FAMILY-CENTERED MATERNITY CARE

Participant’s Manual

Russia
2003
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Family-Centered Maternity Care Training

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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.
## 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>
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<tbody>
<tr>
<td>09:00</td>
<td><em>(For training cohort only)</em></td>
<td>Host Team</td>
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<tr>
<td>11:00</td>
<td>Break</td>
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<td>13:00</td>
<td>Lunch</td>
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<td>5. Alternative Positions for Labor &amp; Birth</td>
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<td>6. Active Management of the Third Stage of Labor</td>
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<td>15:45</td>
<td>Break</td>
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<td></td>
<td>7. Non-pharmacological Pain Relief</td>
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<td>13. Postpartum Care of the Mother</td>
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<td>23. Post-Test</td>
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<td>24. Evaluation and Reflection for Week 1</td>
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<td>17:45</td>
<td>Evaluation Activity</td>
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<td>18:00</td>
<td>Steering Committee</td>
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<td>DAY 1</td>
<td>DAY 2</td>
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<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>
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<tr>
<td>Attend Maternity’s Morning Case Conference</td>
<td>Morning Conference</td>
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<td>Morning Conference</td>
<td>Prepare for conference</td>
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<td>Change birthing rooms</td>
<td>Change birthing rooms</td>
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<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>TEAMS C-D</td>
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<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>Attend births and conduct postpartum rounds</td>
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<td>Meet with local staff at end of shift to transfer cases</td>
<td>Meet with local staff</td>
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<td>Meet with local staff</td>
<td>Meet with local staff</td>
<td>Conference with maternity staff</td>
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<td>- Clients describe experience</td>
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<td>- Report results of questionnaires</td>
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<td>- Trainees describe experience</td>
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<td>Evaluation of Week 2</td>
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Session 1:
Welcome and Introductions

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.
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.
The Host Team

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.
- Host Team members are important to the Steering Committee because they represent the entire group of participants. They are the “spokespeople” for course participants.
Session 3:  
Introduction to Family-Centered Maternity Care: Evidence-Based medicine

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.

**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.

*Developed by Judith Rooks, CNM, DrPH.*

"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.

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.

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.

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

The following were consistently identified as key elements:
- continuity of care within her community,
- sensitivity to women's social needs and responsibilities,
- 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.

Further, Oakley articulated a summation of women's views as:
- pregnancy is not an illness;
- women are human beings;
- obstetrics should be scientific; and,
- 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.

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.
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.

**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.

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.

- 1992 — the first Cochrane Center was founded in Oxford.
**Cochrane Collaboration in figures:** 15 centers throughout the world -
- 1388 systemic reviews;
- Result: 300,000 randomized clinical studies;
- Critical assessment of systemic 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](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](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.

**Grading of Reliability of the Information Provided**

*(Worked out by the Evidence-based Medicine Center in Oxford)*

**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.
Is evidence-based medicine 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.

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
  
<table>
<thead>
<tr>
<th>CTG use</th>
<th>RR 1.49*</th>
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</thead>
<tbody>
<tr>
<td>epidural anaesthesia</td>
<td>RR 1.33*</td>
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<tr>
<td>increase</td>
<td>RR 1.26*</td>
</tr>
<tr>
<td>operative delivery</td>
<td>RR 1.36*</td>
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<tr>
<td>*- evidence confirmed</td>
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- CTG is not appropriate in low risk deliveries
  

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:

- **mastering on his own** (MEDLINE, the Cochrane data base –

- **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](http://www.obgyn.net))

List of recommended clinical publications:

Effective Care in Pregnancy and Labor
2 volumes: Pregnancy and Labor, 1989 r., ed. by Iain Chalmers, Murray Enkin,
Marc J.N.C Keirse, introduction by Archie Cochrane.

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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- 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)

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
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.

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>

Ultrasound:
Positive impact: Useful in specific situations, e.g. to diagnose fetal congenital anomalies
Negative impact: Expensive; routine use on healthy pregnant women does not positively effect perinatal outcomes. Currently no clear evidence that it is harmful, but substantive data is needed on the short and long term effects on neonates and children.

Routine electronic fetal monitoring:
Positive impact: Effective in detecting specific fetal compromised situations.
Negative impact: Associated with increased cesarean section rates and operative vaginal delivery. The rate of neonatal seizures is decreased but overall morbidity and mortality are not improved. Contributed to the rapidly increased cesarean rate in the US from 4.5% in 1968 to 24.7% in 1988. Interpretation of fetal heart rate patterns is open to wide variation.

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 effect their health status. It may effect 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.
- 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.
Session 4:
Attitudes Toward Maternity Care

Case Study:
Through Her Eyes

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.

**Discussion Questions:**

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.
Session 5:  
Alternative Positions for Labor and Birth  

- **Ambulation facilitates a woman's labor process.**

  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.

  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).

- **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).

Information adapted from “Family-Centered Maternity Care” Presentation by Pauline Glatleider, CNM, MN, American College of Nurse-Midwives.

Positions for Labor Illustrations (next page)
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.
Further Readings for Day 1 Topics:

FCMC:


Positions & Ambulation in Labor and Birth


Appropriate technology


Midwife-attended births


Session 6: Support during Labor

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.

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.
- The control group had significantly more perinatal problems and longer labors (p = 0.001).
- The mothers in the doula group were significantly more awake after birth, stroked and talked to the baby more.

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.

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:

"...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.

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.
Session 7:
Non-Pharmacologic Pain Relief

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

Pain Relief Illustrations

See the illustrations on the following page.
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

#### 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.
Fact Sheets on Labor and Birth Practices

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

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.

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.

**Advantages and Disadvantages:**

**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)

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.
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 postpartum hemorrhage (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.
Session 10:
Clinical Skills Practice

Guidelines for Pelvic Exam:

- 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.

Guidelines for Neonatal Resuscitation:

(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.
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.
Further Readings for Day 2 Topics:

Support during labor


Pain relief


Electronic fetal heart monitoring


Enemas


Episiotomy


**Pubic shaving**

Session 11:  
The Partograph

Effectiveness of the partograph\(^1\):

- 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%.

The following is adapted from WHO’s “Essential Antenatal, Perinatal and Postpartum Care,” EUR/ICP/FMLY 01 04 03, Module 11.

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.

## PARTOGRAPH

<table>
<thead>
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<th>Gravids</th>
<th>Para</th>
<th>Hospital no.</th>
</tr>
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### Cervix (cm) [Plot X]

- **Active Phase**
- **Alert**
- **Action**

### Descent of head [Plot D]

- **Latent Phase**

### Contraction per 10 mins

- 5
- 4
- 3
- 2
- 1

### Oxytocin U/L drops/min

### Drugs given and IV fluids

### Pulse

- 180
- 170
- 160
- 150
- 140
- 130
- 120
- 110
- 100
- 90
- 80
- 70
- 60

### BP

### Temp °C

### Urine

- protein
- acetone
- volume
**Information Recorded on the Partograph:**

<table>
<thead>
<tr>
<th><strong>Patient information</strong></th>
<th>The patient’s name, gravida, para, registration/hospital number, date and time of admission and time of ruptured membranes are written at the top.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fetal heart rate</strong></td>
<td>This is recorded to monitor the condition of the fetus.</td>
</tr>
<tr>
<td><strong>Liquor</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>Moulding</strong></td>
<td>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 (+++).</td>
</tr>
<tr>
<td><strong>Cervical dilatation</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>Descent of the head</strong></td>
<td>This is very important in the monitoring of the progress of labour. The descent is plotted with an “O”.</td>
</tr>
<tr>
<td><strong>Time</strong></td>
<td>This is recorded using the time of admission as zero time. The actual time of day is recorded below the hours line.</td>
</tr>
<tr>
<td><strong>Contractions</strong></td>
<td>Along with cervical dilatation and descent of the head, contractions tell the progress of labour. The contractions are recorded under the time line.</td>
</tr>
<tr>
<td><strong>Oxytocin, drugs and intravenous fluids</strong></td>
<td>These are recorded in the space provided.</td>
</tr>
<tr>
<td><strong>Blood pressure, pulse and temperature</strong></td>
<td>These are recorded in the space provided.</td>
</tr>
<tr>
<td><strong>Urine</strong></td>
<td>The amount is recorded every time urine is passed. Albumin and acetone (ketone) are tested if the materials for testing are available.</td>
</tr>
</tbody>
</table>

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**

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 Graph]

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.

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?
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.

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?
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.

![Graph with latent and active phases]

**Fig. D**

**Note:** TR = transfer of plotted point from the latent phase onto the alert line.

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?
### 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.

Fig. F

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?
**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**

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*Win Project FCMC Training 2002 Participant’s Manual*
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**

![Diagram of partograph showing key and phases]

Fig. 1
Find the following on Fig. I.

- 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.
- Contractions 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.

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.

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”.

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).
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:

- o = bones are separated and the sutures can be felt easily.
- + = bones are just touching each other
- ++ = bones are overlapping but can be separated easily with pressure from your finger, refer
- +++ = bones are overlapping but cannot be separated easily with pressure from your finger, refer

Fig. L
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.
Fig. M

- **Oxytocin U/L drops/min**
- **Drugs given and IV fluids**
- **Pulse and BP**
- **Temp °C**
- **Urine**
  - Protein
  - Acetone
  - Volume

Values:
- Pulse: 180, 140, 120, 100, 80, 60
- BP: 180, 170, 160, 150, 140, 130, 120, 110, 100, 90, 80, 70, 60
- Temp °C: 37, 37, 36.8
- Urine: 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

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 .................................................................
**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:**

Exercise 7 will demonstrate the importance of the alert and action lines. Look carefully at Fig. O and answer the questions.

![Fig. O](image)

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.

**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 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?
Group Work Exercise A: Fig. P

PARTOGRAPH

Name: Mrs. B.  Gravida: 1  Para: 0  Hospital no.: 1059

Date of admission: 27.3.1988  Time of admission: 5:00  Ruptured membranes: 2 hours

Fetal heart rate 140
Liquor Moulding
Cervix (cm) [Plot X]
Descent of head [Plot Y]

Time

Contractions per 10 mins
Oxytocin U/L, drops/min

3
2
1

Drugs given and IV fluids

Pulse and BP

Temp °C

Urine

protein
acetone

volume

80 70 60
40 30 20
120 110 100
180 170 160
140 130 120
100 90

SVD of live female infant at 13:10 on 27.3.1988, wt 2800 gm.
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?
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

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

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Case Study:  
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.

Note: Lecture adapted from WHO “Essential Care of the Newborn” and “Mother-Baby Package.”

1. Overview: Infant and neonatal mortality

8.1 million infant deaths per year world wide; 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.2

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

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.

Supporting breast-feeding:
- 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
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.

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
Further Readings on Day 3 Topics:

Newborn Care


Partograph


Skin to skin contact


Session 14:
Midwife-Physician Collaboration

Role Play Instructions:

You will have 30 minutes to prepare a role play on a labor complication with a partner. One of you should play the midwife, while the other plays the physician.

With your partner, please:
1. Read the case you are assigned.
2. Decide together on:
   - the timing for physician consultation
   - the midwife’s recommendations
   - the range of possible interventions
   - the appropriate choice of intervention for this woman
   - how to discuss the intervention with the family
   - follow-up.
3. Write up a partograph for the case.
4. Practice role-playing the discussion between the midwife and physician.

Be prepared to present this role play in front of the class.

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.
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 09:00:
- 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 14:00:
• 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 18:00
• 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 11:00:
- 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 13:00:
- 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 15:00:
- 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 2\textsuperscript{nd} 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 13:00:
- 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 14:00:
- 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 15:30:
- 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 16:30:
- 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 01:00:
- 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 05:00:
- 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 08:00:
- 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 12:00:
- 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 14:00:
- 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 16:00:
- 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

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

Six listening and learning skills:

**Skill 1. Use non-verbal communication**

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

**Non-verbal communication**

- **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

- **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)
• **Barriers:**
  Hinders: sit behind a table, or write notes while you talk
  Helps: remove the table or the notes

• **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

• **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

**Skill 2. Ask open questions**
- 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.
- Closed questions are usually less helpful. They tell a client the answer that you expect, and a client can answer then with “Yes” or “No”.
  - Closed questions usually start with “Are you?” or “Did he?”

**Skill 3. Use responses and gestures which show interest**
- 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
Skill 4. Reflect back what the client says

- 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.

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

- 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.

Skill 6. Avoid words which sound judging

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

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
Role Play:
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.
Session 16:  
Infection Control Guidelines for Maternity Hospitals

**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** (applicable to patients with documented or suspected bacilli production).

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**Scenario:**

Tanya 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?
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

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.
Session 17
Infection Control Case Study

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?
Further Readings on Day 4 Topics:

Infection Control


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)


Session 18:
Evaluation of FCMC Implementation

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.

The forms include:
1. Critical indicators
2. Benchmarks
3. FCMC Delivery Record Questionnaire
4. FCMCM Postpartum Questionnaire
5. Hospital Monthly Tally Sheet
Session 19:
Strategies for Change

In our personal lives we get used to doing activities a certain way. We typically do such an activity in the same way every day, and changing this routine feels awkward and uncertain. 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.

Reasons for Resistance:
• cost
• time investment
• threat
• vested interests
• fear of failure
• fear of disorganization

Conditions that promote resistance to change (Olson, 1979):
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.”

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.”
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.
References

Session 3: Introduction to FCMC


Glatleider, P. “Family Centered Maternity Care.” American College of Nurse-Midwives.


Session 5: Alternative Positions for Labor and Birth


Glatleider, P. “Family Centered Maternity Care.” American College of Nurse-Midwives.


Session 6: Support during Labor


Glatleider, P. “Family Centered Maternity Care.” American College of Nurse-Midwives.


Session 7: Non-pharmacologic Pain Relief


Session 8: Evidence-based Labor and Birth Practices


Session 9: Active Management of the Third Stage of Labor


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Session 10: Clinical Skills Practice

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Session 11: The Partograph


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Session 18: Evaluation of FCMC Implementation


Session 19: Strategies for Change
