# NURS 3337: Nursing Care of Childbearing Families  
Clinical Education Center and Simulation  
Day 1 Experience

## Learning Activities

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<td>Maternal Simulation Experiences</td>
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</table>

## Preparation for CEC/SIM Learning Activities

In order to come prepared to be active and engaged in today’s learning activates you will need to review the following:

**SIMULATION 1**
- Review elements for routine early labor admission
- Know prenatal labs & be able to identify significant prenatal labs
- Review elements of a Physical Exam for a patient in early labor
- Answer scenario prep questions

**SIMULATION 2**
- Identify multiple non-pharmacological comfort measures
- Review elements for routine fetal monitoring expectations
- Differentiate between early, variable, and late decelerations
- Answer scenario prep questions

**SIMULATION 3**
- Be prepared to know what initial care to complete and document your findings on the admission sheet
- Know how to do an Apgar and neonatal vital signs
- Answer scenario prep questions

**In addition you will need to review the following journal article:**

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OB CEC/Sim Workbook Day 1
Skills Related to the Woman
SKILL #1: Leopold’s Maneuvers

Leopold’s maneuvers determine fetal head position, presenting part, and lie.
*Note: Some practitioners may perform the sequence differently.*

When palpating the woman’s gravid abdomen, you are asking yourself the following questions:
- Fetal lie, longitudinal or transverse?
- What is in the fundus? Buttocks or head?
- Where is fetal back?
- Where are small parts or extremities?
- What is in inlet? Do findings in inlet confirm findings in fundus?
- Presenting part engaged or floating
The fourth maneuver of Leopold's tells you how the presenting part is positioned: vertex, face, or forehead presentation. You can tell by the flexion or extension of the fetal neck. Even though the fetus has a cephalic presentation in both to the pictures below, the presenting part is different.

Clinical Key – palpate back and follow back to head to determine degree of flexion.

**Activity #1:** Using the teaching aid, try to palpate all 4 Leopold’s maneuvers. Determine:
- What is the fetal lie, longitudinal or transverse?
- What is in the fundus? Buttocks or head?
- Where is fetal back?
- What is in the inlet?

**SKILL #2: Locating Fetal Heart Beat & Counting Fetal Heart Tones**

You will learn how to locate and count Fetal Heart Tones. Knowing how to count a fast rate will also help you count neonatal respirations and neonatal heart rate, you will have to learn to count in your head in order to keep up.

Fetal Heart Tones are often counted using an ultrasound and/or a Doppler (most common).
Can you see how knowing Leopold’s maneuvers might help you locate fetal heart tones?

Will you locate fetal heart tones in the same quadrant when fetus is breech compared to cephalic or transverse?

The frequency of the fetal heart tone assessment and documentation depends on the risk status of the mother and of the fetus. What would be some risk factors?

**Activity #1:** Count Fetal Heart tones for 30 seconds – did you all get about the same rate? Use this web site to practice counting fast heart rates:

- [www.metronomeonline.com](http://www.metronomeonline.com)
Activity #2: Use the Doppler to find your radial pulse.

**SKILL #3: Fetal Station and Cervical Dilation and Effacement**

The station refers to where the presenting part is in the context of the maternal pelvis.

- Maternal ischial spines are zero (0) station
- Presenting part moves from negative 1-4 to positive 1-4

In the illustration above, the fetal head is considered “floating”, and not yet engaged in the inlet. The fetal head is directed down toward the pelvis but can still easily move away from the inlet.

Cervical Dilation and Effacement: To gauge cervical dilatation, the nurse places the index and middle fingers against the cervix and determines the size of the opening. (This is a sterile procedure for a woman in labor.)
Activity #1: Don sterile gloves and try to determine cervical effacement and dilation on the teaching aid provided in lab.
University of Colorado Hospital Sterile Vaginal Examination:

**Description (Purpose):** This document provides guidelines for performing a vaginal examination to determine dilatation and effacement of the cervix, for the purpose of assessing progress of labor and/or favorability for induction.

**Accountability (Scope/Personnel):** Physician, Certified Nurse Midwives (CNMs), RNs are responsible for performance of this procedure.

**Guidelines:**

1. Assess the patient for the following indications or contraindications (including relative contraindications) prior to the vaginal examination. This list is a sample of common situations and may not be all inclusive.

<table>
<thead>
<tr>
<th>Indications</th>
<th>Contraindications</th>
</tr>
</thead>
<tbody>
<tr>
<td>For completion of the Medical Screening Exam</td>
<td>Vaginal Bleeding (other than bloody show)</td>
</tr>
<tr>
<td>Patient c/o “baby coming”</td>
<td>Suspected or known placenta previa</td>
</tr>
<tr>
<td>Placement of FSE</td>
<td>Suspected or known placental abruption</td>
</tr>
<tr>
<td>Assessment of progress of labor</td>
<td></td>
</tr>
<tr>
<td>Assist with 2nd stage pushing</td>
<td></td>
</tr>
</tbody>
</table>

2. Digital exams are usually contraindicated in PPROM. In PTL with intact membranes, the exam should usually be performed by an MD; although it may be performed by a nurse.

3. Gather equipment:
   - One sterile examination glove
   - One packet of sterile bacteriostatic surgical lubricant

4. Insert index and middle fingers into vagina, avoiding the anal region, touching the cervix. Assess for cervical dilatation, effacement, fetal station, presentation and lie.

5. Upon completion of the exam, dispose of the glove appropriately.

**Nursing Considerations:**

Limit the number of vaginal examinations when the patient’s membranes have ruptured, to minimize the possible introduction of infection.

**SKILL #4: Assisting the Mom into Laboring & Birthing Positions**

We will talk as a group, using a poster in the CEC to guide our conversation.

Positions are dictated by equipment tethering, health of mom, health of baby, position of baby – which may make some positions more comfortable than others. Generally, the mom will try to seek a position that allows for counter pressure to offset the discomfort dictated by fetal lie and presentation.

- Which positions might promote fetal decent?

- Which positions might be best with an epidural?

- Which positions might be best for an ill mother that is tethered?

- What position should the mother avoid? Why?
All positions have advantages, disadvantages, and cultural norms. Here are some common positions to consider:

- Bed, birthing chair, delivery table
- Recumbent position
- Left lateral Sims’ position
- Squatting position
- Semi-Fowler’s position
- Sitting position
- Hands and knees position

Activity #1: Help a classmate into these laboring positions:
- Minimizing back pain
- Promoting descent
- Any other position of your choice

Skills Related to the Fetus/Neonate

SKILL #1: Eye Ointment

Antibiotic eye ointment is also given within hours of birth, why?

Why is it typically not administered during the first hour of life?

The most common topical agents are:
- 0.5% erythromycin ophthalmic ointment
- 1% tetracycline

Old’s Text: Procedure for Administration of ophthalmic ointment
- Wash hands
- With gloved hands, instill a narrow ribbon or strand of 0.5 to 1 cm long of ointment
- Retract lower eyelid outward and downward.
- The ointment, supplied in a single dose ampule, is placed in the lower conjunctival surface of each eye, starting at the inner canthus
- After administration, gently massage the eyelid to distribute the ointment.
Skill #2: Infant IM injections

Vitamin K and Hepatitis B vaccine #1 are given shortly after birth. (HBIG is also indicated if mom is Hepatitis B surface antigen positive.)

**Vitamin K is given within hours of birth, why?**

Vitamin K and Hepatitis B vaccine are given intramuscularly, the preferred site is the vastus lateralis and usually a 25 to 27gage needle is used. (See Lifespan Considerations in Chapter 19 of your Craven text, pg 463)

Old’s Text: Injection sites. The middle third of the vastus lateralis muscle is the preferred site for intramuscular injection in the newborn. The middle third of the rectus femoris is an alternative site, but its proximity to major vessels necessitates caution in using this site for injection.

**Old’s text:** Procedure for vitamin K injection.

- With Gloves on, cleanse area thoroughly with alcohol swab, and allow skin to dry.
- Bunch the tissue of the mid-anterior lateral aspect of the thigh (vastus lateralis muscle) and quickly insert a 25-gauge 5/8-inch needle at a 90-degree angle to the thigh.
- Aspirate, and then slowly inject the solution to distribute the medication evenly and minimize the baby’s discomfort. Sweeties are commonly given 1 minute prior to injection.
- Remove the needle and massage the site with an alcohol swab.

Ophthalmic ointment technique

- Your instructor will demonstrate how you will retract the eyelid to administer the ointment

**Divide into groups and practice each activity.**

**Activity #1: Ophthalmic ointment technique**

- Using the infant mannequins find demonstrate how you will retract the eyelid to administer the ointment
Activity #2: IM injection landmarks and safe immobilization of leg

- Using the infant mannequins find the landmark of your vitamin K injection and demonstrate how you will stabilize the leg to prevent trauma secondary to movement.

**SKILL #3: Temperature Monitoring & Newborn Bath - Instructor Demo**

Neonatal temperatures are taken using the axillary route, typically at birth and then every 30 minutes until stable, 36.6-37.5°C (98-99.5°F) for 2 hours, then every 8 hours.

Babies born to women who are GBS+ or have other infections need temperature monitoring more frequently, why?

Why is newborn hypothermia such a concern?

**Match heat loss to activity**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Heat loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Removal from an incubator for procedures</td>
<td>A. Convection → warm body surface to cooler air currents</td>
</tr>
<tr>
<td>Placing the newborn on a cold surface, such as a scale</td>
<td>B. Evaporation → loss of heat incurred when water converted to vapor</td>
</tr>
<tr>
<td>Giving a bath</td>
<td>C. Conduction → loss of heat to cooler surface by direct skin contact</td>
</tr>
<tr>
<td>Placing the isolette near a cold surface such as a window or outside wall</td>
<td>D. Radiation → body heat transferred to cooler surfaces, objects not in direct contact with body</td>
</tr>
</tbody>
</table>

**Newborn Bath**

- Check axillary temperature first to insure you may proceed with bath as planned.
- Bathe while under warmer or under heating units by sink, with parents present as desired.
- Keep baby swaddled while head is washed
- Dry hair and put cap on before the baby is un-swaddled for bath
- Protect baby from drafts
- After bath, Fold diaper down, exposing umbilical cord to air
- Swaddle with warn blankets after bath, needs cap and lots of warm blankets
  - Helps maintain body temperature
  - Provides feeling of closeness and security
  - May be effective in quieting a crying baby
- Recheck temperature after bath
Swaddling in blankets:

Bring arms and legs into midline to increase sense of security

Activity #3: Baby temperature, bath, and swaddling

Working together in groups, practice axillary temp, bathing, eye drops, and swaddling as noted above.
SIMULATION

SIM #1: NORMAL LABOR & BIRTH – ROUTINE ADMISSION IN EARLY LABOR

SIMS 1-2 SCENARIO SUMMARY: Margaret is a 23 year old primip at term. She has received prenatal care in a multidisciplinary practice and the midwife (CNM) will be attending her delivery. Her general health is good, and she has experienced no prenatal complications. She wants an unmedicated birth, and she plans to breastfeed. Currently she is being admitted with regular mild contractions and bloody show. You will need to begin the admission process. Start by making her comfortable, checking and executing your orders, and completing a physical exam appropriate for an OB patient.

PRENATAL INFORMATION:

<table>
<thead>
<tr>
<th>Name</th>
<th>DOB: September 14</th>
<th>MRN: 00098790</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGE: 23</td>
<td>MEDICAL HISTORY: negative</td>
<td>G/P: 2/0-0-1-0</td>
</tr>
<tr>
<td>SO: Bill (husband)</td>
<td>OB HISTORY: N/A</td>
<td>GESTATIONAL AGE: 40 2/7’s</td>
</tr>
<tr>
<td>CHILDREN: none</td>
<td>PREVIOUS SURGERIES: no</td>
<td>CURRENT PREGNANCY: neg for complications, 25 pound weight gain</td>
</tr>
<tr>
<td>HT: 68”</td>
<td>WT (GAIN): 170# (35#)</td>
<td>REASON FOR ADMISSION: labor</td>
</tr>
<tr>
<td>EDUCATION: college graduate</td>
<td>PHYSICAL EXAM: negative</td>
<td>MEMBRANES: not yet examined</td>
</tr>
<tr>
<td>OCCUPATION: 4th grade teacher</td>
<td>PSYCHOSOCIAL ISSUES: none</td>
<td>BIRTH PLAN: natural</td>
</tr>
<tr>
<td>ALLERGIES: none</td>
<td>CURRENT INFECTION: prenatal vitamins</td>
<td>INFANT FEEDING: breast</td>
</tr>
<tr>
<td>PRENATAL CARE: yes</td>
<td>PRENATAL LABS</td>
<td>ABO/RH: A neg</td>
</tr>
<tr>
<td>CHILDBIRTH EDUCATION: yes</td>
<td></td>
<td>GBS: positive</td>
</tr>
<tr>
<td>GENETIC TESTING: no</td>
<td></td>
<td>RUB: non-immune</td>
</tr>
</tbody>
</table>
BIRTH PLAN

Mother-to-be: Margaret  
Partner: Bill

Practitioner: CNM  
Place of Birth: CU CON

This birth plan is intended to express the preference and desires we have for the birth of our baby. It is not intended to be a script. We fully realize that situations may arise such that our plan cannot and should not be followed. However, we hope that barring any extenuating circumstances, you will be able to keep us informed and aware of our options. Thank you.

First Stage (Labor):
- Dim lights.
- Would prefer to keep vaginal exams to a minimum.
- Maintain mobility (Walking, rocking, up to bathroom, etc.)
- Eat and drink to comfort.
- Intermittent monitoring (ACOG Standards) with an external monitor.
- Please do not offer me pain medications, I will ask for them if I want them.
- Relaxation techniques (breathing, focusing, etc.).
- Positioning as desired.
- Water (Shower or Tub).
- Heat or Cold packs.
- Massage (back, foot, counter pressure, etc.).
- Acupressure

Induction:
- I would prefer to use natural methods to start labor.

Augmentation:
- I would prefer to try nipple stimulation.

Second Stage (Birth):
- Choice of position
- I would prefer no episiotomy, but please use compresses, massage, and positioning.

Baby Care:
- Delay the cord cutting
- Delay eye medication for 1 hour
- Breast feeding only
- No separation of Mother & Baby

Cesarean Birth:
- Spinal/epidural anesthesia
- Partner present
- Partner to cut the cord
- Breast feeding in recovery room

Sick Baby:
- Breast feeding as soon as possible
- Unlimited visitation for parents
- Handling the baby (Kangaroo care, holding, care of, etc.)
LEARNER PREPARATION FOR SCENARIO

- Review elements for routine early labor admission
- Know prenatal labs & be able to identify significant prenatal labs
- Review elements of a Physical Exam for a patient in early labor
- Answer scenario prep questions

SCENARIO PREP QUESTIONS FOR STUDENTS:

1. Is there anything of concern in this patient’s prenatal records?

2. What specific skills will be necessary to care for this patient?

3. What patient education should you anticipate giving while caring for this patient?

4. What procedures and medications might be necessary during this scenario?

5. What outcomes do you expect in this scenario?
SCENARIO SUMMARY: Margaret is a 23 year old primip at term. She was recently admitted to your unit. Her general health is good, and she has experienced no prenatal complications. She wants a natural birth but the contractions are now more often, lasting longer and more painful. She is quiet during the contractions, doesn’t move or talk, and begins to tear up when you speak to her. You really need to get her on the monitor (External Fetal Monitor) as you address her pain.

- Be prepared to explain the monitor to the couple and interpret the strip.
- Be prepared to make suggestions to manage her increasing frequency and pain with contractions.
PRENATAL INFORMATION: SEE SIMULATION #1, SAME PATIENT

<table>
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<td>• Differentiate between early, variable, and late decelerations</td>
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<td>• Answer scenario prep questions</td>
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SCENARIO PREP QUESTIONS FOR STUDENTS:

1. What things can you suggest to help the patient manage escalating pain?

2. What makes a pregnancy low risk?

3. What are the 2 devices that are strapped onto the maternal abdomen during External Fetal Monitoring?

4. A patient with a category 3 tracing on her EFM ask is she can get up to the bathroom. Can she be disconnected to go to the bathroom?

5. A patient with a category 1 tracing on her EFM who is low risk, active labor, can be off the monitor for how long?
SIM 3: NORMAL LABOR & BIRTH – ROUTINE NEWBORN CARE & ASSESSMENT

SIM 3 SCENARIO SUMMARY: Margaret delivered a baby girl who is immediately given to you to assess. You will need to provide immediate neonatal care. You are told to take the newborn to the warmer to provide this care. Mom is not available during the simulation.

Prenatal Information: See SIM 1

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SCENARIO PREP QUESTIONS FOR STUDENTS:

1. What is the Apgar test used for?

2. What is scored in an Apgar?

3. What are some of the first interventions for a neonate:

4. Ideally, Where should a healthy infant be placed immediately after birth?
The Apgar score was originally named after its creator, Virginia Apgar, M.D. After the Apgar score became standard, the categories were renamed to form the acronym APGAR:

- Appearance (Color)
- Pulse (Heart Rate)
- Grimace (Response to Stimulation)
- Activity (Muscle Tone)
- Respiration (Respiration)

<table>
<thead>
<tr>
<th>SIGN</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>1 MIN</th>
<th>5 MIN</th>
<th>10 MIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart Rate</td>
<td>Absent</td>
<td>&lt; 100 bpm</td>
<td>&gt; 100 bpm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respiratory Effort</td>
<td>Absent</td>
<td>Slow, irregular</td>
<td>Good cry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Muscle Tone</td>
<td>Limp</td>
<td>Some flexion</td>
<td>Active motion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reflex Irritability</td>
<td>No response</td>
<td>Grimace</td>
<td>Cry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>Pale or cyanotic</td>
<td>Acrocyanosis</td>
<td>Pink</td>
<td></td>
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</tr>
</tbody>
</table>

**TOTAL**