal dry.
• Leave patient’s veins after catheterization untreated to heal.

General Guidelines on Staff Clothing, Hand Decontamination, Surface and Floor Cleaning, Waste Disposal, Surface Decontamination and Sterilization:

Protective clothing
• Ensure that all staff wears medical coats, personal cotton underwear and easy-to-clean shoes (medical coats should be changed daily).
• Use caps optionally.
• Wear masks only during breaks.
• Wear sterile and non-sterile gloves depending on the procedure.
• Ensure that all medical staff wear during labor and delivery clean protective clothing, including non-sterile coats (to be changed after each delivery), gloves, aprons and glasses (may be used for individual protection masks and caps).

Invasive procedures for newborns:
• Change masks, caps, sterile coats, disposable (sterile) gloves after contact with each newborn.

Hand decontamination.
• Wash hands before and after a procedure or a visit to a restroom as well as before and after meal.
• Only disposable towels should be used.
• Decontaminate hands before every procedure.
• Wear disposable gloves during patients’ examination. (disposable plastic gloves are allowed).
• Use sterile gloves for invasive procedures.
• Provide mothers and their babies with liquid soap (in the ward).

Gloves
• Use sterile and non-sterile gloves depending on the type of procedure.

Mothers’ clothing
• Use personal underwear.
• Change bed linen as defined in Instruction № 345; commercially available pantyliners should be used.
• Visitor’s clothing
• Wear clean clothes and bring a pair of clean shoes to be worn inside the MH.

Newborns’ clothing
• Use of baby’s clothes, nappies, pampers, etc…, brought from home, may be allowed.
• Sterilize baby’s clothes provided by the MH in the oven (autoclave).

Cleaning
• Clean surfaces after contact with each patient.
• Clean surfaces before the end of each shift.
• Perform general cleaning every seven days.
• Perform damp cleaning twice a day, as appropriate.
• Use decontaminants and detergents following container labels.
• Ventilate rooms thoroughly rather use UV lamps.

**Delivery room cleaning**
• Clean the delivery room with appropriate agents following to the Methodological Guidelines on Decontamination and Sterilization of Medical Instruments and Items.
• Decontaminate the delivery room surfaces stained with patients’ blood and body fluids, following relevant guidelines (other surfaces are cleaned with detergents).
• Decontaminate and ventilate highly contaminated delivery rooms thoroughly.
• Clean the delivery room after each delivery.
• Decontaminate the delivery room with aerosol every seven days; keep record of this procedure on a regular basis using a separate log book.
• Perform damp cleaning twice a day, as appropriate.

**Cleaning of postnatal care wards (mother-and-child wards).**
• Ensure a 1-3 days’ patient rotation in each ward.
• Perform twice a day damp cleaning of each ward, including diapering table, with soap and soda solution.
• Decontaminate the ward thoroughly after each discharge.

**Waste disposal**
• Disassemble syringes before disposal and discard the needles and cups separately; syringe bodies should be fully immersed in the disposal container.
• Put needles in a separate container for further disposal.
• Put cotton swabs after injection into a separate container.
• Put gloves into a separate container.
• Dispose of enema tips similarly to disposable syringes.
• Provide each mother and child ward with a container having waste bags for nappy disposal, if unavailable; the nappies should be put into washable rubber bags.

**Decontamination**
• Decontaminate to prevent virus hepatitis following relevant practical guidelines.
• Decontaminate medical instruments and items after each delivery.
• Decontaminate diapering tables with detergents after contact between the newborn baby by the nurse.
• Rinse toys with detergent (water solution).
• Decontaminate the examination room chairs with bleach after contact with each woman.

**Sterilization**
• Provide the department with sterilization boxes with cotton swabs, gloves and sterile material to be laid out on the sterile table.
• Set the sterile table every six hours, with the data and time to be recorded if the patient has no record of staying in sterile environment.
• Rinse thermometers after decontamination and keep them dry.
• Sterilize medical instruments and dressings.
• Sterilize medical clothes following relevant guidelines.
• Sterilize newborn diapers in oven (autoclave).

Culture

Women:
• Perform drug sensitivity test on cervical culture and flora of the women:
  - admitted without prior medical testing;
  - with recurrent colpitis.
• Culture urine culture for flora and DS in the following cases:
  - acute pyelonephritis;
  - bacteriuria;
  - pyuria.
• Perform histological tests only when generalized infection is suspected, in order to determine the transmission route (ascending or descending infections.)

Newborns:
• Take specimens, when indicated, for culture from axillary crease.
• Culture specimens from the intubation probe and tracheal specimens one day after delivery.
• Culture stool before chemotherapy when symptoms of intrauterine infection are available.
• Culture in case pre-nozology symptoms (lacrimation, etc.) are available.
IC Structure and Management

Ask:
- What management structures support effective infection control?
- What structures are in place at your maternity?

Two Approaches to Structuring IC System

Regulatory approach:
- Dictatorship by external supervising agencies.
- Data collection for comparison with external standards.
- Inspections.
- Disciplinary actions.

Quality improvement strategy:
- MH personnel independently defines IC methods and objectives.
- Data collection for internal review.
- MH personnel is constantly looking for ways of improvement.
- Failures must be attributed to IC drawbacks rather than to individual poor performance.

Requirements to Nosocomial Infection Control
- Structure of the IC management.
- Take on record and monitor nosocomial infection cases.
- Culture test equipment for IC.
- Perform NI case detection.
- Take IC preventive and epidemic control action.
- Provide medical education and training;
- Ensure medical staff safety.

Infection Control (IC) Management and Responsibilities

The MH structure is to ensure effective IC by:
- Establish the IC Committee (ICC) for control over all departments and units.
- Include an epidemiologist in the MH staff.
- Provide every MH unit in need of IC with IC supervisors.
- Charge the Chief Director with IC development and maintenance.

Key Duties of MH ICC
- Develop the IC system structure, programs and action plans and define its general goals.
• Made decisions on the needs and cost-effectiveness of IC financing and resource utilization.
• Review the IC action plan (program) outcomes and make changes, if required.
• Provide information on IC to all MH departments and units and ensure the coordination.
• Review IC effectiveness.

Nosocomial Infection Case Records and Monitoring

Taking on record and monitoring NI cases should be timely and complete.

• List infection cases detected at MH for NI monitoring and record keeping.
• Make the NI list, classification and other data subject to monitoring and registration comply with standard NI definitions (diagnostic criteria) matching those approved for the whole city (region, country).
• Test each NI case detected and define following the above standards.
• Develop a proactive NI case detection procedure.

Culture for IC

• Perform up-to-date culture tests.
• Set relevant standards and improve the drug susceptibility tests (DST).
• Use up-to-date quality control procedures.
• Define medical indications for culture.
• Ensure the continuity of services: clinician-lab technician-epidemiologist.
• Discontinue the routine tests of room surfaces and personnel (up to 50-80% of all investigations!).

NI Case Detection

The NI CD procedures lay the basis for effective prevention and epidemic control action at MH.

• Gather the data required for NI control. The quality and volume of data depends on the internal MH setting and the test results.
• Review efficiently retrospective test results.
• Review efficiently ongoing test results.

Preventive Action and Epidemic Control in the IC Format

The MH should develop an effective IC system based on test results and specific features of clinical setting.

• Develop the IC procedures based on retrospective test results, subject to ongoing updates.
• Draft relevant guidelines on the entire range of IC-specific procedures, as well the testing and medical treatment specifications, including the IC standards.

Training

*All the MH personnel and specialties should have basic knowledge of IC and improve their expertise on the ongoing basis.*

• Develop and use various specialty training the differential IC training programs considering the MH (department) specifics.
• Provide the basic IC course to each professional on employment, with further IC refresher course training to be provided to all personnel on the on-going basis.

MH Personnel Safety

*Effective protection is required for MH personnel against the dangerous effects of infections and non-communicable occupational diseases.*

• Establish the Occupational Health Committee.
• Charge the MH Chief Doctor with taking effective action for occupational health safety.
• Charge the chiefs of MH departments with ensuring the routine screening of personnel as well as preventive action and safe-work conditions.

Antibiotic Therapy Policy

• Monitor drug resistance.
• Develop empiric chemotherapy protocols and pre-surgery preventive action.
• Reduce reasonably the list of drugs routinely used for in-patient care and develop appropriate prescription forms and procedures for MH pharmacy.
• Include chemotherapists in MH staff and organize training in chemotherapy for physicians.

Hand Decontamination

• List indications for hand washing and decontamination.
• Create appropriate conditions for hand washing.
• Use non-aqueous (alcoholic) decontaminants.
• **Do not use washable towels.**
• Provide training in hand decontamination.
• Choose decontaminants carefully.
• Improve personnel motivation and enhance the responsibility.
# Infection Control Game Cards

Cut along the dotted lines to make cards for the game. You can fold each card down the middle so that the correct answer is hidden on the back.

<table>
<thead>
<tr>
<th>IC Practices</th>
<th>Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cut on dotted lines</td>
<td>Fold here ▼</td>
</tr>
<tr>
<td>1. Perform a routine cleansing enema on all women in labor.</td>
<td>NOT SUPPORTED BY EVIDENCE Studies have shown that there is no difference in the risk of fecal contamination with or without enema.</td>
</tr>
<tr>
<td>2. Perform a routine perineum shave on all women in preparation for childbirth.</td>
<td>NOT SUPPORTED BY EVIDENCE Research shows that shaving does not affect the incidence of infection.</td>
</tr>
<tr>
<td>3. Do not allow mothers to wear their personal clothes and underwear in the delivery room.</td>
<td>NOT SUPPORTED BY EVIDENCE</td>
</tr>
<tr>
<td>4. Keep mothers and their babies in the same ward (rooming-in).</td>
<td>YES, SUPPORTED BY EVIDENCE In addition to promoting breastfeeding and mother-infant bonding, rooming in avoids the infection risk of keeping too many babies in an overcrowded nursery.</td>
</tr>
<tr>
<td>5. Perform examinations only using disposable gloves.</td>
<td>YES, SUPPORTED BY EVIDENCE</td>
</tr>
<tr>
<td>6. Ensure that all staff wear nonsterile medical coats that are changed daily.</td>
<td>YES, SUPPORTED BY EVIDENCE</td>
</tr>
<tr>
<td>7. Wash hands before and after a procedure, a meal, or a visit to the restroom.</td>
<td>YES, SUPPORTED BY EVIDENCE</td>
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</tr>
<tr>
<td>8.</td>
<td>Use UV lamps to clean rooms.</td>
</tr>
<tr>
<td></td>
<td>NOT SUPPORTED BY EVIDENCE</td>
</tr>
<tr>
<td></td>
<td>Ventilate rooms thoroughly instead.</td>
</tr>
<tr>
<td>9.</td>
<td>Do not allow babies to wear personal clothes brought from home.</td>
</tr>
<tr>
<td></td>
<td>NOT SUPPORTED BY EVIDENCE</td>
</tr>
<tr>
<td>10.</td>
<td>Ensure that staff wear gowns and face masks during labor and delivery.</td>
</tr>
<tr>
<td></td>
<td>NOT SUPPORTED BY EVIDENCE</td>
</tr>
<tr>
<td>11.</td>
<td>Treat the newborn’s umbilical cord stump with antiseptics.</td>
</tr>
<tr>
<td></td>
<td>NOT SUPPORTED BY EVIDENCE</td>
</tr>
<tr>
<td></td>
<td>It is recommended to simply leave the cord to dry, with no treatment.</td>
</tr>
<tr>
<td>12.</td>
<td>Allow siblings to visit the mother and newborn.</td>
</tr>
<tr>
<td></td>
<td>YES, SUPPORTED BY EVIDENCE</td>
</tr>
<tr>
<td>13.</td>
<td>Wash the newborn with tap water.</td>
</tr>
<tr>
<td></td>
<td>YES, SUPPORTED BY EVIDENCE</td>
</tr>
<tr>
<td>14.</td>
<td>Manage perineal scars with good personal hygiene, not antibiotics.</td>
</tr>
<tr>
<td></td>
<td>YES, SUPPORTED BY EVIDENCE</td>
</tr>
<tr>
<td>15.</td>
<td>Perform a damp cleaning of the postnatal care wards twice a day.</td>
</tr>
<tr>
<td></td>
<td>YES, SUPPORTED BY EVIDENCE</td>
</tr>
<tr>
<td>16.</td>
<td>Conduct routine testing of room surfaces and personnel.</td>
</tr>
<tr>
<td></td>
<td>NOT SUPPORTED BY EVIDENCE</td>
</tr>
</tbody>
</table>
Session 17: Infection Control Case Study

Time: 1 hour 45 minutes
Materials: none
Methods: Case study
Learning Objectives: By the end of the session, participants will be able to:
• Explain how to conduct FCMC practices while still preventing infection.

Tell participants that they will now put their knowledge of infection control into practice by considering how to implement FCMC and maintain infection control at the same time.

Distribute Handout: “Infection Risk and FCMC” (shown below). Divide participants into 4 or 5 small groups. Assign each group one of the women in the case study and ask them to answer the questions about her infection risks. Tell the groups they have 45 minutes to work.

Infection Risk and FCMC

Your maternity has 8 small rooms available for labor and birth: 6 are currently occupied by women, one is used by staff, and one is empty. The following women are present in the maternity:

Room 1: A normal healthy mother in labor, with her husband present
Room 2: A mother in labor who had syphilis at her first prenatal visit. She and her husband were treated adequately as demonstrated by her low titer when rechecked during the third trimester.
Room 3: A mother who is an active carrier of Hepatitis B, in labor, with her husband present
Room 4: A mother 2 days postpartum with puerperal sepsis, with her husband and baby present
Room 5: A normal healthy mother, 2 hours postpartum, with her husband present
Room 6: A mother in early labor with ruptured membranes, with her husband present

Please answer the following questions about the mother your group is assigned.

1. What, if anything, is this mother at risk of contracting? What is the possible route of transmission?
2. What, if anything, might this mother infect others with? What is the possible route of transmission? What precautions are necessary to prevent transmission of this organism?
3. Are the following people at risk for contracting this infection from the mother during labor, birth or the postpartum period? If so, what is the mode of transmission?
   a) mother
   b) fetus/infant
   c) father
   d) midwife
   e) doctor
4. Does this woman need to be isolated? Why or why not?
5. Describe how you could implement FCMC in this situation. What precautions, if any, would need to be in place? Explain why.
6. How would you discuss this condition with the mother and her family?
7. After she is moved, how should the room be cleaned for the next mother?

Reconvene the class and ask each group to briefly present their answers. If a group recommends a restrictive measure that interferes with FCMC practices, such as isolating a woman from her family or baby, ask them to explain why. Be sure that any restrictions suggested by the groups are based on the information about risk and transmission that was presented earlier.

Close the discussion by reiterating the importance of basing childbirth practices on evidence rather than unproven convention, particularly when they interfere with a woman’s ability to receive support, be with her baby and companions, etc.

Ask:
• How do you think these principles of infection control could be applied in your maternity? What would be the obstacles?

This may be an opportunity to discuss the San-Epi department’s regulations and how to build support for changing them.
Evaluation Activity, Day Four

15 minutes

Conduct a short evaluation activity to assess participants’ learning and their reaction to what they have learned so far.

Suggested activity:

Ask participants to repeat the physical continuum activity from Day Two so that they can compare their responses since the beginning of the week.

Ask participants to stand up at the back of the training room. Tell them that you are going to make a statement, and they will respond to it by standing somewhere along a continuum from “Agree” to “Disagree.” If they strongly agree, they should stand at the left end of the wall; if they strongly disagree, they should stand at the right end; or they can place themselves anywhere in the middle according to their opinion.

Statement:

“*We can implement Family-Centered Maternity Care at our maternity.*”

After participants have found a place on the continuum, ask people at different points to explain their position. Ask whether or not their position has changed since Day 2, and to explain why or why not.

FURTHER READINGS ON DAY 4 TOPICS:

Assign all or some of the following articles and abstracts. It is recommended that participants select readings on topics that interest them, or that they want to understand more thoroughly.

Infection Control:
- Birembaum
- de Andrade
- Enkin
- Frost
- Humphreys
- Kunarantanopruk
- Mercer
- Mugford
- NIH
- Rush
- Smaill
- Wilson
Session 18:  
Evaluation of FCMC Implementation

Time:  1 hour  
Materials:  none  
Methods:  Discussion  

Learning Objectives: By the end of the session, participants will be able to:
- explain the importance of evaluation as part of program implementation.  
- fill out the FCMC Continuous Quality Improvement forms correctly and explain them to others.  

Ask:
- Why do we evaluate health interventions?

Present the following information, relating it to their responses.

Purposes of program evaluation:
- to determine if the project’s goals have been achieved  
- to evaluate the effectiveness of a change  
- to influence future direction of the initiative  
- to validate the project for both the internal community and its broader external community

Ask:  
- What is continuous quality improvement (CQI)?

Reinforce the following answer:

Quality Assurance is a set of activities carried out to set standards and to monitor and improve performance so that the care provided is as effective and as safe as possible (Quality Assurance Project, 1993).

Purpose: To provide the means for auditing the performance of specific clinical practices and identifying areas of excellence and areas for improvement.

Purpose of the FCMC CQI program:
- to set standards for FCMC practices, with targeted levels of achievement called benchmarks  
- to provide a means of auditing the implementation, performance and outcomes of FCMC practices  
- to identify areas for improvement and areas of excellence.
Explain proposed CQI evaluation system to be put in place through the WIN project, including:

- who will receive the data
- what will be done with it/how used
- how maternities will receive feedback on the analyzed data
- type of support and follow-up that the maternities will receive from WIN for using the data to assess progress and make changes.

Ask participants to brainstorm for the key FCMC practices about which data should be collected. List them on a flipchart.

Point out which practices from their list are included on the CQI forms.

Go over each CQI form and explain:

- When it is used (ex: on admission; one day postpartum, etc.)
- What information is recorded, which practices are included
- Who fills it out
- Who is responsible for administering and collecting it
- How the results can be used
- Any questions participants have about the meaning of any items on the questionnaires.

Ask:

- What are your thoughts about this system? Will it be easy to implement? What will be the challenges?

Conclude by pointing out the importance of evaluation for implementation of a new model of care. The evaluation system will help them to see how their maternity is progressing in implementation, and to identify practices that are difficult to put in place.
Session 19:
Strategies for Change

Time: 45 minutes
Materials: none
Methods: lecture and discussion

Learning Objectives: By the end of the session, participants will be able to:
- List conditions that impede change.
- List conditions that support change.
- Explain Lewin’s model of the stages of change.

Tell participants that now that they have learned about the basics of FCMC, they will have time to plan for sharing this information with their colleagues and implementing the practices in their institutions.

Implementing FCMC in maternities is a significant change in practice. In this session, tell participants they will learn about some frameworks and strategies for thinking about institutional change.

Ask everyone to think about a time that they went through a big change in their behavior – either personally or professionally. Give everyone a minute to think individually. Then ask one or more volunteers to describe their experience. Ask:
- What did it feel like to make this change?
- What did you think at first when the change was proposed?
- What made it difficult? What supported the change?

In our personal lives we get used to doing activities a certain way. Ask participants for an example of a routine habit such as putting on a pair of pants. We typically do such an activity in the same way every day, and changing this routine feels awkward and uncertain. (You can ask the group to all stand up and mime putting on a pair of pants the “wrong” way to demonstrate how difficult it is.)

In our professional lives, the same thing occurs. We become used to providing care to our clients in a certain way. Though you are an expert, there is a routine that you follow. With FCMC, you and your colleagues at the maternity are being challenged to change the routine. The resistance to change may come in many forms – from your mind, your body, your emotions and your spirit.

Ask:
- What are reasons that people resist change?
List answers on a flip chart, and add the following if not mentioned:\(^8\)

- cost
- time investment
- threat
- vested interests
- fear of failure
- fear of disorganization

Present the following list of conditions that **promote resistance to change** (Olson):

1. “When the nature of the change and its effects are not clear to those involved.
2. When information is distorted
3. When the change is made on personal grounds rather than according to the impersonal requirements of the organization
4. When change ignores the established norms or customs of the group
5. When excessive work pressure is involved in the change
6. When the planning of change fails to consider in detail exactly how the change will be brought about.
7. When there is little consideration given to problems that are likely to arise and how to deal with them.
8. When there is fear of failure, or when the change is seen as inadequate or ineptly managed.
9. When no provision is made for adequate two-way communication.”

Ask:
- What are strategies for countering resistance that arises from these causes we have just discussed?

Listen to responses and reinforce the following:

**Conditions that reduce resistance:**

1. “The project has support from top officials.
2. Participants are involved.
3. There is consensual group decision.
4. There is provision for feedback.
5. There is an open feeling about revisions and reconsideration.”

Explain that some experts have developed theories of how change happens, providing a road map for initiating a change process, implementing the change, and finally solidifying it.

---

Present Lewin’s framework for the Stages of Change:

1. **Unfreezing**: At the beginning, disequilibrium is created. This sets the stage for opening up institutions and people to be ready for the coming change. This stage might include visiting a place where the change is working well, or trying the change on a trial basis. It is important not to push extreme changes since they may provoke resistance.

2. **Moving**: Provide an environment conducive to behavioral change, one that is supportive, nonthreatening, and educational. Within the process there must be internal and external rewards for behavior change.

3. **Refreezing**: Once the change has occurred, it is time to stabilize. Positive feedback will help ensure the continued implementation of what has been changed. An ongoing formal evaluation process will create real understanding of the benefits of the change, and help identify areas for improvement.

Ask:
- What are the characteristics that a change agent needs to have?

Responses may include: flexibility, persistence, social awareness, people-oriented, able to help others feel a sense of ownership in the change, “fostering the feeling of ‘we did it ourselves.’”

Ask:
- How might the WIN project help maternities go through these stages of change to implement FCMC?

Responses might include: Training; follow-up visits from training resource center; continuous quality improvement process/evaluation.
Session 20:  
Situation Analysis

Time: 1 hour 45 min  
Materials: Handout: “Situation Analysis”  
Methods: Group work  
Learning Objectives: By the end of the session, participants will be able to:  
▪ List the supports for and obstacles to implementing FCMC in their own maternities.

In order to plan effectively for bringing about change in their maternities, participants will now conduct an analysis of the conditions from which they will be starting at their own maternities.

Ask participants to take 5 minutes to write down individually their responses to the following questions (written on a flipchart). They can make brief notes rather than a complete statement.

▪ What are the main things that will help you implement FCMC in your maternity?  
▪ What are the main things that will make it difficult for you to implement FCMC in your maternity?

Ask a few participants to volunteer to share their responses.

Hand out the Situation Analysis worksheets. Explain that these worksheets will help them think about the knowledge, skills, attitudes and resources that already exist in their maternities. This analysis will help them to identify helpful supports existing at their maternities, and to target their time and energy to those areas that need work. They will consider these aspects for:

(a) providers – midwives, physicians, neonatologists and other practitioners at their maternity;  
(b) the institution – the administration, resources, and policies of the maternity  
(c) consumers – the women and their families  
(d) external environment – policies and regulations from the oblast; the surrounding community.

Go over the worksheets and make sure that everyone is clear about the meaning of the terms.

Instruct participants to work with others from their maternity to fill out the worksheets. They may divide the sections of the worksheets up among pairs or trios if the groups are too large. Give the groups 45 minutes to work.
Reconvene the whole class. Ask each maternity to list one key supporting factor (e.g. “providers already know how to promote breastfeeding”) and one key barrier (e.g. “physicians are not accustomed to delegating significant responsibility to midwives”). Note similarities/differences between the maternities.

Select one or more of the barriers mentioned as time allows, and ask the class to brainstorm for strategies for overcoming them.
Session 21:
Action Plan

Time: 1 hour 45 min
Materials: Handout: Action Plan
Methods: Group work
Learning Objectives: By the end of the session, participants will be able to:
- Write an action plan for implementing FCMC in their own maternities.

Tell participants that now that they have completed their analysis of the situation in their
maternities, they will make a specific workplan for implementing FCMC that addresses
the current situation.

Give out copies of the Action Plan worksheet, shown below:

Action Plan Handout

<table>
<thead>
<tr>
<th>Task</th>
<th>Person Responsible</th>
<th>Timeframe</th>
<th>Resources/Support Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Ask:
- Why is it helpful to make an Action Plan?

Possible responses: breaks down a large, complex and potentially overwhelming task into
manageable, concrete tasks; helps them think about what can be realistically achieved
with their resources and staff; sets specific responsibilities and deadlines so that action is
taken rather than only discussed in the abstract; helps them decide what additional
resources/support are needed and to communicate those to their administrators and/or the
FCMC project.

Explain how the WIN project will be following up with the maternities about these plans.

Working in groups by maternities again, participants should fill in the following on the
worksheet:
1. list the tasks involved in implementing FCMC
2. designate specific persons and deadlines where possible
3. list the resources and support they will need in order to carry out each task, making a
   note of those that are available versus those that must be secured.

Give the groups 1 hour to work.
Remind the groups that the Continuous Quality Improvement and follow-up from the WIN project should figure into their plans.

When the groups are finished, reconvene the class. Ask each group to give a brief overview of their plans, focusing on the major tasks and the supports & resources they expect they will need. Discuss with the class how each maternity can access these resources.
Session 22:
Plan for Clinical Week

Time: 1 hour
Materials: Flip charts with Clinical Week Team assignments
Preparation: Make team assignments
Learning Objective: By the end of the session, participants will be able to:
- explain the arrangements for the clinical week of the training.
- describe the set-up of a birthing room.

Discuss the clinical week with the class. Cover the following issues.

1) Schedule: Refer participants to the Clinical Week Schedule in their manuals (found at beginning of manual).

<table>
<thead>
<tr>
<th></th>
<th>DAY 1</th>
<th>DAY 2</th>
<th>DAY 3</th>
<th>DAY 4</th>
<th>DAY 5</th>
<th>DAY 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEAMS A-B</td>
<td>Attend Maternity’s Morning Case Conference</td>
<td>Attend births and conduct postpartum rounds</td>
<td>Attend births and conduct postpartum rounds</td>
<td>Attend births and conduct postpartum rounds</td>
<td>Attend births and conduct postpartum rounds</td>
<td>Prepare for conference</td>
</tr>
<tr>
<td></td>
<td>Change birthing rooms</td>
<td>Change birthing rooms</td>
<td>Change birthing rooms</td>
<td>Change birthing rooms</td>
<td>Change birthing rooms</td>
<td></td>
</tr>
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<td></td>
<td>Attend births and conduct postpartum rounds</td>
<td>Attend births and conduct postpartum rounds</td>
<td>Attend births and conduct postpartum rounds</td>
<td>Attend births and conduct postpartum rounds</td>
<td>Attend births and conduct postpartum rounds</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Do learning activities during down time</td>
<td>Do learning activities during down time</td>
<td>Do learning activities during down time</td>
<td>Do learning activities during down time</td>
<td>Do learning activities during down time</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Meet with local staff at end of shift to transfer cases</td>
<td>Meet with local staff at end of shift to transfer cases</td>
<td>Meet with local staff at end of shift to transfer cases</td>
<td>Meet with local staff at end of shift to transfer cases</td>
<td>Meet with local staff at end of shift to transfer cases</td>
<td></td>
</tr>
</tbody>
</table>

Go over what will happen each day:
- Attend case conference with local maternity staff in the morning.
- Attend patients; conduct postpartum rounds.
- During down time when no women are in labor, work on modules (described below).
- Brief check-in meeting with the local maternity staff on call at the end of the shift to transfer care of cases.

Explain who will be assigned to which teams, which trainers will lead each team, and which shifts each team will take. The suggested schedule for shifts is as follows. It will need to be adjusted to suit the needs of the particular site.
On the seventh day of the week, all the teams will come together to make a presentation to the host maternity and other invited guests from the administration. Teams will prepare for the conference during their down time on Days 5 and 6. The conference will provide a chance for trainees to describe their experience of the clinical week; to report the results of the evaluation questionnaires; and for families who participated to describe the experience from their perspective. Explain that this conference is a chance to showcase the effectiveness of FCMC to the whole maternity.

2) Protocols:

Explain the protocols the group will follow for:
- case selection
- referral of complications
- persons responsible for final decision-making about cases
- transfer of cases to the host maternity staff
- working within the host maternity’s regular procedures

These protocols should be provided in the Participant’s Manual.

3) Changing birthing rooms:

On their first day on duty, each team will transform one or more rooms for use as a birthing room. Ask:
- What physical changes will make a birthing room more inviting for the mother?

In general, the room should be made as home-like as possible. Changes may include:
- labor bed – no stirrups, discourage use of lithotomy position
- chairs or sofas for family/companions
- curtains on windows
- equipment available for various birthing positions (birthing ball, chair, etc.)
- privacy; one woman per room
- emergency equipment available but not prominently displayed (including infant warmer and resuscitation equipment)
- warm

During down time on shift, teams will work on modules that are available to use at any time. These include:
- reviewing post-test results
- practicing role plays of labor support and other scenarios
- making short presentations on topics they wish to study in depth
- additional information on topics such as puerperal sepsis treatment
- clinical skills practice with models.
Session 23:
Post-Test

**Time:** 30 minutes

**Materials:** Handout: “Post-Test”

**Methods:** test

**Learning Objectives:** By the end of the session, participants will be able to:
- identify areas in which they have learned something new over the course of the training.

Introduce the Post-Test to participants. Explain that they will now take the pre-tests over again. The purpose of the test is:

1. to help them assess their own learning over the past week and identify topics about which they need more practice; and
2. to help the trainers identify topics that need additional attention.

They will have an opportunity to go over the results with the trainers during the Clinical Week, during their down time on shift. Make it clear that the results will not be shared with their employers.

Give participants 20 minutes to take the test. Collect the tests at the end, making sure that participants’ names are on them so that they can be returned.

Before the clinical week begins, go over the tests and mark them, making note of areas in which there was improvement, and areas that still need work during clinical week.
Session 24:
Evaluation and Reflection

Time: 30 minutes
Materials: Handout: “Week 1 Evaluation”
Methods: Individual reflection

Learning Objectives: By the end of the session, participants will be able to:
- reflect on their learning experience in Week 1 of the training.

Tell participants that they will now take some time to reflect on what they have learned, and their attitudes toward FCMC.

Give participants a blank sheet of paper. Ask them to reflect on the change process they have gone through over the course of this training. Write the questions on a flip chart and give participants 15 minutes to write their answers. Explain that their responses will be anonymous, but they will be collected and read by the trainers.

| What did you think about the ideas of FCMC when you heard about them on the first day? |
| What do you think about them now? |
| What do you want to get out of the Clinical Week? |
| How do you feel about implementing FCMC practices at your maternity? |

After the individual reflection is finished, ask volunteers to share their responses. Take time to address resistance and concerns about the realities of implementation.

Hand out the Evaluation of Week 1 of the training. Ask participants to fill it out individually before leaving. Explain that participants will evaluate Week 2 on the last day.

Collect both the evaluation and the written responses (both anonymous).

Congratulate participants on completing the first week.

FURTHER READINGS ON DAY 5 TOPICS:

Assign all or some of the following articles and abstracts. It is recommended that participants select readings on topics that interest them, or that they want to understand more thoroughly.

Change Theory:
- Olson
CLINICAL WEEK

Introduction

The purpose of the clinical week is to demonstrate the FCMC practices and management of labor, birth and immediate postpartum that were discussed during the first week. Clinical experience and additional interactive learning sessions will reinforce participants’ understanding of FCMC.

During the week, the nurse-midwives and physicians on the training team will role-model the collaborative relationship between a midwife and physician.

Coordination between the FCMC participant teams and the maternity center’s clinical staff is imperative. Before the training takes place, protocols should be agreed upon with the host maternity for criteria for consultation or transfer to the maternity clinical staff. For example, consultation will be needed when the clinical management of a woman’s care includes oxytocin augmentation, instrument delivery or cesarean section. The maternity staff will assume care for any woman in the FCMC model of care who requires an instrument delivery or cesarean section. The FCMC team will continue to provide supportive care, breastfeeding assistance and postpartum instruction in these cases.

Admission for Labor and Birth

The admission criteria should be discussed with the maternity center director prior to beginning the clinical week to obtain agreement. Women will be accepted into the FCMC clinical demonstration for labor and birth if they have essentially low risk pregnancies or moderate risk. The admission criteria outlined in Greulich, et al (1994) is used as the guideline for inclusion.

Women and their family members who come to the maternity center for evaluation of labor will be offered inclusion into the FCMC clinical training if the woman meets the admission criteria. This decision will ideally be made prior to transfer to the labor area. FCMC practices will be followed, including no traditional enema and shave, and allowing the woman her choice of companion as a support person for labor and birth. If a woman is alone or chooses not to have a family member present, a member of the FCMC participant group will be the designated support person.

Care during Labor and Birth

The FCMC participant team will provide care for the woman during her labor and birth. One of the midwives on the team will be the designated provider. The other team members will provide supportive care to the laboring woman and family. When not providing supportive care, the FCMC team will observe the woman’s labor process and the FCMC techniques used by the designated midwife and the trainer.
The designated midwife and team will maintain a record of the clinical course for the woman’s labor on the partograph. The trainer will guide them through the labor and birth process. If there is a need for consultation about the woman’s labor, the FCMC obstetrician will be consulted. The results of this consultation will determine whether there is a need for collaboration with the maternity center clinical staff on duty.

The repair of lacerations and/or episiotomies will be done by the team’s designated midwife guided by the trainer. Any third or fourth degree lacerations will be repaired by the FCMC obstetrician as previously agreed with the maternity.

The appropriate measures will be taken if neonatal resuscitation is anticipated for the birth. The FCMC OB and the maternity clinical team on duty will be notified and the appropriate providers will be present for the birth.

Postpartum Care

The postpartum care for women in the FCMC training and newborn care for their infants should be discussed with the maternity center director in advance. This will help ensure cooperation and discourage interference with the postpartum and newborn clinical staff. The FCMC team will make daily rounds on the FCMC women and infants. They will provide teaching regarding breastfeeding.

Final Conference

On the day after the clinical shifts are completed, all participants will make a presentation for maternity staff and other guests. This is an excellent opportunity to showcase the benefits of FCMC based on the firsthand experiences of clients and practitioners.

This conference may include:
- presentation by FCMC training participants about their experience of the FCMC training;
- presentation of the statistics on FCMC practices collected during the week;
- talk by a family who received FCMC during the week regarding their experience;
- presentation of certificates to participants for completing the training.
Modules

The following stand-alone modules are available for use during down-time in the clinical shifts. A recommended sequence is suggested below. However, the schedule will necessarily depend on the timing of births, and trainers should use their discretion to select topics that respond to their teams’ interests.

First Shift:
A. Birthing Rooms
B. Post-Test Review
C. Family Counseling on FCMC
D. Clinical Skills Practice

Second Shift:
E. Review of Scientific Literature
F. Partograph
G. Infection Control
H. Management of Puerperal Sepsis

Third Shift:
I. Preparation for Final Conference

Additional WHO Modules: Complications
Module A:  
Birthing Rooms

The training team will prepare one or more rooms for FCMC labor and birth. The host maternity should be consulted in advance to arrange for private single rooms and other equipment.

At the beginning of the first shift, set up the room with the team.

- The FCMC room should be as home-like as possible.
- There should be a labor bed, some chairs and/or sofa for the woman and her family.
- Privacy must be ensured.
- The necessary emergency equipment should be available but not prominent in the room surroundings.
- The room must be warm enough to accommodate the newborn.
- An infant warmer with the necessary resuscitation equipment should be immediately available if it is not in the room.

While setting up the room together, discuss:

- the reasons for making each change and what it contributes to a family-centered environment;
- how participants could set up FCMC birthing rooms in their own maternities (what would be the constraints in terms of resources and space, and how to address these constraints.)

Before the training, arrangements should also be made with the host maternity for the provision of equipment. Do not use clinical supplies that the maternity center staff cannot normally access; the FCMC clinical training must demonstrate how safely to do the most with a minimum of supplies. Basic supplies should include:

- fetascopes
- sterile single exam gloves
- sterile gloves (paired) various sizes
- non-sterile gloves
- masks
- eye shields or goggles
- lubricant
- local anesthesia
- various suture materials
- sterile needles and syringes
- neonatal resuscitation bag
- antibacterial soap
Module B:
Post-Test Review

Return the graded pre- and post-tests to all participants on the team. Give participants a few minutes to look over their answers. Tell them to make a note of:

1. areas in which they improved over the week
2. areas that they still do not understand

Ask participants to share which areas showed improvement, and to reflect on what helped them to learn it. This information can be helpful to you as a trainer for future reference.

Go over all test questions and ask for volunteers to explain the correct answer. Spend time on those questions that participants missed in the post-test. Ask participants to reflect on why they had difficulty with these areas, and make note for future trainings. (For example, participants may not learn content well if they did not have enough time to practice it hands-on, or if it was covered too briefly.) If possible, spend more time reinforcing this content over the course of the clinical week.

Clarify any other questions participants have about the tests.
Module C: Family Counseling on FCMC

In preparation for orienting families to participate in the FCMC clinical week, practice the role play on family counseling from the didactic week (see Facilitator’s Guide, Day 4).

Ask participants:
- What is your greatest concern about counseling families about FCMC?

Discuss how to handle these concerns with the team, and role play some of the scenarios they are worried about.

Ask for different members of the group to practice different scenarios that they might encounter during the week when admitting mothers, such as:
- a woman with her husband;
- a woman with no companion;
- a woman who is very anxious and agitated;
- a woman who has given birth before under traditional maternity practices;
- a woman and husband who are reluctant to take part in the FCMC training.

After each role play, ask for feedback first from the ‘actors,’ next from all other team members, and finally give feedback yourself. Feedback should focus on:
- What the person playing the health practitioner did well.
- What needs improvement.
- Other strategies for handling the situation that they could have tried.

Team members who are observing may use the Communication Observation Checklist to structure their feedback to the role players.
Module D: Clinical Skills Practice

Review the clinical skills that were practiced during the didactic week, including:

- pelvic exam (see Day 2)
- neonatal resuscitation (see Day 2)
- encouraging use of alternative positions during labor (see Day 1)
- nonpharmacologic pain relief methods during labor (see Day 2)
- breastfeeding support (see Day 3)
- labor challenges (see Day 2)

If the team had the chance to perform one of these practices during the shift, review their performance:

- What went well?
- What was difficult?
- What needs practice?

For skills not yet experienced on shift, ask:

- What aspects of this technique do you still find difficult?

Using the models, have participants take turns role playing. They should focus on areas of difficulty mentioned in discussion. Remind participants to practice not only the clinical technique, but also the means of communicating with the mother during the procedure.

After each role play, ask for feedback first from the ‘actors,’ next from all other team members, and finally give feedback yourself. Feedback should focus on:

- What the person playing the health practitioner did well.
- What needs improvement.
- Other strategies for handling the situation that they could have tried.
Module E:
Review of Scientific Literature

Ask each team member to select one FCMC topic or practice to research further. Encourage them to choose a topic about which they are NOT yet convinced, or which they do not understand well.

Participants should read at least one article from the reading list about the topic, and prepare a short (15 minute) presentation about the reading for the rest of the team. It should include:

- Brief description of the study (hypothesis, research methodology, and number of subjects). If it is a review of several studies, give an overview of the types of studies included.
- Main findings
- Recommendations for practice based on the findings
- The participants’ own opinion of the findings: Explain why you agree or disagree with the recommendations of the article.

Ask the other team members to discuss the participant’s arguments about the article’s recommendations. If possible, provide any other available information about the topic that informs the debate.
Module F: Partograph

To give participants more practice with using the partograph, select a case from the clinical week. It can be a woman whose birth the team attended, or a birth that took place during a different shift.

1) Review the notes taken during the labor and birth. If no partograph was filled out at the time, have the group fill one out based on the notes. Ask the following:
   - Review the progress of the labor based on the partograph. Was there a point at which the labor fell to the right of the alert or action lines? What can we see about the labor by looking at the graph?
   - Would you have managed this labor differently based on the partograph versus the written notes? If so, how?

2) To demonstrate the importance of filling out the partograph correctly, make an alteration on a copy of the graph, such as recording cervical dilatation or position of fetal head incorrectly. Then ask participants:
   - Compare the correct and incorrect partographs. How would you have managed the labor differently based on these two graphs?
   - What might the outcome have been for the mother and baby?

3) If the class did not have time to complete all the partograph exercises during the session in the didactic week, work through the remaining ones with the team to practice interpreting and recording. (See Facilitator’s Guide, Day 3.)
Module G: Infection Control

Review the principles of infection control for labor and birth wards discussed during the didactic week. (See Facilitator’s Guide, Day 4.) Emphasize the principles that:

- Any measure which limits a woman’s freedom of choice or restricts contact with her baby and companions of choice must have a compelling reason.
- Normal labor and birth requires cleanliness but not sterility.

Find out whether any women in the labor or postpartum rooms have infectious diseases. (Note: The women’s privacy must be respected, particularly women who are not taking part in the FCMC training.)

Discuss with the team:

8. What, if anything, is this mother at risk of contracting? What is the possible route of transmission?
9. What, if anything, might this mother infect others with? What is the possible route of transmission? What precautions are necessary to prevent transmission of this organism?
10. Are the following people at risk for contracting this infection from the mother during labor, birth or the postpartum period? If so, what is the mode of transmission?
   a) mother
   b) fetus/infant
   c) father
   d) midwife
   e) doctor
11. Does this woman need to be isolated? Why or why not?
12. Describe how you could implement FCMC in this situation. What precautions, if any, would need to be in place? Explain why.
13. How would you discuss this condition with the mother and her family?
14. After she is moved, how should the room be cleaned for the next mother?
15. What infection control procedures is the maternity implementing for this woman? Are they appropriate? Why or why not?
Module H: Management of Puerperal Sepsis

To expand on the discussion of infection control from the didactic week, present the following information about the management of puerperal sepsis.

Excerpted from "Puerperal Sepsis Module" WHO/FRH/MSM/96.4

INTRODUCTION

Puerperal sepsis is one of the major causes of maternal death and accounts for 15% of all maternal deaths in developing countries. If it does not cause death, puerperal sepsis can cause long-term health problems such as chronic pelvic inflammatory disease (PID) and infertility. It is very important for midwives and doctors to be able to prevent puerperal sepsis and treat it promptly if it occurs.

DEFINING PUERPERAL SEPSIS

Puerperal sepsis is an infection of the genital tract at any time between the onset of rupture of membranes or labor and the 42nd day following delivery or abortion in which two or more of the following are present:

- pelvic pain;
- fever of 38.5 degrees C or more measured orally on anyone occasion;
- abnormal vaginal discharge;
- abnormal smell, foul odor of discharge;
- delay in the rate of reduction of the size of the uterus.

Bacteria which Cause Puerperal Sepsis

Some of the most common ones are:

- streptococci
- staphylococci
- Escherichia coli (E. coli)
- Clostridium tetani
- Clostridium welchli
- chlamydia and gonococci bacteria which cause sexually transmitted diseases

Infection is most often a mixed infection with several kinds of bacteria. Bacteria may be either endogenous or exogenous.

Endogenous bacteria: These are bacteria that normally live in the vagina and rectum without causing harm (e.g. some kinds of streptococci and staphylococci, E. coli, Clostridium welchli). Even when a sterile technique is used for delivery, infection can
still occur from endogenous bacteria. Endogenous bacteria can become harmful and cause infection if:
- they are brought into the uterus by the examining finger or by instruments during pelvic examinations;
- they are in the presence of bruised, lacerated or dead tissue (e.g. after a traumatic delivery or following obstructed labor);
- they go up into the uterus when there is prolonged rupture of membranes.

**Exogenous bacteria:** These are bacteria that are introduced into the vagina from the outside (streptococci, staphylococci, Clostridium tetani etc). Exogenous bacteria can be introduced into the vagina:
- by unclean hands and unsterile instruments;
- by foreign substances that are inserted into the vagina (e.g. herbs, oil, cloth);
- by sexual activity.

Students should be aware of the problem of sexually transmitted diseases, which are caused by exogenous bacteria. In areas where sexually transmitted diseases (STDs), e.g. gonorrhea and chlamydial infection, are common, they cause the majority of uterine infections. If a woman gets an STD during pregnancy and it remains untreated, the bacteria causing the STD will stay in the vagina and may cause a uterine infection after delivery. Uterine infections caused by STDs can be prevented by diagnosing and treating women for STDs during their pregnancy.

**Signs and Symptoms of Puerperal Sepsis**

The woman usually has a fever but this may not be so in clostridial infections. The woman may have pelvic pain, the uterus is tender, lochia may be offensive, and there may be a delay in the rate of reduction of the size of the uterus. There may be pain, swelling and pus discharge at the site of lacerations or episiotomy.

**Risk Factors for Puerperal Sepsis**

Some women are more vulnerable to puerperal sepsis, including for example anaemic or malnourished women or women who have been in prolonged labor.

**HOW PUERPERAL SEPSIS OCCURS**

Puerperal sepsis can occur intrapartum or postpartum. Before delivery, the amniotic and chorionic membranes may become infected when membranes rupture many hours before labor starts. Bacteria have then enough time to go up from the vagina into the uterus and infect the membranes, the placenta, the baby and mother. Chorioamnionitis is a very serious problem and the woman and her baby are both in danger of losing their lives.

Following delivery, puerperal sepsis may be localized in the perineum, vagina, cervix or uterus. Infection of the uterus can rapidly become widespread causing infection of fallopian tubes or ovaries, parametritis, peritonitis and spreading to the lymphatics,
leading to septicemia as it enters the bloodstream. This may be further complicated by septic shock and disseminated intravascular coagulation which gives rise to bleeding problems. Puerperal sepsis can become rapidly fatal.

Women are vulnerable to infection in the postpartum period, because of the following factors:

1. The placental site is large, warm, dark and moist. This allows bacteria to grow very quickly. It is an ideal medium to culture bacteria. In the laboratory, warm, dark and moist conditions are produced artificially in order to help bacteria grow and multiply.

2. The placental site has a rich blood supply, with large blood vessels leading directly into the main venous circulation. This allows bacteria in the placental site to move very quickly into the bloodstream. This is called septicemia. Septicemia can lead to death very quickly.

3. The placental site is not far from the outside of the woman's body. Only the length of the vagina (7-10 cm) separates the entrance to the uterus from the outside. This means that bacteria, which naturally live in the rectum (such as E.coli) can easily move into the vagina and into the uterus. Here they are harmful or "pathogenic" because they will cause infection in the placental site.

4. During delivery, women may have suffered tears in the cervix, vagina or perineal area or had an episiotomy. These areas of traumatized tissue are susceptible to infection, especially if a sterile technique of delivery was not used. Infection is usually localized, but in severe cases it spreads to underlying tissues.

CHECKLIST FOR PUERPERAL SEPSIS

The most common site of infection in puerperal sepsis is the placental site. Other sites of infection are tears of the cervix, vagina, perineum and site of episiotomy.

Risk Factors for Puerperal Sepsis

These include:

- poor hygiene
- poor aseptic technique
- manipulations high in the birth canal
- presence of dead tissue in the birth can be due to intrauterine death of fetus, retained fragments of placenta or membranes, shedding of dead tissue from vaginal wall following obstructed labor
- insertion of unsterile hand, instrument or packing
- pre-existing anemia and malnutrition
- prolonged/obstructed labor
- prolonged rupture of membranes
- frequent vaginal examinations
• cesarean section and other operative deliveries
• unrepaired vaginal or cervical lacerations
• pre-existing sexually transmitted diseases
• postpartum hemorrhage
• not being immunized against tetanus
• diabetes

Other factors that affect puerperal sepsis include community and health service factors. These make the danger of death from puerperal sepsis greater.

**Community Risk Factors**

These include:

• lack of transportation and resources;
• great distance from a woman's home to a health facility;
• low socioeconomic status;
• cultural factors which delay care seeking behavior,
• low status of women;
• lack of knowledge about signs and symptoms of puerperal sepsis.

**Health Service Risk Factors**

These include:

• inadequate monitoring of temperature in prolonged labor and after delivery;
• lack of asepsis during delivery;
• inadequate bacteriological investigations in women with puerperal sepsis;
• shortage of blood for transfusion;
• inadequate management with appropriate antibiotics or further operative intervention;
• non-availability of appropriate antibiotics.

**MANAGEMENT OF PUERPERAL SEPSIS**

1. **Isolation and Barriers, Nursing of the Woman**

The aim is to prevent the spread of infection to other women and their babies. Basic nursing principles are important. Nurses/midwives should:

• nurse the woman in a separate room or, if that is not possible, in the corner of the ward, separated from the other patients;
• use a gown and gloves when attending to the woman and use this particular gown and gloves only when attending to her;
• keep one set of equipment, dishes and other utensils exclusively for the use of this woman and make sure it is not used by anyone else;
• wash hands carefully before and after attending to this woman.

Where possible a special midwife/nurse should be allocated to care for this mother and her baby. It may also be helpful to have a relative assist with their care. If so, the relative must be instructed in the basic principles of preventing the spread of infection. Otherwise visitors should be limited.

2. Administration of High Doses of Broad Spectrum Antibiotics

These will normally be prescribed by a doctor. Where no doctor is available, midwifery personnel must know how to prescribe and give appropriate drugs. If legislation does not allow this, it should be reviewed urgently.

Women will die of puerperal sepsis if appropriate antibiotic therapy is not given early enough. The aim of the antibiotics is to start treatment immediately and stop further spread of the infection.

Choice of antibiotic

If the woman is not very sick (e.g. fever absent or low grade, pulse not very high, normal state of consciousness), useful regimes are:
• amoxicillin 1 9 stat orally followed by 500 mg every 8 hours for 7 days + metronidazole 400 or 500 mg every 8 hours for 7 days, or
• amoxicillin 1 9 stat orally followed by 500 mg every 8 hours for 7 days + tetracycline* I 9 stat orally followed by 500 mg every 6 hours for 7 days

(NOTE: Tetracycline should only be given to breast feeding mothers if there is no suitable alternative antibiotic available.)

If the woman is very sick, (e.g. very high fever, rapid pulse, confused), often more than one kind of bacteria is involved. A combination of antibiotics should be given to provide as broad a coverage as possible.

Metronidazole and chloramphenicol** are very effective against chlamydia and other bacteria which are resistant to other antibiotics. Metronidazole should be given if the woman has had a cesarean section or if you suspect chlamydia.

**(NOTE: Warning: Chloramphenicol has some serious side effects such as anemia or leucopenia. If you give Chloramphenicol you must be able to monitor the blood count.)

Useful regimens are:
• benzylpenicillin 5 million IU IV stat followed by 2 million IU every 6 hours + gentamicin 100 mg stat IM followed by 80 mg every 8 hours + metronidazole 400 or 500 mg orally every 8 hours; OR
• ampicillin 1 g IV stat followed by 500 mg IM every 6 hours + metronidazole 400 or 500 mg orally every 8 hours; OR
• benzylpenicillin 5 million IU IV stat followed by 2 million IU every 6 hours + gentamicin 100 mg stat IM followed by 80 mg every 8 hours OR
• benzylpenicillin 5 million IU IV stat OR followed by 2 million IU every 6 hours + chloramphenicol' 500 mg IV every 6 hours.

Note: the first regimen provides the broadest coverage.

Follow-up

If the woman does not improve after 48 hours or the laboratory report states that the bacteria are resistant to these antibiotics, the antibiotics must be changed. Do not change the antibiotics until you have considered:
• Is the original diagnosis correct?
• Is there an abscess anywhere?

Intravenous therapy should continue until the woman has had no fever for at least 48 hours. Antibiotics can then be given orally for another week on an outpatient basis.

3. Giving Plenty of Fluids

The aim is to correct or prevent dehydration and help to lower the fever. In severe cases, it is necessary to give intravenous fluids at first. If the woman is conscious and there is no indication for the need of a general anesthetic in the next few hours, she should also be given oral fluids. In mild cases, increase oral fluid intake.

4. Ruling out Retained Placental Fragments

Retained placental fragments can be a cause of puerperal sepsis. Suspect this if the uterus is soft and bulky, if lochia are excessive and contain blood clots. The woman should be referred to a facility that has the equipment and health care personnel to perform a curettage.

5. Providing Skilled Nursing Care

This requires careful attention both to the comfort of the woman and to carrying out the doctor's instructions. It is important to:
• advise woman to rest in bed;
• monitor vital signs;
• measure intake and output;
• keep accurate records;
• prevent the spread of infection and cross-infection.

Practical problems that may arise include:
• facilities do not allow for proper isolation;
• staff shortage does not allow a single midwife/nurse to be allocated to give care.

The midwife must be gentle both physically and emotionally. This means that the woman must be handled gently when giving physical care. Rough handling increases pain and shock.

A sensitive approach is important in speaking with the woman and her relatives. The woman is ill. The midwife and the doctor should demonstrate empathy. The midwife must also be accurate in all her observations, recording and reporting.

6. Managing Complications

Peritonitis

Generalized peritonitis is inflammation of the whole of the peritoneum. This means both the parietal peritoneum, which is the membrane that lines the abdominal wall, and the visceral peritoneum, which lies over the viscera or internal organs, are inflamed.

Diagnosis: It is important to know how to recognize peritonitis. Peritonitis and/or multiple abscesses in the abdomen can follow cesarean section or ruptured uterus or can be a complication of puerperal sepsis.

The following signs and symptoms are present in addition to fever:
  • rebound tenderness *
  • abdominal pain
  • distended abdomen at 3 to 4 days
  • vomiting
  • poor bowel sounds
  • diarrhea.

* To elicit rebound tenderness, palpate the abdomen, then release your hand suddenly: if there is peritoneal inflammation, this will be painful.

Management of generalized peritonitis:

Treat actively if suspected, without waiting for confirmation of diagnosis. Start antibiotics such as benzylpenicillin plus gentamicin plus metronidazole, IV fluids and analgesics (such as pethidine 50--00 mg IM every 6 hours). If available, pass a nasogastric tube and aspirate the stomach contents.

Ensure that the woman is transferred without delay to the next referral level where skilled medical/surgical help is available.

Salpingo-oophoritis and Parametritis
Salpingo-oophoritis is infection of the ovary and fallopian tubes. Parametritis is infection of the parametrium. (The parametrium is the loose tissue found around the uterus. It extends onto the sides of the cervix and between the layers of the broad ligament).

Diagnosis:

Salpingo-oophoritis: fever, bilateral pain and tenderness in the lower abdomen.

Parametritis: fever, pain or tenderness on one or both sides of the abdomen, marked tenderness on vaginal examination

Management of salpingo-oophoritis or parametritis:

Start antibiotics such as benzylpenicillin plus gentamicin plus metronidazole. If necessary, give pain relief such as pethidine 50-100 mg TM every 6 hours. If the woman does not improve in 2 or 3 days she should be transferred to the appropriate level hospital.

Septicemia

Septicemia is the presence and multiplication of bacteria in the bloodstream.

Diagnosis: Fever and chills. fast pulse. woman very sick.

Management of septicemia:

Start antibiotics, e.g. benzylpenicillin + gentamicin + metronidazole. Refer the woman without delay to the appropriate hospital. Consideration may be given to starting Heparin if disseminated intravascular coagulation is suspected.

Abscesses

Diagnosis:
Bulging, fluctuating mass on vaginal examination, severe pain and tenderness, fever not decreasing in spite of antibiotics.

Management of abscesses:
Refer the woman to the appropriate hospital for a posterior colpotomy (surgical incision into the posterior wall of the vagina) for abscesses in the Pouch of Douglas or a laparotomy for abscesses elsewhere in the abdomen.
Managing Infections of Tears of the Perineum, Vulva, Vagina, Infection of Episiotomy

Signs and Symptoms:
- pain
- swelling
- redness
- pus discharge
- fever

Management:
- antipyretics or analgesics
- sitz baths three times daily (The woman sits in a tub of clean warm water for a few minutes.)
- clean wound with hydrogen peroxide or betadine twice daily after genital area has been cleaned with water.

If there is no improvement after 3 days, remove sutures if present, probe wound and drain. Clean wound with hydrogen peroxide or betadine twice daily. If after 3 days there is still no improvement, refer to the appropriate hospital for surgical exploration and debridement.

8. Managing Chorioamnionitis

Signs and symptoms:
- fever
- tender uterus on palpation
- foul smelling amniotic fluid draining
- fast pulse (above 90 per minute)
- the baby also has a fast heartbeat (above 160 per minute)
- there is history of prolonged rupture of membranes.

Management:
Delivery should take place as soon as possible. The woman and her baby are both in danger of losing their lives.
- set up an IV infusion and start IV fluids;
- start antibiotics and also give an antipyretic;
- monitor for signs of shock;
- transfer the woman without delay to the hospital where skilled obstetrical and pediatric help is available. Be prepared for delivery and infant resuscitation during transfer.
Prevention of chorioamnionitis

- Advise all pregnant women to seek medical help as soon as they notice any fluid coming out from the birth canal. If the membranes are ruptured and the woman is not having contractions, do not do a vaginal examination.
- If labor does not begin within 12 hours after the membranes rupture, give the mother prophylactic (preventive) antibiotic treatment: use a broad spectrum antibiotic such as ampicillin 1 g stat IM then 300 mg IM every 6 hours or amoxicillin 500 mg orally every 8 hours. As an alternative, sulfamethoxazole/trimethoprine 800/I 60mg may be given twice daily.
- Refer to the next level of care after a maximum of 12 hours of no labor.
Module I:  
Prepare for Final Conference

During their last shift, participants should begin preparing for the conference on the last day. They can begin by:

- identifying a participating family who might be willing to speak about their experience at the conference;
- analyzing and interpreting the data they have recorded thus far using the Continuous Quality Improvement system;
- discussing ways to present this data.

Participants will have more time to prepare on the morning of Day 6.
Additional WHO Modules: Complications

If participants are interested in discussing obstetric complications, the following WHO modules are available in Russian:

1. Anaemia in pregnancy (Module 7)
2. Referral in Pregnancy with reference to Bleeding (Module 8)
3. Hypertensive Disorders (Module 9)
4. Administration of Oxytocin in Intrapartum period (Module 12)
5. Obstructed Labour (Module 13)
6. Induction of Labour (Module 16)
7. Postpartum haemorrhage (Module 17)
Bibliography of Readings available in Russian

The following articles are provided in alphabetical order in the participant manual as a reference. For some, only the abstract is available in Russian. An index organized by topic follows.

Alphabetical Index


Family-Centered Maternity Care

HANDOUTS

Session 1: Host Team Sign-Up Sheet
Session 2: Pre-Test
Session 3: Grading of Recommendation Reliability
Session 13: Postpartum Care Role Cards
Session 15: Communication Observer’s Guide
Session 16: Infection Control Game Cards
Session 20: Situation Analysis
Session 21: Action Plan
Session 23: Post-Test
Session 24: Evaluation Week 1
Clinical Week: Pre- and Post-Test Answer Key
Management of Puerperal Sepsis
Evaluation Week 2
Host Team Sign-Up Sheet

Please volunteer for one day during the training. The Host Team helps start the day, energizes the class with icebreakers, and meets with the trainers after class to give feedback.

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
<th>Day 5</th>
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</table>
Family-Centered Maternity Care PRE-TEST

Please circle T for true or F for false.

1. Women will be less embarrassed and more relaxed if no one familiar is with them during labor.  
   T   F

2. Women should be significantly involved in decision-making about their own care during childbirth.  
   T   F

3. Giving a perineal shave and enema in early labor will prevent infection.  
   T   F

4. Tightly swaddling a newborn is the best way to prevent hypothermia.  
   T   F

5. Allowing family members in street clothes into the labor and birth unit of a hospital has increased perinatal infection rates.  
   T   F

6. Perinatal infection is largely preventable with consistent hand washing and wearing of gloves.  
   T   F

7. Continuous electronic fetal monitoring has reduced overall neonatal morbidity and mortality.  
   T   F

8. Newborns are generally too excited to breast-feed soon after birth. They should rest first before attempting to nurse.  
   T   F

9. Women should be counseled about contraception during the postpartum period.  
   T   F

10. Health care providers do not need to give women and their families information about childbirth procedures because they will not understand it.  
    T   F

11. Women should be encouraged to walk around during labor.  
    T   F

12. Allowing women to eat and drink during labor has led to increased maternal morbidity and mortality.  
    T   F

13. Newborns should be kept in a nursery for the first hours after birth to allow the mother to rest.  
    T   F

14. Women who give birth lying flat on the back tend to have weaker contractions and longer labors.  
    T   F
15. Active management of the third stage of labor has been shown to reduce the chances of postpartum hemorrhage.  

16. Episiotomy should be performed routinely because it prevents more serious perineal trauma.  

17. Every birth should be attended by a physician if possible.  

18. A woman’s pain during labor can be relieved by massage or by changing positions.  

19. Look at the section of a partograph below, which records information about a woman in labor. Is her labor progressing normally?

<table>
<thead>
<tr>
<th>Cervix (cm)</th>
<th>Descent of head</th>
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<td>[Plot X]</td>
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<th>Hours</th>
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Active Phase
Latent Phase
Alert
Action

Yes  No
### Handout: Grading of Recommendation Reliability

<table>
<thead>
<tr>
<th>Recommendation Reliability Grade</th>
<th>Degree of Evidence Convincingness</th>
<th>Course of Treatment/Prevention, Etiology/Damage</th>
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<tbody>
<tr>
<td>A</td>
<td>1a</td>
<td>Systematic review of randomized controlled studies (trials)</td>
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<tr>
<td></td>
<td>1b</td>
<td>An individual randomized controlled study (with a narrow confidence interval)</td>
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<tr>
<td>B</td>
<td>2a</td>
<td>Systematic review of cohort studies</td>
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<tr>
<td></td>
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<td>An individual cohort study</td>
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<td></td>
<td>3a</td>
<td>Systematic review of case-control studies</td>
</tr>
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<td></td>
<td>3b</td>
<td>An individual case-control study</td>
</tr>
<tr>
<td>C</td>
<td>4</td>
<td>Study cases series</td>
</tr>
<tr>
<td>D</td>
<td>5</td>
<td>An expert opinion without critical assessment or based on physiology, results of a trial or on guidelines</td>
</tr>
</tbody>
</table>

Evidence reliability grade received from different sources diminishes in the following way (Li Wan Po, 1998):

1) randomized controlled clinical study;
2) non-randomized clinical study with concurrent control;
3) non-randomized clinical study with historic data control;
4) cohort study;
5) case-control study;
6) cross-control clinical study;
7) results of clinical observations;
8) descriptions of individual cased.
Role Assignments for Postpartum Exercise

Print out this page and cut out each role onto a separate strip; or copy down each role onto a small card. Make enough copies so that each participant has one card. (Some participants may be assigned the same role.)

You are a mother who finished a long and difficult labor 1 hour ago.

You are a woman whose fetus died intrapartum.

You are a woman who has given birth to a healthy infant.

You are a first-time mother who had an episiotomy and suffered some lacerations of the perineum during birth.

You are a mother who just gave birth to your third child. Your husband is not at the hospital with you.

You are a first-time mother who is having difficulty breastfeeding.

You are a mother who has puerperal sepsis.

You are a mother who has just given birth to a pre-term infant.

You are a mother who had a cesarean section.

You are an HIV-positive mother.

You are a single mother who gave birth to a second child.

You are a mother whose husband and 8-year-old child are present.
## Communication Observer’s Guide

<table>
<thead>
<tr>
<th>Communication Skills</th>
<th>Usually</th>
<th>Sometimes</th>
<th>Rarely</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nonverbal:</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Relaxes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opens up to client; nonjudgemental</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Leans forward toward client</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Establishes eye contact</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Sits squarely (and smiles)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Verbal:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clarifies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Listens</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Encourages and praises client</td>
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<td></td>
<td></td>
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<tr>
<td>Acknowledges</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reflects and repeats</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Counselling Process (steps):
- Greets client and family warmly
- Asks open-ended and probing questions
- Tells clients about the benefits of FCMC
- Helps woman to make her own decision
- Explains anticipated processes (admission, labor, etc.)
- Return visits, referral, follow-up explained

**Observer’s Comments:**
### Infection Control Game Cards

*Cut along the dotted lines to make cards for the game. You can fold each card down the middle so that the correct answer is hidden on the back.*

<table>
<thead>
<tr>
<th>IC Practices</th>
<th>Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cut on dotted lines</strong></td>
<td><strong>Fold here</strong></td>
</tr>
</tbody>
</table>
| 1. Perform a routine cleansing enema on all women in labor. | NOT SUPPORTED BY EVIDENCE  
Studies have shown that there is no difference in the risk of fecal contamination with or without enema. |
| 2. Perform a routine perineum shave on all women in preparation for childbirth. | NOT SUPPORTED BY EVIDENCE  
Research shows that shaving does not affect the incidence of infection. |
| 3. Do not allow mothers to wear their personal clothes and underwear in the delivery room. | NOT SUPPORTED BY EVIDENCE |
| 4. Keep mothers and their babies in the same ward (rooming-in). | YES, SUPPORTED BY EVIDENCE  
In addition to promoting breastfeeding and mother-infant bonding, rooming in avoids the infection risk of keeping too many babies in an overcrowded nursery. |
<p>| 5. Perform examinations only using disposable gloves. | YES, SUPPORTED BY EVIDENCE |
| 6. Ensure that all staff wear nonsterile medical coats that are changed daily. | YES, SUPPORTED BY EVIDENCE |
| 7. Wash hands before and after a procedure, a meal, or a visit to the restroom. | YES, SUPPORTED BY EVIDENCE |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>8.</td>
<td>Use UV lamps to clean rooms.</td>
</tr>
<tr>
<td></td>
<td>NOT SUPPORTED BY EVIDENCE</td>
</tr>
<tr>
<td></td>
<td>Ventilate rooms thoroughly instead.</td>
</tr>
<tr>
<td>9.</td>
<td>Do not allow babies to wear personal clothes brought from home.</td>
</tr>
<tr>
<td></td>
<td>NOT SUPPORTED BY EVIDENCE</td>
</tr>
<tr>
<td>10.</td>
<td>Ensure that staff wear gowns and face masks during labor and delivery.</td>
</tr>
<tr>
<td></td>
<td>NOT SUPPORTED BY EVIDENCE</td>
</tr>
<tr>
<td>11.</td>
<td>Treat the newborn’s umbilical cord stump with antiseptics.</td>
</tr>
<tr>
<td></td>
<td>NOT SUPPORTED BY EVIDENCE</td>
</tr>
<tr>
<td></td>
<td>It is recommended to simply leave the cord to dry, with no treatment.</td>
</tr>
<tr>
<td>12.</td>
<td>Allow siblings to visit the mother and newborn.</td>
</tr>
<tr>
<td></td>
<td>YES, SUPPORTED BY EVIDENCE</td>
</tr>
<tr>
<td>13.</td>
<td>Wash the newborn with tap water.</td>
</tr>
<tr>
<td></td>
<td>YES, SUPPORTED BY EVIDENCE</td>
</tr>
<tr>
<td>14.</td>
<td>Manage perineal scars with good personal hygiene, not antibiotics.</td>
</tr>
<tr>
<td></td>
<td>YES, SUPPORTED BY EVIDENCE</td>
</tr>
<tr>
<td>15.</td>
<td>Perform a damp cleaning of the postnatal care wards twice a day.</td>
</tr>
<tr>
<td></td>
<td>YES, SUPPORTED BY EVIDENCE</td>
</tr>
<tr>
<td>16.</td>
<td>Conduct routine testing of room surfaces and personnel.</td>
</tr>
<tr>
<td></td>
<td>NOT SUPPORTED BY EVIDENCE</td>
</tr>
</tbody>
</table>
### FCMC Implementation:
Maternity Situation Analysis

<table>
<thead>
<tr>
<th></th>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROVIDERS</td>
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<tr>
<td>INSTITUTION</td>
<td></td>
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<tr>
<td>CONSUMERS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENVIRONMENT</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
# FCMC Implementation: Action Plan

<table>
<thead>
<tr>
<th>Task</th>
<th>Person Responsible</th>
<th>Timeframe</th>
<th>Resources/Support Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>
# Family-Centered Maternity Care POST-TEST

Please circle T for true or F for false.

<table>
<thead>
<tr>
<th>Question</th>
<th>T</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Women will be less embarrassed and more relaxed if no one familiar is with them during labor.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>2) Women should be significantly involved in decision-making about their own care during childbirth.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>3) Giving a perineal shave and enema in early labor will prevent infection.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>4) Tightly swaddling a newborn is the best way to prevent hypothermia.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>5) Allowing family members in street clothes into the labor and birth unit of a hospital has increased perinatal infection rates.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>6) Perinatal infection is largely preventable with consistent hand washing and wearing of gloves.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>7) Continuous electronic fetal monitoring has reduced overall neonatal morbidity and mortality.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>8) Newborns are generally too excited to breast-feed soon after birth. They should rest first before attempting to nurse.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>9) Women should be counseled about contraception during the postpartum period.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>10) Health care providers do not need to give women and their families information about childbirth procedures because they will not understand it.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>11) Women should be encouraged to walk around during labor.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>12) Allowing women to eat and drink during labor has led to increased maternal morbidity and mortality.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>13) Newborns should be kept in a nursery for the first hours after birth to allow the mother to rest.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>14) Women who give birth lying flat on the back tend to have weaker contractions and longer labors.</td>
<td>T</td>
<td>F</td>
</tr>
</tbody>
</table>
15) Active management of the third stage of labor has been shown to reduce the chances of postpartum hemorrhage.  

16) Episiotomy should be performed routinely because it prevents more serious perineal trauma.  

17) Every birth should be attended by a physician if possible.  

18) A woman’s pain during labor can be relieved by massage or by changing positions.  

19) Look at the section of a partograph below, which records information about a woman in labor. Is her labor progressing normally?

<table>
<thead>
<tr>
<th>Time</th>
<th>8:00</th>
<th>9:00</th>
<th>10:00</th>
<th>11:00</th>
<th>12:00</th>
<th>13:00</th>
<th>14:00</th>
<th>15:00</th>
<th>16:00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cervix (cm) [Plot X]</td>
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<tr>
<td>Descent of head [Plot O]</td>
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<td>Active Phase</td>
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<td>5:00</td>
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<td>10:00</td>
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<tr>
<td>Latent Phase</td>
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</tbody>
</table>
We would like to learn about your impressions of the first week of this course. You will also fill out a final evaluation at the end of Week 2. Please read each statement and circle the number that best represents how strongly you agree or disagree with it. (1 = strongly agree; 5 = strongly disagree.) If you have any other comments, write them in the space below the statement.

<table>
<thead>
<tr>
<th>AGREE</th>
<th>DISAGREE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2  3</td>
</tr>
</tbody>
</table>

1. The training covered the most important topics about family-centered maternity care.  
   *Comments:*

2. The sequence of sessions was effective.  
   *Comments:*

3. There was enough time to practice new skills.  
   *Comments:*

4. The written materials were helpful and easy to use.  
   *Comments:*

5. The readings were useful.  
   *Please make a note of any readings that were especially useful.*

6. The trainers made an effort to find out what I already knew about each topic at the beginning of each session.  
   *Comments:*

7. The trainers used different teaching methods effectively.  
   *Comments:*

Handouts

Facilitator’s Guide
8. I feel ready to implement FCMC practices at my maternity.
   
   Comments:

9. I feel ready to demonstrate FCMC practices to colleagues at my maternity.
   
   Comments:

10. Which topics were the most relevant to your work?

11. Which topics were new to you?

12. What changes to the first week of the training would you suggest?
### Pre- and Post-Test Answer Key

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
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<td>T</td>
</tr>
<tr>
<td>19. Look at the section of a partograph below, which records information about a woman in labor. Is her labor progressing normally?</td>
<td>No</td>
</tr>
</tbody>
</table>
PUERPERAL SEPSIS

Excerpted from "Puerperal Sepsis Module" WHO/FRWMSM196.4

INTRODUCTION

Puerperal sepsis is one of the major causes of maternal death and accounts for 15% of all maternal deaths in developing countries. If it does not cause death, puerperal sepsis can cause long-term health problems such as chronic pelvic inflammatory disease (PID) and infertility. It is very important for midwives and doctors to be able to prevent puerperal sepsis and treat it promptly if it occurs.

DEFINING PUERPERAL SEPSIS

Puerperal sepsis is an infection of the genital tract at any time between the onset of rupture of membranes or labor and the 42nd day following delivery or abortion in which two or more of the following are present:

- pelvic pain;
- fever of 38.5 degrees C or more measured orally on anyone occasion;
- abnormal vaginal discharge;
- abnormal smell, foul odor of discharge;
- delay in the rate of reduction of the size of the uterus.

Bacteria which Cause Puerperal Sepsis

Some of the most common ones are:
- streptococci
- staphylococci
- Escherichia coli (E. coli)
- Clostridium tetani
- Clostridium welchli
- chlamydia and gonococci bacteria which cause sexually transmitted diseases

Infection is most often a mixed infection with several kinds of bacteria. Bacteria may be either endogenous or exogenous.

Endogenous bacteria: These are bacteria that normally live in the vagina and rectum without causing harm (e.g. some kinds of streptococci and staphylococci, E. coli, Clostridium welchli). Even when a sterile technique is used for delivery, infection can still occur from endogenous bacteria.

Endogenous bacteria can become harmful and cause infection if:
Clinical Week

- they are brought into the uterus by the examining finger or by instruments during pelvic examinations;
- they are in the presence of bruised, lacerated or dead tissue (e.g. after a traumatic delivery or following obstructed labor);
- they go up into the uterus when there is prolonged rupture of membranes.

Exogenous bacteria: These are bacteria that are introduced into the vagina from the outside (streptococci, staphylococci, Clostridium tetani etc).

Exogenous bacteria can be introduced into the vagina:
- by unclean hands and unsterile instruments;
- by foreign substances that are inserted into the vagina (e.g. herbs, oil, cloth);
- by sexual activity.

Students should be aware of the problem of sexually transmitted diseases, which are caused by exogenous bacteria. In areas where sexually transmitted diseases (STDs) (e.g. gonorrhea and chlamydial infection) are common, they cause the majority of uterine infections. If a woman gets an STD during pregnancy and it remains untreated, the bacteria causing the STD will stay in the vagina and may cause a uterine infection after delivery. Uterine infections caused by STDs can be prevented by diagnosing and treating women for STDs during their pregnancy.

**Signs and Symptoms of Puerperal Sepsis**

The woman usually has a fever but this may not be so in clostridial infections. The woman may have pelvic pain, the uterus is tender, lochia may be offensive, and there may be a delay in the rate of reduction of the size of the uterus. There may be pain, swelling and pus discharge at the site of lacerations or episiotomy.

**Risk Factors for Puerperal Sepsis**

Some women are more vulnerable to puerperal sepsis, including for example anemic or malnourished women or women who have been in prolonged labor.

**HOW PUERPERAL SEPSIS OCCURS**

Puerperal sepsis can occur intrapartum or postpartum. Before delivery, the amniotic and chorionic membranes may become infected when membranes rupture many hours before labor starts. Bacteria have then enough time to go up from the vagina into the uterus and infect the membranes, the placenta, the baby and mother. Chorioamnionitis is a very serious problem and the woman and her baby are both in danger of losing their lives. Following delivery, puerperal sepsis may be localized in the perineum, vagina, cervix or uterus. Infection of the uterus can rapidly become widespread causing infection of fallopian tubes or ovaries, parametritis, peritonitis and spreading to the lymphatics, leading to septicemia as it enters the bloodstream. This may be further complicated by
septic shock and disseminated intra vascular coagulation which gives rise to bleeding problems. Puerperal sepsis can become rapidly fatal.

Women are vulnerable to infection in the postpartum period, because of the following factors:
1. The placental site is large, warm, dark and moist. This allows bacteria to grow very quickly. It is an ideal medium to culture bacteria. In the laboratory, warm, dark and moist conditions are produced artificially in order to help bacteria grow and multiply.
2. The placental site has a rich blood supply, with large blood vessels leading directly into the main venous circulation. This allows bacteria in the placental site to move very quickly into the bloodstream. This is called septicemia. Septicemia can lead to death very quickly.
3. The placental site is not far from the outside of the woman's body. Only the length of the vagina (7-10 cm) separates the entrance to the uterus from the outside. This means that bacteria which naturally live in the rectum (such as E.coli) can easily move into the vagina and into the uterus. Here they are harmful or "pathogenic" because they will cause infection in the placental site.
4. During delivery, women may have suffered tears in the cervix, vagina or perineal area or had an episiotomy. These areas of traumatized tissue are susceptible to infection, especially if a sterile technique of delivery was not used. Infection is usually localized, but in severe cases it spreads to underlying tissues.

CHECKLIST FOR Puerperal SEPSIS

The most common site of infection in puerperal sepsis is the placental site. Other sites of infection are tears of the cervix, vagina, perineum and site of episiotomy.

Risk Factors for Puerperal Sepsis

These include:
- poor hygiene
- poor aseptic technique
- manipulations high in the birth canal
- presence of dead tissue in the birth can be due to intrauterine death of fetus, retained fragments of placenta or membranes, shedding of dead tissue from vaginal wall following obstructed labor
- insertion of unsterile hand, instrument or packing
- pre-existing anemia and malnutrition
- prolonged/obstructed labor
- prolonged rupture of membranes
- frequent vaginal examinations
- cesarean section and other operative deliveries
- unrepaired vaginal or cervical lacerations
- pre-existing sexually transmitted diseases
- postpartum hemorrhage
• not being immunized against tetanus
• diabetes

Other factors that affect puerperal sepsis include community and health service factors. These make the danger of death from puerperal sepsis greater.

**Community Risk Factors**

These include:
• lack of transportation and resources;
• great distance from a woman's home to a health facility;
• low socioeconomic status;
• cultural factors which delay care seeking behavior,
• low status of women;
• lack of knowledge about signs and symptoms of puerperal sepsis.

**Health Service Risk Factors**

These include:
• inadequate monitoring of temperature in prolonged labor and after delivery;
• lack of asepsis during delivery;
• inadequate bacteriological investigations in women with puerperal sepsis;
• shortage of blood for transfusion;
• inadequate management with appropriate antibiotics or further operative intervention;
• non-availability of appropriate antibiotics.

**MANAGEMENT OF PUERPERAL SEPSIS**

**1. Isolation and Barriers, Nursing of the Woman**

The aim of this is to prevent the spread of infection to other women and their babies. Basic nursing principles are important. Nurses/midwives should:
• nurse the woman in a separate room or, if that is not possible, in the corner of the ward, separated from the other patients;
• use a gown and gloves when attending to the woman and use this particular gown and gloves only when attending to her;
• keep one set of equipment, dishes and other utensils exclusively for the use of this woman and make sure it is not used by anyone else;
• wash hands carefully before and after attending to this woman.

Where possible a special midwife/nurse should be allocated to care for this mother and her baby. It may also be helpful to have a relative assist with their care. If so, the relative must be instructed in the basic principles of preventing the spread of infection. Otherwise visitors should be limited.
2. Administration of High Doses of Broad Spectrum Antibiotics

These will normally be prescribed by a doctor. Where no doctor is available, midwifery personnel must know how to prescribe and give appropriate drugs. If legislation does not allow this, it should be reviewed urgently. Women will die of puerperal sepsis if appropriate antibiotic therapy is not given early enough. The aim of the antibiotics is to start treatment immediately and stop further spread of the infection.

Choice of antibiotic

- If the woman is not very sick (e.g. fever absent or low grade, pulse not very high, normal state of consciousness), useful regimes are:
  - amoxicillin 1 g stat orally followed by 500 mg every 8 hours for 7 days + metronidazole 400 or 500 mg every 8 hours for 7 days, or
  - amoxicillin 1 g stat orally followed by 500 mg every 8 hours for 7 days + tetracycline* 1 g stat orally followed by 500 mg every 6 hours for 7 days

*(NOTE: Tetracycline should only be given to breast feeding mothers if there is no suitable alternative antibiotic available.)

If the woman is very sick, (e.g. very high fever, rapid pulse, confused), offer more than one kind of bacteria is involved. A combination of antibiotics should be given to provide as broad a coverage as possible. Metronidazole and chloramphenicol** are very effective against chlamydia and other bacteria which are resistant to other antibiotics. Metronidazole should be given if the woman has had a cesarean section or if you suspect chlamydia.

**(NOTE: Warning: Chloramphenicol has some serious side effects such as anemia or leucopenia. If you give Chloramphenicol you must be able to monitor the blood count.)

Useful regimens are:
- benzylpenicillin 5 million IU IV stat followed by 2 million IU every 6 hours + gentamicin 100 mg stat IM followed by 80 mg every 8 hours + metronidazole 400 or 500 mg orally every 8 hours; OR
- ampicillin 1 g IV stat followed by 500 mg IM every 6 hours + metronidazole 400 or 500 mg orally every 8 hours; OR
- benzylpenicillin 5 million IU IV stat followed by 2 million IU every 6 hours + gentamicin 100 mg stat IM followed by 80 mg every 8 hours OR
- benzylpenicillin 5 million IU IV stat OR followed by 2 million IU every 6 hours + chloramphenicol 500 mg IV every 6 hours.

Note: the first regimen provides the broadest coverage.

Follow-up
If the woman does not improve after 48 hours or the laboratory report states that the bacteria are resistant to these antibiotics, the antibiotics must be changed. Do not change the antibiotics until you have considered:

- is the original diagnosis correct?
- is there an abscess anywhere?

Intravenous therapy should continue until the woman has had no fever for at least 48 hours. Antibiotics can then be given orally for another week on an outpatient basis.

3. Giving Plenty of Fluids

The aim of this is to correct or prevent dehydration and help to lower the fever. In severe cases, it is necessary to give intravenous fluids at first. If the woman is conscious and there is no indication for the need of a general anesthetic in the next few hours, she should also be given oral fluids. In mild cases, increase oral fluid intake.

4. Ruling out Retained Placental Fragments

Retained placental fragments can be a case of puerperal sepsis. Suspect this if the uterus is soft and bulky, if lochia are excessive and contain blood clots. The woman should be referred to a facility that has the equipment and health care personnel to perform a curettage.

5. Providing Skilled Nursing Care

This requires careful attention both to the comfort of the woman and to carrying out the doctor's instructions. It is important to:

- advise woman to rest in bed;
- monitor vital signs;
- measure intake and output;
- keep accurate records;
- prevent the spread of infection and cross-infection.

Practical problems that may arise include:

- facilities do not allow for proper isolation;
- staff shortage does not allow a single midwife/nurse to be allocated to give care.

The midwife must be gentle both physically and emotionally. This means that the woman must be handled gently when giving physical care. Rough handling increases pain and shock. A sensitive approach is important in speaking with the woman and her relatives. The woman is ill. The midwife and the doctor should demonstrate empathy. The midwife must also be accurate in all her observations, recording and reporting.

6. Managing Complications

*Peritonitis*
Generalized peritonitis is inflammation of the whole of the peritoneum. This means both the parietal peritoneum, which is the membrane that lines the abdominal wall, and the visceral peritoneum, which lies over the viscera or internal organs, are inflamed.

**Diagnosis:** It is important to know how to recognize peritonitis. Peritonitis and/or multiple abscesses in the abdomen can follow cesarean section or ruptured uterus or can be a complication of puerperal sepsis.

The following signs and symptoms are present in addition to fever:
- rebound tenderness*
- abdominal pain
- distended abdomen at 3 to 4 days
- vomiting
- poor bowel sounds
- diarrhea.

* To elicit rebound tenderness, palpate the abdomen then release your hand suddenly: if there is peritoneal inflammation, this will be painful.

**Management of generalized peritonitis:**

Treat actively if suspected, without waiting for confirmation of diagnosis. Start antibiotics such as benzylpenicillin plus gentamicin plus metronidazole, IV fluids and analgesics (such as pethidine 50–100 mg IM every 6 hours). If available, pass a nasogastric tube and aspirate the stomach contents.

Ensure that the woman is transferred without delay to the next referral level where skilled medical/surgical help is available.

**Salpingo-oophoritis and Parametritis**

Salpingo-oophoritis is infection of the ovary and fallopian tubes. Parametritis is infection of the parametrium. (The parametrium is the loose tissue found around the uterus. It extends onto the sides of the cervix and between the layers of the broad ligament).

**Diagnosis:**

Salpingo-oophoritis: fever, bilateral pain and tenderness in the lower abdomen.

Parametritis: fever, pain or tenderness on one or both sides of the abdomen, marked tenderness on vaginal examination

**Management of salpingo-oophoritis or parametritis:**
Start antibiotics such as benzylpenicillin plus gentamicin plus metronidazole. If necessary, give pain relief such as pethidine 50-100 mg TM every 6 hours. If the woman does not improve in 2 or 3 days she should be transferred to the appropriate level hospital.

**Septicemia**

Septicemia is the presence and multiplication of bacteria in the bloodstream.

**Diagnosis:** Fever and chills, fast pulse, woman very sick.

**Management of septicemia:**

Start antibiotics. e.g. benzylpenicillin + gentamicin + metronidazole. Refer the woman without delay to the appropriate hospital. Consideration may be given to starting Heparin if disseminated intravascular coagulation is suspected.

**Abscesses**

**Diagnosis:** Bulging, fluctuating mass on vaginal examination, severe pain and tenderness, fever not decreasing in spite of antibiotics.

**Management of abscesses:**

Refer the woman to the appropriate hospital for a posterior colpotomy (surgical incision into the posterior wall of the vagina) for abscesses in the Pouch of Douglas or a laparotomy for abscesses elsewhere in the abdomen.

**Managing Infections of Tears of the Perineum, Vulva, Vagina, Infection of Episiotomy**

**Signs and symptoms**
- pain
- swelling
- redness
- pus discharge
- fever.

**Management**
- antipyretics or analgesics
- sitz* baths three times daily
- clean wound with hydrogen peroxide or betadine twice daily after genital area has been cleaned with water.
* The woman sits in a tub of clean warm water for a few minutes
If there is no improvement after 3 days, remove sutures if present, probe wound and drain. Clean wound with hydrogen peroxide or betadine twice daily. If after 3 days there is still no improvement, refer to the appropriate hospital for surgical exploration and debridement.

8. Managing Chorioamnionitis

**Signs and symptoms:**
- fever
- tender uterus on palpation
- foul smelling amniotic fluid draining
- fast pulse (above 90 per minute)
- the baby also has a fast heartbeat (above 160 per minute)
- there is history of prolonged rupture of membranes.

**Management**

Delivery should take place as soon as possible. The woman and her baby are both in danger of losing their lives:
- set up an IV infusion and start IV fluids;
- start antibiotics and also give an antipyretic;
- monitor for signs of shock;
- transfer the woman without delay to the hospital where skilled obstetrical and pediatric help is available. Be prepared for delivery and infant resuscitation during transfer.

**Prevention of Chorioamnionitis**

- Advise all pregnant women to seek medical help as soon as they notice any fluid coming out from the birth canal. If the membranes are ruptured and the woman is not having contractions, do not do a vaginal examination.
- If labor does not begin within 12 hours after the membranes rupture, give the mother prophylactic (preventive) antibiotic treatment: use a broad spectrum antibiotic such as ampicillin 1 g stat IM then 300 mg IM every 6 hours or amoxicillin 500 mg orally every 8 hours. As an alternative, sulfamethoxazole/trimethoprine 800/I 60mg may be given twice daily.
- Refer to the next level of care after a maximum of 12 hours of no labor.
### Family-Centered Maternity Care Training

#### Participant Evaluation

**Week 2**

We would like to learn about your impressions of the second week of this course. Please circle your responses and add any other comments.

<table>
<thead>
<tr>
<th>AGREE</th>
<th>DISAGREE</th>
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<tbody>
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<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

1. The course met its goal: “to prepare health practitioners to implement family-centered maternity care practices in their maternity.”
   
   *Comments:*

2. I had the opportunity to practice the skills I learned about during Week 1.
   
   *Comments:*

3. The activities during down-time on the shift were useful.
   
   *Please make a note of any activities that were especially useful.*

4. The trainers effectively coached me in FCMC practices when working with clients.
   
   *Comments:*

5. I feel ready to implement FCMC practices at my maternity.
   
   *Comments:*
6. I feel ready to demonstrate FCMC practices to colleagues at my maternity. 
   *Comments:*

7. How do you anticipate using the skills you learned from this training in your work?

8. What changes to the second week of the training would you suggest?


Enkin M., Enkin E., Chalmers I., and Hemminki E. Prophylactic antibiotics in association with caesarean section.


Mercer, B.M. and Arheart, K.L. Antimicrobial therapy in expectant management of preterm premature rupture of the membranes. (Summary)
Mugford, M., Kingstone, J. and Chalmers, I. Reducing the incidence of infection after caesarean section: implications of prophylaxis with antibiotics for hospital resources. (Abstract)


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Infection Control


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Midwife-attended births


**Newborn Care**


**Pain relief**


**Partograph**

Positions & Ambulation in Labor and Birth


Pubic shaving


Skin to skin contact


Support during labor


Other

