OBJECTIVES

After studying this chapter, you should be able to:

1. Analyze issues that may face the new nurse who cares for women during the intrapartum period.
2. Explain teaching guidelines for going to the hospital or birth center.
3. Describe admission and continuing intrapartum nursing assessments.
4. Describe common nursing procedures used when caring for women during the intrapartum period.
5. Identify nursing priorities when assisting the woman to give birth under emergency circumstances.
6. Relate therapeutic communication skills to care of the intrapartum woman and her significant others.
7. Apply the nursing process to care of the woman experiencing false or early labor.
8. Apply the nursing process to care of the woman and her significant others during the intrapartum period.

DEFINITIONS

Abortion A pregnancy that ends before 20 weeks’ gestation, either spontaneously (miscarriage) or electively. Miscarriage is a lay term for spontaneous abortion that is being more frequently used by health professionals.

Amniotomy Artificial rupture of the membranes (amniotic sac).

Caput Succedaneum Area of edema over the presenting part of the fetus or newborn that results from pressure against the cervix (usually called caput).

Crowning Appearance of the fetal scalp or presenting part at the vaginal opening.

EDD Abbreviation for estimated date of delivery; also may be abbreviated EDB (estimated date of birth).

Episiotomy Incision of the perineum to enlarge the vaginal opening.

Ferning Microscopic appearance of amniotic fluid resembling fern leaves when the fluid is allowed to dry on a microscope slide; also called fern test.

Gravida A pregnant woman; also refers to a woman’s total number of pregnancies, including the one in progress, if applicable.

Multipara A woman who has given birth after two or more pregnancies of at least 20 weeks’ gestation; also informally used to describe a pregnant woman before the birth of her second child.

Nitrazine Paper Paper used to test pH; helps determine whether the amniotic sac has ruptured.

Nuchal Cord Umbilical cord around the fetal neck.

Nullipara A woman who has not completed a pregnancy to at least 20 weeks’ gestation.

Para A woman who has given birth after a pregnancy of at least 20 weeks’ gestation; also designates the number of a woman’s pregnancies that have ended after at least 20 weeks’ gestation. (A multifetal gestation, such as twins, is considered one birth when calculating parity.)

Primipara A woman who has given birth after a pregnancy of at least 20 weeks’ gestation; also used informally to describe a pregnant woman before the birth of her first child.
Care of the woman and her family during labor and birth is a rewarding yet demanding specialty within nursing. The birth of a baby is more than a physical event. Birth has deep personal and social significance for the family, whose roles and relationships are forever altered by this event.

The nurse must support natural physical processes, promote a meaningful experience for the family, and be alert for complications. Additionally, the nurse cares for two clients, one of whom—the fetus—cannot be observed directly.

The intrapartum area is typically a happy place, and good outcomes for mothers and infants are usual. Most women have accepted their pregnancies and look forward to meeting their infants. Yet some women have had stressful pregnancies because of physical and substance abuse, economic hardship, unsupportive personal relationships, and other problems (see Chapter 24).

**ISSUES FOR NEW NURSES**

New nurses and nursing students often approach care of laboring women with apprehension. They may face several common issues when caring for families during birth.

**Pain Associated with Birth**

Working with people in pain is difficult, and most nurses feel compelled to relieve pain promptly. Yet pain is expected in labor and cannot always be eliminated. Some women choose to have unmedicated births. Helping the woman manage the pain of birth is a critical part of nursing care, and many nurses find this to be the most creative aspect of their roles.

**Inexperience and Negative Experiences**

The nurse who has never given birth may feel inadequate to care for laboring women, even though the same nurse rarely thinks that experiencing a fracture is necessary to care for someone with that problem. Nursing skills needed by the intrapartum nurse are basic: observation, critical thinking, problem solving, therapeutic communication, comfort promotion, empathy, and common sense.

Nurses also may be anxious because of their own difficult experiences during birth. They must be careful not to convey negative attitudes to the laboring woman and her significant other.

**Unpredictability**

Birth follows its own timetable, even with efforts to “manage” it. Some nurses find the uncertain nature of an intrapartum area troubling, whereas others find it exciting. Some occurrences cannot be predicted or explained. In addition, the number of women needing care and the levels of care they require can change quickly.

**Intimacy**

The intimate nature of intrapartum care and its sexual overtones make some nurses uncomfortable. They may feel that they are intruding on a private time.

The male nurse often is anxious about this aspect of intrapartum care. Although he may have cared for other female clients, his care rarely has been so focused on the reproductive system. He often wonders whether a woman’s male partner will accept him as a care provider.

Both male nurses and female nurses should maintain professional conduct and take cues from the couple. If the couple wants privacy, the nurse should intervene only as needed to assess the woman and fetus. In more advanced labor, both partners often welcome the presence of a competent, caring nurse of either gender.

**ADMISSION TO THE BIRTH CENTER**

**The Decision to Go to the Hospital or Birth Center**

During the last trimester, the woman needs to know when she should go to the hospital or birth center. Factors to consider include:

- Number and duration of any previous labors
- Distance from the hospital
- Available transportation
- Child care needs

Nurses instruct women to distinguish between false and true labor. Nurses teach guidelines for going to the birth center and reinforce those given by the physician or nurse-midwife (“Women Want to Know: When to Go to the Hospital or Birth Center”). Not everyone has a typical labor, so a woman should be encouraged to go to the birth center if she is uncertain or has other concerns.

**WOMEN WANT TO KNOW**

When to Go to the Hospital or Birth Center

These are guidelines for providing individualized instruction to women about when to enter the hospital or birth center. Contractions—A pattern of increasing regularity, frequency, duration, and intensity:

- Nullipara—Regular contractions, 5 minutes apart, for 1 hour
- Multipara—Regular contractions, 10 minutes apart, for 1 hour

Ruptured membranes—A gush or trickle of fluid from the vagina should be evaluated, regardless of whether contractions are occurring.

Bleeding—Bright-red bleeding should be evaluated promptly. Normal bloody show is thicker, pink or dark red, and mixed with mucus.

Decreased fetal movement—if you notice a substantial decrease in the baby’s movement, notify your physician or nurse-midwife or come to the labor unit.

Other concerns—These guidelines cannot cover all situations and do not replace specific instructions given to you by your birth attendant. Therefore please go to the hospital for evaluation of any concerns and feelings that something may be wrong.
Establishing a Therapeutic Relationship

Sandra Hall is a nursing student assigned to the intrapartum unit. A woman walks toward Sandra. The woman is leaning on a man and breathing rapidly. She says to Sandra, “I think I’m in labor, and my water broke on the way to the hospital.”

Sandra: It sounds like today’s the day! Let’s find you a room.

Sandra asks the woman’s name (Amy James) and that of her birth attendant (Donna Moore, CNM, a nurse-midwife) as they walk to a room.

Sandra: I’m Sandra Hall, a nursing student. What names do you want us to call each of you? (Questioning for information. Shows respect by not assuming how the couple wants to be addressed.)

Amy: I’m Amy, and my husband is Jeff.

Sandra: Is this your first baby, Amy, or have you had others? (Questioning in a way that avoids “yes” or “no” answers.)

Amy: It’s my second, and the first took forever! I’ve been having contractions off and on since midnight, but they didn’t get regular till about 6:00 this morning. They are coming every 3 minutes now and starting to hurt a lot.

Sandra helps Amy put on a gown and applies the external fetal monitor while they wait for the RN. She does not follow up on Amy’s implied concern about having a long labor, however.

Amy: Oh no . . . the monitor . . . .

Sandra: You have a problem about the monitor? (Clarifying the nonspecific remark that Amy made about the monitor.)

Amy: I hated having that thing on with my last baby. I had to lie the same way all the time or they couldn’t hear the baby. I know it’s best for the baby, though.

Sandra: You seem to have mixed feelings about the monitor. (Reflecting what Amy seems to be feeling.)

Amy: Yes, I didn’t like it, but I do feel better knowing the baby’s okay.

Sandra: We can usually find ways so it doesn’t bother you so much. We don’t want you to feel tied down because that will make you more uncomfortable. (Giving information without promising that Amy will be totally comfortable with the external fetal monitor.)

Sandra observes that Amy’s contractions are every 3 minutes and strong. She finds an experienced nurse to help evaluate Amy. Sandra uses critical thinking and wisely seeks help from an experienced nurse because Amy seems to be active labor and this is her second baby. The fact that Amy’s first labor “took forever” does not necessarily mean that this labor will be long.

Nursing Responsibilities during Admission

The two nursing priorities when the woman arrives at the birth center are to (1) establish a therapeutic relationship and (2) assess the condition of the mother and fetus.

ESTABLISHING A THERAPEUTIC RELATIONSHIP

The nurse must quickly establish a therapeutic relationship with the woman and her significant other. The woman’s first impression influences her perception of the quality of her entire birth experience.

MAKING THE FAMILY FEEL WELCOME. A warm greeting makes the woman and her significant other feel valued. Even if the unit is busy, the nurse should communicate interest, friendliness, caring, and competence. People understand if the nurse is busy, but they do not understand rudeness and insensitivity to their needs.

Nurses often encounter women who speak a language other than English. Arranging for a culturally acceptable interpreter who is fluent in the woman’s language makes the woman and her family feel welcome and promotes safety because it enhances understanding among the woman, her family, and the nurse.

When caring for a woman who has not had prenatal care or childbirth classes, which are behaviors that most nurses value, the nurse must not be judgmental in either words or actions. The woman’s priorities and values may be different from those of the nurse, but she deserves the same respect, support, and care as the woman who made every preparation for her baby’s birth.

DETERMINING FAMILY EXPECTATIONS ABOUT BIRTH. Regardless of their number of children, women and their partners have expectations about the birth experience. The partners may have studied their options extensively and planned a birth that best fits their ideals. Those who have not made specific plans also have expectations shaped by contact with relatives and friends and previous birth experiences. A couple may want to repeat a previous satisfying experience or avoid repeating a poor experience. Sometimes one part of a past birth has negatively influenced the couple’s impression of the entire experience.

CONVEYING CONFIDENCE. From the first encounter, the nurse should convey confidence and optimism in the woman’s ability to give birth and the ability of her significant other to support her. Women having their first baby may be overwhelmed by the power of normal labor contractions. The nurse can reassure these women that intense contractions are normal in active labor while helping them manage contractions and watching for true problems.

Think about the different perspectives implied by the phrases give birth and be delivered. The woman who gives birth is an active and able participant; she is the principal action figure. However, the language of be delivered implies that the woman is passive. The nurse might ask “Who will attend you as you give birth?” rather than “Who will deliver your baby?”

ASSIGNING A PRIMARY NURSE. Having one nurse give care during all of labor is ideal but often unrealistic. However, changes in caregivers should be as limited as possible. The woman should know the name of and what to
expect from each caregiver. For example, the primary nurse might explain the role of a nursing student in the woman’s care. Common roles of nursing students in the intrapartum area include promoting comfort, giving emotional support, and helping the primary nurse observe for maternal and fetal problems.

**USING TOUCH FOR COMFORT.** Touch can communicate acceptance and reassurance and provide physical and emotional comfort to many laboring women. Women who usually do not welcome touch may appreciate it during labor. Cultural norms and personal history influence a woman’s comfort with touch from an unrelated person. The nurse should not assume that the woman desires touch but should ask her if she welcomes or benefits from touch. As labor progresses, the woman’s desire for touch may change, and touch mode may become irritating rather than comforting.

**RESPECTING CULTURAL VALUES.** Cultural beliefs and practices give structure, meaning, and richness to the birth experience. They influence the behavior of both the childbearing family and the professional staff. Most cultural groups have specific practices related to childbearing. The nurse should incorporate a family’s beneficial and neutral cultural practices into care as much as possible.

- People naturally believe that their own cultural values are best. The nurse should avoid using an attitude that is superior or diminishes the validity of another person’s cultural beliefs. Trust in technology is a common value of many caregivers in the United States, but such reliance on technology is considered unnecessary, odd, and even harmful by many other cultures.

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**CHECK YOUR READING**

1. What communication skills can the nurse use to establish a therapeutic relationship when the woman and her family enter the hospital or birth center?
2. How can the nurse incorporate a couple’s cultural practices into intrapartum care?

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**MAKING ASSESSMENTS AT THE TIME OF ADMISSION**

A paper or computerized record of prenatal care is sent to the center where the woman plans to give birth and added to her chart when she is admitted. Admission information can be obtained from the prenatal record and verified or updated as needed. Women who have not had prenatal care or who had care with a provider other than one who practices at the facility she enters need more extensive assessment by the nurse and physician (Table 13-1).

**FOCUSED ASSESSMENT**

A focused assessment is performed before the broader database assessment in the intrapartum unit, opposite of the usual order. Assessment priorities are to determine the condition of the mother and fetus and whether birth is imminent.

**FETAL HEART RATE.** For assessment of a term fetus using intermittent auscultation, the following fetal heart rate (FHR) guidelines are considered reassuring (Feinstein, Sprague, & Trépanier, 2000):
- A lower limit of 110 beats per minute (bpm) and an upper limit of 160 bpm
- Regular rhythm
- Presence of accelerations in the FHR
- Absence of decelerations from the baseline

These findings also would be reassuring in an electronically monitored fetus (see Chapter 14).

**MATERNAL VITAL SIGNS.** Maternal vital signs are assessed to identify signs of hypertension and infection. Hypertension during pregnancy is defined as a sustained blood pressure increase to 140 mm Hg systolic or 90 mm Hg diastolic. The hypertension may be a disorder that is specific to pregnancy or it may be chronic (American Academy of Pediatrics [AAP] & American College of Obstetricians and Gynecologists [ACOG], 2002; ACOG, 2001; ACOG, 2002) (see Chapter 25 for more information). A temperature of 38° C (100.4° F) or higher suggests infection.

**IMPELLING BIRTH.** Grunting sounds, bearing down, sitting on one buttock, and saying urgently, “The baby’s coming” suggest imminent birth. The nurse abbreviates the initial assessment and collects other information after birth. While the nurse cares for the mother, the following minimal information can be quickly gathered if birth is imminent:
- Names of mother and support person(s)
- Name of her physician or nurse-midwife if she had prenatal care
- Number of pregnancies and prior births, including whether the birth was vaginal or cesarean
- Status of membranes
- Expected date of delivery
- Any problems during this or other pregnancies
- Allergies to medications, foods, or other substances
- Time and type of last oral intake
- Maternal vital signs and FHR
- Pain: location, intensity, factors that intensify or relieve, duration, whether constant or intermittent, whether the pain is acceptable to the woman

If focused assessments of mother and fetus are normal and birth is not imminent, a more complete admission assessment is taken. If the initial assessments show that birth is near or another urgent condition is identified, the physician or nurse-midwife is notified promptly with essential assessment information.

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**CHECK YOUR READING**

3. What are the two assessment priorities when a woman comes to the intrapartum unit?
4. What FHR characteristics (when auscultated) are reassuring?
5. What observations suggest that a woman is going to give birth very soon? What should the nurse do in that case?
### TABLE 13-1 Intrapartum Assessment Guide

Women who have had prenatal care have much of this information available on their prenatal record. The nurse need only verify it or update it as needed.

<table>
<thead>
<tr>
<th>Assessment, Method (Selected Rationales)</th>
<th>Common Findings</th>
<th>Significant Findings, Nursing Action</th>
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</thead>
<tbody>
<tr>
<td><strong>Interview</strong></td>
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</tr>
<tr>
<td><strong>Purpose:</strong> To obtain information about the woman's pregnancy, labor, and conditions that may affect her care. The interview is curtailed if she seems to be in late labor.</td>
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</tr>
<tr>
<td><strong>Introduction:</strong> Introduce yourself, and ask the woman how she wants to be addressed. Ask her if she wants her partner and/or family to remain during the interview and assessment. (Shows respect for the woman and gives her control over those she wants to remain with her.)</td>
<td>Many women prefer to be addressed by their first names during labor.</td>
<td>The surname (family name) precedes the given name in some cultures. Clarify which name is used to properly address the woman and to properly identify both mother and newborn.</td>
</tr>
<tr>
<td><strong>Culture and language:</strong> If she is from another culture, ask what her preferred language is and what language(s) she speaks, reads, or verbally understands. (Identifies the need for an interpreter and enables the most accurate data collection.)</td>
<td>Common non-English languages of women in the United States are Spanish and some Asian dialects. The most common non-English language varies with location.</td>
<td>Try to secure an interpreter fluent in the woman's primary language. Ask her if there are people who are not acceptable to her as interpreters (e.g., males or members of a group in conflict with her culture). Family members may not be the best interpreters because they may interpret selectively, adding or subtracting information as they see fit. Telephone interpreters are available in many facilities. Hearing-impaired women may read lips well, or they may need sign-language interpreters or other assistance.</td>
</tr>
<tr>
<td><strong>Communication:</strong> Ask the woman to tell you when she has a contraction, and pause during the interview and physical assessment. (Shows sensitivity to her comfort and allows her to concentrate more fully on the information the nurse requests.)</td>
<td>Women in active labor have difficulty answering questions or cooperating with a physical examination while they are having a contraction.</td>
<td>If contractions are very frequent, assess the woman's labor status promptly rather than continuing the interview. Ask only the most critical questions.</td>
</tr>
<tr>
<td><strong>Nonverbal cues:</strong> Observe the woman's behaviors and interactions with her family and the nurse. (Permits estimation of her level of anxiety. Identifies behaviors indicating that she should have a vaginal examination to determine whether birth is imminent.)</td>
<td>Latent phase: Sociable and mildly anxious. Active phase: Concentrating intently with contractions; often uses prepared childbirth techniques.</td>
<td>The unprepared or extremely anxious woman may breathe deeply and rapidly, displaying a tense facial and body posture during and between contractions. These behaviors suggest that birth is imminent: 1. Her statement that the baby is coming 2. Grunting sounds (low-pitched, guttural sounds) 3. Bearing down with abdominal muscles 4. Sitting on one buttock Euphoria, combativeness, or sedation suggests recent illicit drug ingestion. Bleeding, preterm labor, pain other than labor contractions. Report these findings to the physician or nurse-midwife promptly.</td>
</tr>
<tr>
<td><strong>Reason for admission:</strong> “What brings you to the hospital/birth center today?” (Open-ended question promotes more complete answer.)</td>
<td>Labor contractions at term, induction of labor, or observation for false labor are common reasons for admission.</td>
<td>No prenatal care or care that was irregular or begun in late pregnancy means that complications may not have been identified.</td>
</tr>
<tr>
<td><strong>Prenatal care:</strong> “Did you see a doctor or nurse-midwife during your pregnancy?” “Who is your doctor or nurse-midwife?” “How far along were you in your pregnancy when you saw the physician or nurse-midwife?” “Have you ever been admitted here before during this pregnancy?” (Enables location of prenatal record and prior visit records.)</td>
<td>Early and regular prenatal care promotes maternal and fetal health.</td>
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</table>
### TABLE 13-1 Intrapartum Assessment Guide—cont’d

<table>
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<tr>
<td><strong>Interview—cont’d</strong></td>
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<tr>
<td>Estimated date of delivery (EDD): “When is your baby due?” (Determines if gestation is term.) “When did your last menstrual period begin?” (For estimation of EDD if woman did not have prenatal care.)</td>
<td>Term gestation: 38-42 wk. The woman’s gestation may have been confirmed or adjusted during pregnancy with an ultrasound or other clinical examination.</td>
<td>Gestations earlier than the beginning of the 38th week (preterm) or later than the end of the 42nd week (postterm) are associated with more fetal or neonatal problems. The physician may try to stop labor that occurs earlier than 36 weeks.</td>
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<tr>
<td>Gravidity, parity, abortions: “How many times have you been pregnant?” “How many babies have you had? Were they full term or premature?” “How many children are now living?” “Have you had any miscarriages or abortions?” “Were there any problems with your babies after they were born?” (Helps estimate probable speed of labor and anticipate neonatal problems.)</td>
<td>Labor may be faster for the woman who has given birth before than for the nullipara. Miscarriage is used to describe a spontaneous abortion because many lay people associate the term abortion with only induced abortions.</td>
<td>Women who have diabetes or hypertension may have poor placental blood flow, possibly resulting in fetal compromise. Some complications of past pregnancies, such as gestational diabetes, may recur in another pregnancy. The woman who plans a VBAC may need more support and reassurance to give birth vaginally. Although the VBAC is less common, it may be chosen for a variety of reasons. The nurse should be aware of the need for support and for complications that may be more likely in the current pregnancy.</td>
</tr>
<tr>
<td>Pregnancy history (Identifies problems that may affect this birth.)</td>
<td>Complications are not expected.</td>
<td>Women who have diabetes or hypertension may have poor placental blood flow, possibly resulting in fetal compromise. Some complications of past pregnancies, such as gestational diabetes, may recur in another pregnancy. The woman who plans a VBAC may need more support and reassurance to give birth vaginally. Although the VBAC is less common, it may be chosen for a variety of reasons. The nurse should be aware of the need for support and for complications that may be more likely in the current pregnancy.</td>
</tr>
<tr>
<td>Present pregnancy: “Have you had any problems during this pregnancy, such as high blood pressure, diabetes, infections, or bleeding?”</td>
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<tr>
<td>Past pregnancies: “Were there any problems with your other pregnancy(ies)?” “Were your other babies born vaginally or by cesarean birth?”</td>
<td>Women who had previous cesarean birth(s) may have a trial of labor and vaginal birth (VBAC). A woman who previously had a difficult labor or a cesarean birth may be more anxious than one who had an uncomplicated labor and birth.</td>
<td>Women who have had several spontaneous abortions or who have given birth to infants with abnormalities may face a higher risk for an infant with a birth defect.</td>
</tr>
<tr>
<td>Other: “Is there anything else you think we should know so that we can better care for you?”</td>
<td>This open-ended question gives the woman a chance to share information that may not be elicited by other questions.</td>
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<tr>
<td>Labor status: “When did your contractions become regular?” “What time did you begin to think you might really be in labor?” (Facilitates a more accurate estimation of the time labor began.)</td>
<td>Varies among women. Many women go to the birth facility when contractions first begin. Others wait until they are reasonably sure that they are really in labor.</td>
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<tr>
<td>Contractions: “How often are your contractions coming?” “How long do they last?” “Are they getting stronger?” “Tell me if you have a contraction while we are talking.” (Obtains the woman’s subjective evaluation of her contractions. Alerts the nurse to palpate contractions that occur during the interview.)</td>
<td>Varies according to her stage and phase of labor. Labor contractions are usually regular and show a pattern of increasing frequency, duration, and intensity.</td>
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<tr>
<td>Membrane status: “Has your water broken?” “What time did it break?” “What did the fluid look like?” “About how much fluid did you lose—was it a big gush or a trickle?” (Alerts the nurse of the need to verify whether the membranes have ruptured if it is not obvious. Identifies possible prolonged rupture of membranes or preterm rupture.)</td>
<td>Most women go to the birth facility for evaluation soon after their membranes rupture. If a woman is not already in labor, contractions usually begin within a few hours after the membranes rupture at term.</td>
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<tr>
<td><strong>TABLE 13-1</strong> Continued</td>
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**VBAC, vaginal birth after cesarean.**
### TABLE 13-1 Intrapartum Assessment Guide—cont’d

<table>
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<td><strong>Interview—cont’d</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allergies: “Are you allergic to any foods, medicines, or other substances?” “Do you have an allergy to latex?” “What kind of reaction do you have?” “Have you ever had a problem with anesthesia when you have had dental work?” (Determines possible sensitivity to drugs that may be used.)</td>
<td>Record any known allergies to food, medication, or other substances. As needed, describe how they affected the woman.</td>
<td>Allergy to seafood, iodized salt, or x-ray contrast media may indicate iodine allergy. Because iodine is used in many “prep” solutions, alternative ones should be used. Allergy to latex is becoming more common. Allergy to dental anesthetics may indicate possible allergy to the drugs used for local or regional anesthetics. These drugs usually end in the suffix -caine.</td>
</tr>
<tr>
<td>Tobacco or alcohol: “Do you smoke or use tobacco in any other form? About how many cigarettes a day?” “Do you use alcohol? About how many drinks do you have each day (or week)?” (Evaluates use of these legal substances.)</td>
<td>Record the time of the woman’s last food intake and what she ate. Include both liquids and solids.</td>
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<tr>
<td>Recent illness: “Have you been ill recently?” “What was the problem?” “What did you do for it?” “Have you been around anyone with a contagious illness recently?”</td>
<td>Most pregnant women are healthy. An occasional woman may have had a minor illness such as an upper respiratory tract infection.</td>
<td>Urinary tract infections are associated with preterm labor. The woman who has had contact with someone having a communicable disease may become ill and possibly infect others in the facility.</td>
</tr>
<tr>
<td>Medications: “What drugs do you take that your doctor or nurse-midwife has prescribed?” “Are there any over-the-counter drugs that you use?” “I know this may be uncomfortable to discuss, but we need to know about any illegal substances that you use, to more safely care for you and your baby.” (Permits evaluation of the woman’s drug intake and encourages her to disclose nonprescribed use.)</td>
<td>Prenatal vitamins and iron are commonly prescribed. Record all drugs the woman takes, including time and amount of last ingestion. Women who use illegal substances often conceal or diminish the extent of their use because they fear reprisals.</td>
<td>Drugs may interact with other medications given during labor, especially analgesics and anesthetics. Substance abuse is associated with complications for the mother and infant (see Chapter 24). If the woman discloses that she uses illegal drugs, ask her what kind and the last time she ingested them (often referred to as “taking a hit”). A nonjudgmental approach is more likely to result in honest information.</td>
</tr>
<tr>
<td>Birth plans (shows respect for the woman and her family as individuals and promotes achievement of their expectations; enables more culturally appropriate care): Coach or primary support person: “Who is the main person you want to be with you during labor?” “Is there anyone else you would like to be present during labor?” Ask that person how he or she wants to be addressed, such as “Mr. Ramos,” or “Carlos.”</td>
<td>As in substance abuse, women may underreport the extent of their use of tobacco or alcohol.</td>
<td>Infants of heavy smokers are often smaller and may have reduced placental blood flow during labor. Infants of women who use alcohol may show fetal alcohol effects (see Chapter 30).</td>
</tr>
<tr>
<td>Other support: “Is there anyone else you would like to be present during labor?”</td>
<td>Women often want another support person present.</td>
<td>The woman who has little or no support from significant others probably needs more intense nursing support during labor and after the birth. These clients are more likely to have problems with parent-infant attachment.</td>
</tr>
<tr>
<td>Preparation for childbirth: “Did you attend prepared childbirth classes?” “Did someone go with you?”</td>
<td>Ideally, the woman and a partner have had some preparation in classes or self-study. Women who attended classes during previous pregnancies do not always repeat the classes during subsequent pregnancies. Some women or couples have strong feelings regarding certain interventions. Common ones are (1) analgesia or anesthesia; (2) intravenous lines; (3) fetal monitoring; (4) use of episiotomy or forceps.</td>
<td>The unprepared woman may need more support with simple relaxation and breathing techniques during labor. Her partner may need to learn techniques to assist her.</td>
</tr>
<tr>
<td>Preferences: “Are there any special plans you have for this birth?” “Is there anything you want to avoid?” “Did you plan to record the birth with pictures or video?”</td>
<td>Women from Asian and Hispanic cultures may subscribe to the “hot-and-cold” theory of illness and want specific foods after birth, such as soft-boiled eggs. They may not want their water or other fluids iced.</td>
<td>Conflict may arise if the woman has not previously discussed her preferences with her physician or nurse-midwife or if she is unaware of what services are available where she gives birth.</td>
</tr>
<tr>
<td>Cultural needs: “Are there any special cultural practices that you plan when you have your baby?” “How can we best help you to fulfill these practices?”</td>
<td>This is usually the woman’s husband or the baby’s father, but it may be her mother, her sister, or a friend, especially if she is single.</td>
<td>Try to incorporate all positive or neutral cultural practices. If a practice is harmful, explain why and try to find a way to work around it if the family does not want to give it up.</td>
</tr>
</tbody>
</table>
TABLE 13-1 Intrapartum Assessment Guide—cont’d

<table>
<thead>
<tr>
<th>Assessment, Method (Selected Rationales)</th>
<th>Common Findings</th>
<th>Significant Findings, Nursing Action</th>
</tr>
</thead>
</table>
| **Fetal Evaluation**
  *Purpose:* To determine if the fetus seems to be healthy and tolerating labor well.
  *Fetal heart rate (FHR):* Assess by intermittent auscultation, or apply an external fetal monitor if that is the facility’s policy (most common in the United States). Document FHR according to the risk status and stage of labor (see Chapter 14).
  *Guidelines include:*
  - **Low risk:** q 1 h (latent phase), q 30 min (active phase), q 15 min (2nd stage).
  - **High risk:** q 30 min (latent phase), q 15 min (active phase), q 5 min (2nd stage).
  
  Average rate at term is 110-160 bpm. Rate usually increases when the fetus moves and is reassuring.
  
  These signs may indicate fetal stress and should be reported to the physician or nurse-midwife:
  - 1. Rate outside the normal limits
  - 2. Slowing of the rate that persists after the contraction ends
  - 3. No increase in rate when the fetus moves
  - 4. Irregular rhythm
  
  More frequent assessments should be made of the FHR and contractions if any finding is questionable.

| **Labor Status**
  *Purpose:* To identify whether the woman is in labor and if birth is imminent. If she displays signs of imminent birth, this assessment is done as soon as she is admitted.
  
  *Contractions (yields objective information about labor status):* In addition to asking the woman about her contraction pattern, assess the contractions by palpation with the fingertips of one hand. Contractions should be assessed each time the FHR is assessed.
  
  See interview section earlier in table.
  
  See interview section earlier in table. Women who have intense contractions or who are making rapid progress should be assessed more frequently.

| **Vaginal examination** (Determines cervical dilation and effacement; fetal presentation, position, and station; bloody show; and status of the membranes.)

  Varies according to the stage and phase of labor. It may not be possible to determine the fetal position by vaginal examination when membranes are intact and bulging over the presenting part.
  
  A vaginal examination is not performed if the woman reports or has evidence of active bleeding (not bloody show) and may not be done if her gestation is 36 weeks or less and she does not seem to be in active labor. Report reasons for omitting a vaginal examination to the physician or nurse-midwife.

  A greenish color indicates meconium staining, which may be associated with fetal compromise or postterm gestation. Thick meconium with heavy particulate matter (“pea soup”) is most significant (see Chapter 30). Thick green-black meconium may be passed by the fetus in a breech presentation and is not necessarily associated with fetal compromise. Cloudy, yellowish, strong-, or foul-smelling fluid suggests infection. Bloody fluid may indicate partial placental separation (see Chapter 25).

  A hard, round, freely movable object in the fundus suggests a fetal head, meaning the fetus is in a breech presentation. Less commonly, the fetus may be crosswise in the uterus: a transverse lie.

  Constant pain or a tender, rigid uterus suggests a complication, such as abruptio placenta (separated placenta) (see Chapter 25) or, less commonly, uterine rupture (see Chapter 27).

| **Status of membranes:** During a vaginal examination a flow of fluid suggests ruptured membranes. A nitrazine test and/or fern test may be done, often using a sterile speculum exam. (Test is not needed if it is obvious that the membranes have ruptured.)

  Amniotic fluid should be clear, possibly containing flecks of white vernix. Its odor is distinctive but not offensive. The nitrazine test with a color change of blue-green to dark blue (pH >6.5) suggests true rupture of the membranes but is not conclusive. The fern test is more diagnostic of true rupture of membranes because it is less likely to be affected by vaginal infections, recent intercourse, or other factors.

  A greenish color indicates meconium staining, which may be associated with fetal compromise or postterm gestation. Thick meconium with heavy particulate matter (“pea soup”) is most significant (see Chapter 30). Thick green-black meconium may be passed by the fetus in a breech presentation and is not necessarily associated with fetal compromise. Cloudy, yellowish, strong-, or foul-smelling fluid suggests infection. Bloody fluid may indicate partial placental separation (see Chapter 25).

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  Constant pain or a tender, rigid uterus suggests a complication, such as abruptio placenta (separated placenta) (see Chapter 25) or, less commonly, uterine rupture (see Chapter 27).

| **Leopold’s maneuvers:** Often done before assessing the FHR to locate the best place for assessment. (Identifies fetal presentation and position. Most accurate when combined with information from vaginal examination.)

  A cephalic presentation with the head well flexed (vertex) is normal. The fetal head is often easily displaced upward (“floating”) if the woman is not in labor. When the head is engaged, it cannot be displaced upward with Leopold’s maneuvers.

  There may be verbal or nonverbal evidence of pain with contractions, but the woman should be relatively comfortable between contractions. The skin around the umbilicus is often sensitive.

| **Pain:** Note discomfort during and between contractions. Note tenderness when palpating contractions. (Distinguishes between normal labor pain and abnormal pain that may be associated with a complication.)

  A hard, round, freely movable object in the fundus suggests a fetal head, meaning the fetus is in a breech presentation. Less commonly, the fetus may be crosswise in the uterus: a transverse lie.

  Constant pain or a tender, rigid uterus suggests a complication, such as abruptio placenta (separated placenta) (see Chapter 25) or, less commonly, uterine rupture (see Chapter 27).

| **Physical Examination**
  *Purpose:* To evaluate the woman’s general health and identify conditions that may affect her intrapartum and postpartum care.
TABLE 13-1 Intrapartum Assessment Guide—cont’d

<table>
<thead>
<tr>
<th>Assessment, Method (Selected Rationales)</th>
<th>Common Findings</th>
<th>Significant Findings, Nursing Action</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical Examination—cont’d</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>General appearance:</strong> Observe skin color and texture, nutritional state, and appearance of rest or fatigue. Examine the woman’s face, fingers, and lower extremities for edema. Ask her if she can take her rings off and put them on.</td>
<td>Women are often fatigued if their sleep has been interrupted by Braxton Hicks contractions, fetal activity, or frequent urination. Mild edema of the lower extremities is common in late pregnancy.</td>
<td>Pallor suggests anemia. Substantial edema of the face and fingers or extreme (pitting) edema of the lower extremities is associated with preclampsia although it may occur in the absence of this hypertensive disorder (see Chapter 25). Report abnormalities to physician or nurse-midwife. Temperature of 38°C (100.4°F) or higher suggests infection. Pulse and respirations may also be elevated. Pulse and blood pressure may be elevated if the woman is extremely anxious or in pain. A blood pressure ≥140 mm Hg or ≥90 mm Hg diastolic or higher is considered hypertensive. For women who did not have prenatal care, there is no baseline for comparison.</td>
</tr>
<tr>
<td><strong>Vital signs:</strong> Take the woman’s temperature, pulse, respirations, and blood pressure. Reassess the temperature every 4 hr (every 2 hr after membranes rupture or if elevated); reassess blood pressure, pulse, and respirations every hour.</td>
<td>Temperature: 35.8°–37.3°C (96.4°–99.1°F). Pulse: 60–100/min. Respirations: 12–20/min, even and unlabored. Blood pressure near baseline levels established during pregnancy. Transient elevations of blood pressure are common when the woman is first admitted, but they return to baseline levels within about 1/2 hr.</td>
<td>The woman who is breathing rapidly and deeply may have symptoms of hyperventilation: tingling and spasm of the fingers, numbness around the lips. Report a dominant mass to the physician or nurse-midwife.</td>
</tr>
<tr>
<td><strong>Heart and lung sounds:</strong> Auscultate all areas with a stethoscope.</td>
<td>Heart sounds should be clear with a distinct S1 and S2. A physiologic murmur is common because of the increased blood volume and cardiac output. Breath sounds should be clear, with respirations even and unlabored.</td>
<td>Report a previous cesarean birth to the physician or nurse-midwife. Transverse uterine scars are least likely to rupture if the woman is in labor (see Chapter 27). Measure the fundal height (see p. 132) if the fetus seems small or if the gestation is questionable. Report absent (uncommon unless the woman is receiving magnesium sulfate) or hyperactive reflexes. Hyperactive reflexes and clonus (repeated tapping when the foot is dorsiflexed) are associated with pregnancy-induced hypertension and often precede a seizure (see Chapter 25).</td>
</tr>
<tr>
<td><strong>Breasts:</strong> Palpate for a dominant mass.</td>
<td>Breasts are full and nodular. Areola is darker, especially in dark-skinned women. Breasts may leak colostrum (clear, sticky, straw-colored fluid) during labor.</td>
<td>Proteinuria is associated with pregnancy-induced hypertension but may also be associated with urinary tract infections or a specimen that is contaminated with vaginal secretions. Glucosuria is associated with diabetes. Ketonuria is common in poorly controlled diabetes or if the woman does not eat adequate carbohydrates to meet her energy needs.</td>
</tr>
<tr>
<td><strong>Abdomen:</strong> Observe for scars at the same time Leopold’s maneuvers and the FHR are assessed. It is usually sufficient to assess the fundal height by observing its relation to the xiphoid process.</td>
<td>Striae (stretch marks) are common. If scars are noted, ask the woman what surgery she had and when. The fundus at term is usually slightly below the xiphoid process but varies with maternal height and fetal size and number.</td>
<td>Report a positive test indicates that the baby could be infected and needs treatment after birth. The mother should be treated if she has not been treated already.</td>
</tr>
<tr>
<td><strong>Deep tendon reflexes:</strong> Assess patellar reflex (see Chapter 25). Upper extremity deep tendon reflexes should be used if epidural block analgesia is planned because they are normally not as strong as the patellar reflex.</td>
<td>A brisk jerk without spasm or sustained muscle contraction is normal. Some women normally have hypoactive reflexes, but at least a slight twitch is expected. Obese women may appear to have diminished reflexes because of the fat tissue over the tendon.</td>
<td></td>
</tr>
<tr>
<td><strong>Midstream urine specimen:</strong> Assess protein and glucose levels with a dipstick. Follow instructions on the package for waiting times. Check for ketones if the woman has not eaten for a prolonged period or has been vomiting. Send for urinalysis if ordered.</td>
<td>Negative or trace of protein; negative glucose and ketones.</td>
<td></td>
</tr>
<tr>
<td><strong>Laboratory tests:</strong> Women who have had prenatal care may not need as many admission tests. Common tests include: 1. Complete blood cell count (or hematocrit done on unit). 2. Blood type and Rh factor. 3. Serologic tests for syphilis.</td>
<td>1. Hemoglobin at least 11 g/dl; hematocrit at least 33%. 2. The woman who is Rh-negative receives Rh immune globulin at 28 weeks’ gestation to prevent formation of anti-Rh antibodies if she has regular prenatal care. 3. Negative.</td>
<td>1. Values lower than these reduce maternal reserve for normal blood loss at birth. 2. Rh-negative mothers need Rh immune globulin after birth if the infant is Rh-positive. 3. A positive test indicates that the baby could be infected and needs treatment after birth. The mother should be treated if she has not been treated already.</td>
</tr>
</tbody>
</table>
CRITICAL THINKING Exercise 13-1

During a labor admission assessment, a woman quickly denies her use of drugs and herbal preparations other than her prescribed prenatal vitamins. She becomes quiet, answering the nurse’s questions in a terse manner.

Questions
What might explain the woman’s change in behavior? Should the nurse alter the assessment interview?

DATABASE ASSESSMENT. In addition to performing the focused assessment, the nurse should assess the mother, fetus, and available maternal support persons.

Basic Information. Intrapartum admission forms guide the nurse to obtain required information. Typical information includes the following:
- The woman’s reason for coming to the hospital or birth center (such as contractions, rupture of membranes)
- Prenatal care: when it began, her most recent visit, and her physician or nurse-midwife’s name
- Estimated date of delivery (EDD)
- Number of pregnancies, births, spontaneous pregnancy losses, and abortions
- Allergies: medications, food, other substances such as latex
- Food intake: what food and when it was eaten
- Medical, surgical, and pregnancy history
- Recent illness, including treatment
- Medications, including prescription and over-the-counter drugs, tobacco, alcohol and other substances of abuse
- Complementary or alternative therapy; use of herbal and botanical preparations and their purpose
- Use of tobacco, alcohol, and illicit substances
- Her subjective evaluation of her labor
- Birth plans, including planned pain management methods
- Support persons: who they are and the role of each
- Potential domestic violence (ask only when the woman is alone)

Women often bring several people with them to the birthing room and want them to stay during admission. However, be careful about asking for sensitive information, such as prior pregnancies and births and potential abuse, when others are present. A woman may have had an abortion or relinquished a baby for adoption, and her family may not know about it. Even if her partner knows about previous pregnancies, her family or friends may not. Asking about domestic violence when the abuser is present will result in a quick denial and can be dangerous for the woman. Delay asking sensitive information until the woman is alone for confidentiality, safety, and accuracy.

Fetal Assessments. The fetal presentation and position are assessed using a combination of vaginal examination and Leopold’s maneuvers (Figure 13-1 and Procedure 13-1). The FHR is assessed by intermittent auscultation and electronic monitoring (see Chapter 14). The nurse documents the color and odor of the amniotic fluid and the time of rupture if the membranes ruptured before admission.

Labor Status. The woman’s labor status is determined by assessing her contraction pattern, performing vaginal examination if there are no contractions, and determining whether her membranes have ruptured. Contractions are assessed by palpation (Procedure 13-2), the fetal monitor, or both. Cervical dilation and effacement and the fetal station, presentation, and position are evaluated by vaginal examination. The vaginal examination may also reveal whether the membranes have ruptured if fluid is not obviously leaking from the vagina. Vaginal examination is not performed if the woman has active bleeding (other than bloody show) because the procedure can increase bleeding.

Physical Examination. A brief physical examination evaluates the woman’s overall health. Other important observations relating to birth include the presence and location of edema, abdominal scars, and height of the fundus.

CHECK YOUR READING

6. Which tests may be done if the nurse is not certain whether the woman’s membranes have ruptured? (See Table 13-1.)
7. Which characteristics of contractions may reduce blood flow to the placenta? (See Procedure 13-2.)

USING ADMISSION PROCEDURES

NOTIFYING THE BIRTH ATTENDANT. After assessment the nurse notifies the woman’s birth attendant to report the woman’s status and obtain orders. The nurse includes the following data in the report:
- Gravidity, parity, abortions, and term and preterm births
- EDB and fundal height if it conflicts with the EDB
- Contraction pattern
- Results of vaginal examination
- Cervical dilation and effacement
- Fetal presentation and position
- Station of the presenting part
- Fetal heart rate and pattern
- Maternal vital signs
- Any identified abnormalities and concerns about the maternal or fetal condition
- Pain, anxiety, or other reactions to labor

If the birth attendant admits the woman, any of several procedures may be performed.

CONSENT FORMS. The woman signs consent for care during labor, such as anesthesia, vaginal birth and/or cesarean birth, blood transfusion, testing for human immunodeficiency virus (HIV). A separate consent for tubal ligation must be signed by the woman if she desires permanent sterilization at the time of birth. Consent for newborn care and circumcision of male infants is often completed at this time.

Text continued on page 280
<table>
<thead>
<tr>
<th>NANDA Problem Number</th>
<th>PREADMIT</th>
<th>ADMISSION</th>
<th>LATENT PHASE (0-4 cm)</th>
</tr>
</thead>
</table>
| IV 5, 8, 9, 16 I 5, 6 | Assessments High risk screening with referrals prn:  
- MFM  
- Homecare  
- Genetic Counsel  
- Social Services | T, P, R, BP  
Deep tendon reflexes / clonus  
Labor status:  
- admit for labor per protocol:  
CRITERIA FOR LABOR:  
1. complete effacement; or 2 cm in nullipara  
2. cervical change  
3. rupture of membranes ≥ labor  
4. contractions at least 5 min apart  
- cervix: sterile vaginal exam unless contraindicated  
- uterine activity (toco/palpation)  
- membrane status, color, amount, odor of fluid  
Fetus:  
- presentation (ultrasound prn)  
- FHR: 20 min or electronic fetal monitoring strip (continue electronic fetal monitoring if non-reassuring pattern)  
Urine – dip for protein & ketones  
Level of childbirth preparation  
Family interaction  
Beta-strep risk factors  
- preterm labor  
- rupture of membranes < 37 wk  
- previous baby ≥ Beta-strep | P, R, BP q 1 hr  
T q 2 hr if rupture of membranes, q 4 hr if bag of waters intact  
BP, P q 15 min if epidural anesthetic  
Bladder status q 2 hr  
Urine protein/ketones dip-stick prn  
Deep tendon reflexes/clonus prn  
Fetal monitoring: electronic fetal monitor or electronic fetal monitoring while in bed or intermittent auscultation  
Labor status:  
- frequency, duration, strength, resting tone of contractions q 1 hr by toco/palpation or intrauterine pressure catheter  
- membrane status: color, amount and odor of fluid  
- sterile vaginal exam prn & prior to meds as indicated  
Fetus:  
- low risk: FHR q 30 min  
- high risk: FHR q 15 min  
In and out catheterization |
| IV 5, 6 | Procedures/Tests CBC, VDRL, ABO-Rh stat on admission  
HBSAG if not on prenatal record | Initiate Labor Curve  
Initiate "Active Management of Labor Protocol" if criteria are met.  
Notify Special Care Nursery of potential problems. |  
If intrauterine pressure catheter labor pattern shows > 250 Montevideo unit  
verified |
| VI 3 XI 5 | Medication | PAIN CONTROL:  
Parenteral analgesia as ordered.  
(Consider Stadol or Nubain).  
If inadequate pain control, anesthesia consult, re-evaluate for epidural  
Narcotic epidural  
Anesthetic epidural | Consider amniotomy for prolonged latent phase.  
Consider use of intrauterine pressure catheter if inadequate cervical change. |
| | Signatures / /  
/ /  
/ / | / /  
/ /  
/ / | / /  
/ /  
/ / |

**Figure 13-1** Care path for stages 1 and 2 of labor.

**BAYLOR UNIVERSITY MEDICAL CENTER**  
**DALLAS, TEXAS**  
**CARE PATH FOR STAGES OF LABOR 1 & 2**  
**PAGE 1 OF 4**
### CARE PATH FOR STAGES OF LABOR 1 & 2

<table>
<thead>
<tr>
<th>NANDA Problem Number</th>
<th>PREADMIT</th>
<th>ADMISSION</th>
<th>LATENT PHASE (0-4 cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>III 11</td>
<td>Elimination</td>
<td></td>
<td>Encourage voiding q 2-3 hr In and out catheterization if unable to void &amp; bladder is distended Bladder remains nondistended</td>
</tr>
<tr>
<td>IV 7</td>
<td>Nutrition Hydration</td>
<td>Clear liquids/ice chips, hard candy if desired</td>
<td>Clear liquids/ice chips, hard candy if desired IV fluids prn and as ordered for T &gt; 101 on 2 consecutive readings (notify attending MD) IV (18G) or heplock if VBAC Hydration status will be maintained</td>
</tr>
<tr>
<td>IV 11</td>
<td>Activity</td>
<td></td>
<td>Bag of waters intact or rupture of membranes with presenting part engaged; encourage up ad lib; chair prn Ambulates frequently</td>
</tr>
<tr>
<td>VI 2, 5, 6</td>
<td>PT/Family Education</td>
<td>At 1st OB appt, give info on: Labor warnings Kick counts Prepared childbirth classes Optional classes: VBAC Baby care Breastfeeding Advise in selection of a pediatrician Goal: By 28 wks, pt identifies when to call the doctor &amp; describes when &amp; how to do kick counts</td>
<td>Ambulation &amp; position changes Electronic Fetal Monitor Breathing &amp; Relaxation (B &amp; R) techniques Analgesia &amp; Anesthesia (A &amp; A) options Labor progress &amp; expectations</td>
</tr>
<tr>
<td>VIII 7, 8</td>
<td>Psycho Social Emotional</td>
<td>Support person identified</td>
<td>Support person identified</td>
</tr>
</tbody>
</table>

**Signatures**
Initials for these signatures will be found throughout the care path.

**Figure 13-1, cont’d** For legend see opposite page.
### CARE PATH FOR STAGES OF LABOR 1 & 2

<table>
<thead>
<tr>
<th>NANDA Problem Number</th>
<th>ACTIVE PHASE (4-10 cm)</th>
<th>SECOND STAGE (10 cm – Delivery)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>LOCATION</strong></td>
<td><strong>MED REC NO. ______________________________________</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Assessments</strong></td>
<td><strong>PATIENT ______________________________________</strong></td>
</tr>
<tr>
<td>IV 5, 8, 9, 16</td>
<td>T, q 4° if bag of waters intact; q 2° if rupture of membranes</td>
<td><strong>PHYSICIAN ______________________________________</strong></td>
</tr>
<tr>
<td></td>
<td>BP, P, R, q 1 hr</td>
<td><strong>FIGURE 13-1, cont’d  Care paths for stages 1 and 2 of labor.</strong></td>
</tr>
<tr>
<td></td>
<td>BP, P q 15 min if epidural anesthetic</td>
<td><strong>BAYLOR UNIVERSITY MEDICAL CENTER</strong></td>
</tr>
<tr>
<td></td>
<td>Bladder status q 2 hr</td>
<td><strong>DALLAS, TEXAS</strong></td>
</tr>
<tr>
<td></td>
<td>Urine protein/ketones dipstick prn</td>
<td><strong>CARE PATH FOR STAGES OF LABOR 1 &amp; 2</strong></td>
</tr>
<tr>
<td></td>
<td>Deep tendon reflexes/clonus prn</td>
<td><strong>PAGE 3 OF 4</strong></td>
</tr>
<tr>
<td></td>
<td>Fetal monitoring: electronic fetal monitoring while in bed, or intermittent auscultation</td>
<td><strong>BAYLOR UNIVERSITY MEDICAL CENTER</strong></td>
</tr>
<tr>
<td></td>
<td>Labor status:</td>
<td><strong>DALLAS, TEXAS</strong></td>
</tr>
<tr>
<td></td>
<td>– frequency, duration, strength, resting tone of contraction q 1 hr by toco/palpation or intrauterine pressure catheter</td>
<td><strong>CARE PATH FOR STAGES OF LABOR 1 &amp; 2</strong></td>
</tr>
<tr>
<td></td>
<td>– membrane status; color, amount and odor of fluid</td>
<td><strong>PAGE 3 OF 4</strong></td>
</tr>
<tr>
<td></td>
<td>– sterile vaginal exam prn &amp; prior to meds</td>
<td><strong>BAYLOR UNIVERSITY MEDICAL CENTER</strong></td>
</tr>
<tr>
<td></td>
<td>Fetuses:</td>
<td><strong>DALLAS, TEXAS</strong></td>
</tr>
<tr>
<td></td>
<td>– low risk: FHR q 30 min</td>
<td><strong>CARE PATH FOR STAGES OF LABOR 1 &amp; 2</strong></td>
</tr>
<tr>
<td></td>
<td>– high risk: FHR q 15 min</td>
<td><strong>PAGE 3 OF 4</strong></td>
</tr>
<tr>
<td></td>
<td>In and out catheterization</td>
<td><strong>BAYLOR UNIVERSITY MEDICAL CENTER</strong></td>
</tr>
<tr>
<td></td>
<td><strong>If intrauterine pressure catheter, labor pattern shows &gt; 250 Montevideo units</strong></td>
<td><strong>DALLAS, TEXAS</strong></td>
</tr>
<tr>
<td></td>
<td>verified</td>
<td><strong>CARE PATH FOR STAGES OF LABOR 1 &amp; 2</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Cervix changes at a rate of &gt; 1.2 cm/hr for nullips; &gt; 1.5 cm/hr for multips</strong></td>
<td><strong>PAGE 3 OF 4</strong></td>
</tr>
<tr>
<td></td>
<td>verified</td>
<td><strong>BAYLOR UNIVERSITY MEDICAL CENTER</strong></td>
</tr>
<tr>
<td></td>
<td><strong>IV 5, 6 Procedures / Tests</strong></td>
<td><strong>DALLAS, TEXAS</strong></td>
</tr>
<tr>
<td></td>
<td>Plot cervical dilation q 2 hours or per exam</td>
<td><strong>CARE PATH FOR STAGES OF LABOR 1 &amp; 2</strong></td>
</tr>
<tr>
<td></td>
<td>Consider use of intrauterine pressure catheter if inadequate cervical change</td>
<td><strong>PAGE 3 OF 4</strong></td>
</tr>
<tr>
<td></td>
<td><strong>VI 3 XI 5 Medications</strong></td>
<td><strong>BAYLOR UNIVERSITY MEDICAL CENTER</strong></td>
</tr>
<tr>
<td></td>
<td>PAIN CONTROL:</td>
<td><strong>DALLAS, TEXAS</strong></td>
</tr>
<tr>
<td></td>
<td>Parenteral analgesics as ordered. (Consider Stadol or Nubain). Anesthesia consult; epidural prn</td>
<td><strong>CARE PATH FOR STAGES OF LABOR 1 &amp; 2</strong></td>
</tr>
<tr>
<td></td>
<td>Oxytocin augmentation, if indicated per protocol</td>
<td><strong>PAGE 3 OF 4</strong></td>
</tr>
<tr>
<td></td>
<td>If rupture of membranes &gt; 24 hr antibiotics as ordered</td>
<td><strong>BAYLOR UNIVERSITY MEDICAL CENTER</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Maintains control; utilizes B &amp; R techniques prn</strong></td>
<td><strong>DALLAS, TEXAS</strong></td>
</tr>
<tr>
<td></td>
<td>verified</td>
<td><strong>CARE PATH FOR STAGES OF LABOR 1 &amp; 2</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Maintains control; utilizes B &amp; R techniques prn</strong></td>
<td><strong>PAGE 3 OF 4</strong></td>
</tr>
<tr>
<td></td>
<td>verified</td>
<td><strong>BAYLOR UNIVERSITY MEDICAL CENTER</strong></td>
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<td><strong>DALLAS, TEXAS</strong></td>
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<td>/</td>
<td><strong>CARE PATH FOR STAGES OF LABOR 1 &amp; 2</strong></td>
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<td></td>
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<td><strong>BAYLOR UNIVERSITY MEDICAL CENTER</strong></td>
</tr>
</tbody>
</table>
## ACTIVE PHASE (4-10 cm) vs SECOND STAGE

<table>
<thead>
<tr>
<th>NANDA Problem Number</th>
<th>LOCATION</th>
<th>ACTIVE PHASE</th>
<th>SECOND STAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>III II</td>
<td>Elimination</td>
<td>Encourage voiding q 2-3 hr</td>
<td>Encourage voiding q 2-3 hr</td>
</tr>
<tr>
<td></td>
<td></td>
<td>In and out catheterization if unable to void &amp; bladder is distended</td>
<td>In and out catheterization if unable to void &amp; bladder is distended</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bladder remains nondistended</td>
<td>Bladder remains nondistended</td>
</tr>
<tr>
<td>II 7</td>
<td>Nutrition Hydration</td>
<td>Clear liquids/ice chips</td>
<td>Clear liquids/ice chips</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IV fluids prn and as ordered for T &gt; 101 on 2 consecutive readings (notify attending MD)</td>
<td>IV fluids prn and as ordered for T &gt; 101 on 2 consecutive readings (notify attending MD)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IV (18G) or heplock if VBAC</td>
<td>IV (18G) or heplock if VBAC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hydration status will be maintained</td>
<td>Hydration status will be maintained</td>
</tr>
<tr>
<td>IV 11</td>
<td>Activity</td>
<td>Bag of waters intact or rupture of membranes with presenting part engaged: encourage up ad lib; chair prn</td>
<td>Facilitate frequent position changes (q 1-2 hr) while in bed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Facilitate frequent position changes (q 1-2 hr) while in bed</td>
<td></td>
</tr>
<tr>
<td>VI 2, 5, 6</td>
<td>PT/Family Education</td>
<td>Support person identified</td>
<td>Support person identified</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Support person identified</td>
<td>Support person identified</td>
</tr>
</tbody>
</table>

### Signatures

MED REC NO. __________________________
PATIENT __________________________
PHYSICIAN __________________________
BILLING NO. __________________________

**BAYLOR UNIVERSITY MEDICAL CENTER**
DALLAS, TEXAS
CARE PATH FOR STAGES OF LABOR 1 & 2
PAGE 4 OF 4

*Figure 13-1, cont’d*  For legend see opposite page.
LABORATORY TESTS. Women who had regular prenatal care need laboratory tests only for specific indications, whereas those who did not have prenatal care need more extensive laboratory tests. Simple tests that are often performed on the unit include the following:

- Hematocrit obtained by finger stick
- Midstream urine specimen to assess protein and glucose levels—usually obtained before notifying the birth attendant

INTRAVENOUS ACCESS. If used, intravenous (IV) access is started with at least an 18-gauge catheter. A saline lock may be used, or the woman may receive continuous infusion of fluids. The lock eases walking during early labor but provides quick access if fluids or drugs are needed. Continuous fluid infusion prevents and relieves dehydration and is necessary if epidural block analgesia is used. IV solutions containing electrolytes, such as lactated Ringer’s solution, are most common.

PROCEDURE

1. Explain the procedure to the woman and the rationale for each step as it is performed. Tell her what is found at each step. Gives information, teaches the woman, and reassures her when the assessment findings are normal.

2. Ask the woman to empty her bladder if she has not done so recently. Have her lie on her back with her knees flexed slightly. Place a small pillow or folded towel under one hip. Decreases discomfort of a full bladder during palpation and improves ability to feel fetal parts in the suprapubic area. Knee flexion helps the woman relax her abdominal muscles to enhance palpation. Uterine displacement prevents aortocaval compression, which could reduce blood flow to the placenta.

3. Wash your hands with warm water. Wear gloves if contact with secretions is likely. Prevents transmission of microorganisms. Warm hands are more comfortable during palpation and prevent tensing of abdominal muscles.

4. Stand beside the woman, facing her head, with your dominant hand nearest her. The first three maneuvers are most easily performed in this position.

FIRST MANEUVER

5. Palpate the uterine fundus. The breech (buttocks) is softer and more irregular in shape than the head. Moving the breech also moves the fetal trunk. The head is harder and has a round, uniform shape. The head can be moved without moving the entire fetal trunk. Distinguishes between a cephalic and breech presentation. If the fetus is in a cephalic presentation, the breech is felt in the fundus. If the presentation is breech, the head is felt in the fundus.

SECOND MANEUVER

6. Hold the left hand steady on one side of the uterus while palpating the opposite side of the uterus with the right hand. Then hold the right hand steady while palpating the opposite side of the uterus with the left hand. The fetal back is a smooth, convex surface. The fetal arms and legs feel nodular, and the fetus often moves them during palpation. Determines on which side of the uterus is the back and on which side are the fetal arms and legs ("small parts").
Other procedures are no longer common but are occasionally indicated:

- Perineal preparation—Hair in the immediate area of an episiotomy may be removed by shaving or clipping the hair near the skin with a shaver or disposable scissors. This judgment may not be made until near vaginal delivery.
- Enema—A small-volume enema (such as Fleet enema) may be given if stool in the rectum causes the woman discomfort or would interfere with fetal descent. Extra lubricant on the enema tip reduces discomfort from hemorrhoids.

**MAKING ASSESSMENTS AFTER ADMISSION**

The woman is usually observed if whether she is in true labor is unclear after the initial assessment. After 1 or 2 hours, progressive cervical change (effacement, dilation, or both) strongly suggests true labor. The woman and fetus are assessed during the observation period as if in early labor.

After the admission assessment the woman and fetus need regular assessments based on their risk status and whether they have interventions such as oxytocin stimulation or epidural analgesia. General guidelines for continuing assessments are listed here.

**FETAL ASSESSMENTS.** Fetal assessments are performed to identify signs of well-being and those that suggest compromise. The principal fetal assessments include the FHR and patterns and character of the amniotic fluid. Abnormalities revealed in these assessments may be associated with impaired fetal gas exchange and infection.

**Fetal Heart Rate.** The FHR is assessed using either intermittent auscultation or electronic fetal monitoring. Frequency of assessment and documentation depends on the risk status of the mother and fetus.

**Amniotic Fluid.** A spontaneous rupture of membranes (SROM) may occur, or the birth attendant may perform an amniotomy. The FHR is assessed for at least 1 minute when the membranes rupture. The umbilical cord could be dis-
PROCEDURE

13-2 Palpating Contractions

PURPOSE: To determine whether a contraction pattern is typical of true labor; to identify abnormal contractions that may jeopardize the health of the mother or fetus

1. Assess at least three contractions in a row at the time the fetal heart rate (FHR) is checked. Guidelines for minimal frequency of assessments are therefore:
   a. Hourly during latent phase
   b. Every 30 minutes during active phase and transition
   c. Every 15 minutes during second stage
   Assess more frequently if abnormalities are identified. Assessment of at least three sequential contractions permits better evaluation of the pattern. Palpate contractions periodically when an external fetal monitor is used because it is less accurate for intensity as a result of thickness of the abdominal fat pad, maternal position, and fetal position.

2. Place fingertips of one hand on the uterine fundus, using light pressure. Keep fingertips relatively still rather than moving them over the uterus. The fingertips are more sensitive to the first tightening of the uterus. Contractions usually begin in the fundus, although the mother usually feels them in her lower abdomen and back. Constant moving of the hand over the uterus may stimulate contractions and give an inaccurate assessment of their true pattern.

3. Note the time when each contraction begins and ends.
   a. Determine frequency by noting the average time that elapses from the beginning of one contraction to the beginning of the next one.
   b. Determine duration by noting the average time in seconds from the beginning to the end of each contraction.
   c. Determine interval by noting the average time between the end of one contraction and the beginning of the next one. Contractions are expected to increase in frequency, duration, and intensity as labor progresses. False labor is usually characterized by contractions that are irregular and do not increase in frequency, duration, and intensity.

4. Estimate the average intensity of contractions by noting how easily the uterus can be indented during the peak of the contraction:
   a. With mild contractions the uterus can be easily indented with the fingertips. They feel similar to the tip of the nose.
   b. With moderate contractions the uterus can be indented with more difficulty. They feel similar to the chin.
   c. With firm contractions the uterus feels “woody” and cannot be readily indented. The contractions feel similar to the forehead. Contractions during labor are expected to intensify progressively. If they do not the woman may not be in true labor or she may be experiencing dysfunctional labor (see Chapter 27).

5. Report hypertonic contractions:
   a. Occurring less than 2 minutes apart and no more than 5 contractions in 10 minutes
   b. Durations longer than 90 to 120 seconds
   c. Intervals shorter than 30 seconds
   d. Incomplete relaxation of the uterus between contractions

Hypertonic contractions reduce placental blood flow by prolonged compression of the vessels that supply the intervillous spaces.

Quantity should be described in approximate terms; for example, at term, a “large” amount is more than 1000 ml, a “moderate” amount is about 500 to 1000 ml, and “scant” amniotic fluid is a trickle, barely enough to detect. If the fetus is well down into the pelvis when the membranes rupture, a small amount of fluid in front of the fetal head may be discharged (forewaters), with the rest lost at birth.

MATERNAL ASSESSMENTS. Several maternal assessments also relate to the health of the fetus, such as vital signs and contractions.

Vital Signs. Abnormalities should be reported and the assessment frequency increased (see Table 13-1).

Contractions. Contractions can be assessed by palpation or with the electronic fetal monitor.

Progress of Labor. A vaginal examination is done periodically to determine cervical dilation and effacement and fetal descent (Figure 13-2). The frequency of vaginal examinations depends on the woman’s parity, status of her membranes, and overall speed of her labor. Vaginal examinations are limited to avoid the introduction of microorganisms from the perineal area into the uterus.

CRITICAL THINKING  EXERCISE 13-2

Chloe Green is in labor with her second baby. The baby is in a left occiput anterior (LOA) position, and Chloe’s cervix is 5 cm dilated and completely effaced. Her membranes rupture at the end of a strong contraction. You note that the fluid is green and watery.

Question
What nursing actions are most important at this time? Why?
PURPOSES
To determine whether membranes have ruptured.
To determine cervical effacement and dilation.
To determine fetal presentation, position, and station.

METHOD
Vaginal examination is not performed by the inexperienced nurse except when training for graduate nursing practice in the intrapartum area.

EQUIPMENT
Sterile gloves, sterile lubricant. If nitrazine paper is being used to test for ruptured membranes, lubricant is not used to avoid altering the test paper.

HAND POSITION

The nurse usually uses the index and middle fingers of the dominant hand for vaginal examination. The thumb and other fingers are kept out of the way to avoid carrying microorganisms into the vagina.

DETERMINING WHETHER MEMBRANES HAVE RUPTURED
Intact membranes feel like a slippery membrane over the fetal presenting part. No leakage of amniotic fluid can be detected.

Bulging membranes feel like a slippery, fluid-filled balloon over the presenting part. It may be difficult to feel the presenting part clearly if the membranes are bulging tensely.

Ruptured membranes show drainage of fluid from the vagina as the nurse manipulates the cervix and presenting part.

DETERMINING CERVICAL EFFACEMENT AND DILATION

The nurse determines effacement by estimating the thickness of the cervix. The uneffaced cervix is about 2 cm long. If it is 50% effaced, it is about 1 cm long. Effacement is expressed as a percentage (0% to 100%), or it may be described as the length in centimeters.

Dilation is determined by sweeping the fingertips across the cervical opening. The average woman’s index finger is about 1.5 cm in diameter.

DETERMINING THE PRESENTING PART
The fetal skull feels smooth, hard, and rounded in a cephalic presentation. The fetal buttocks are softer and more irregular in a breech presentation. If the membranes are ruptured, the fetus in a breech presentation may expel thick, green-black meconium. (Presence of meconium in a breech presentation is not necessarily a sign of fetal compromise. The nurse must evaluate other signs of fetal condition.)

DETERMINING THE FETAL POSITION

In a cephalic presentation, the nurse feels for the distinctive features of the fetal skull. The posterior fontanel is usually felt in a vertex presentation and is triangular with three suture lines (two lambdoid and one sagittal) leading into it. The anterior fontanel is not felt unless the head is poorly flexed or is in the mechanism of extension in late labor. It feels like a diamond-shaped depression with four suture lines (one frontal, two coronal, and one sagittal) leading into it.

DETERMINING THE STATION

Findings of the vaginal examination may be recorded on a labor flow sheet, narrative, or a graph. The graph may be termed a Friedman curve, a partogram, or a labor curve.

Figure 13-2  ■ Vaginal examination during labor.
Intake and Output. Oral and IV intake and each voiding are recorded. Labor may reduce a woman’s urge to void, so her suprapubic area should be checked every 2 hours or more frequently to identify bladder distention if she has received large quantities of IV fluids.

Pressure of the fetal head on the rectum in late labor makes many women feel the need to defecate. The nurse should look at the perineum for crowning of the fetal head if the woman suddenly expresses a strong need to defecate during a contraction.

Response to Labor. The woman’s behavioral responses change as labor intensifies, especially if she has not had epidural analgesia. She withdraws from interactions but needs more nursing presence and reassurance. She may become more anxious because of pain and fear of bodily injury, unknown outcome, loss of control, unresolved psychological issues that influence her readiness to give birth (such as sexual abuse, previous birth experiences), and unexpected occurrences during labor.

Women vary in their ability to handle the pain of labor. The nurse constantly must assess whether additional pain control measures are needed. Behaviors that suggest the woman may want help with pain management include the following:

- Specific requests for medication and other pain control measures such as epidural analgesia (see Chapter 15)
- Statements that nonpharmacologic measures are ineffective
- Tension of her muscles and arching of her back during contractions
- Persistence of muscle tension between contractions
- A tense facial expression, rolling in the bed
- Expressions such as “I can’t take it anymore”

THE SUPPORT PERSON’S RESPONSE. Labor is stressful for the woman’s support person, who often is the baby’s father. He may become anxious, fearful, or tired. He feels a responsibility to protect and support the woman but may have limited resources for doing so. Watching the woman he loves in pain is difficult, even if the pain is normal. He may respond to stress in many ways, including being quiet, suffering silently, or reacting with pacing and anger. Some fathers respond by leaving the room frequently or for long periods, whereas others resist even short breaks.

Nurses encourage and value the father’s presence during labor and birth. However, this may conflict with a couple’s cultural norms dictating that birth is a strictly female activity. The father may be pulled in two directions, wanting to be included but hesitant because men in his culture are not customarily involved with birth. The nurse should respect the values of each couple and their wishes about father involvement.

The support person also may be a parent or another relative, a friend of either gender, or a homosexual partner. The nurse must remember that anyone who assists the woman during labor may have feelings of anxiety and helplessness at times. Reassurance and care for the labor partner strengthen the person’s ability to support the woman and enhance the likelihood that both will view the birth experience as positive.

CHECK YOUR READING

1. What observations suggest that the woman may need additional help with pain management during labor?
2. What is the routine frequency for FHR assessment in uncomplicated labor? Why should the FHR be assessed after the membranes rupture?
3. What is the significance of greenish amniotic fluid? Of cloudy, yellowish, or foul-smelling amniotic fluid?
4. Why are frequent vaginal examinations undesirable during labor?
5. What observations suggest that the woman may need additional help with pain management during labor?

Application of the Nursing Process
False or Early Labor

Assessment

After observation, the nurse may realize that the woman is not in true labor. If findings are normal and the woman’s membranes are intact, she is usually discharged. The woman who is in very early labor may be discharged to await active labor, especially if she is a nullipara and lives nearby.

Analysis

A woman may be frustrated because she cannot tell whether labor is real. She may resist returning to the birth center, possibly causing needless delay of care. She often is tired of being pregnant and just wants it to be over. A nursing diagnosis applicable to many women with false labor contractions is “Deficient Knowledge: Characteristics of True Labor.”

Planning

An expected outcome for this nursing diagnosis is that before discharge, the woman and her support person will describe reasons for returning to the birth center for evaluation.

Interventions

PROVIDING REASSURANCE

A woman sent home after observation may feel foolish and frustrated. She may want to have labor induced to “get it over.” Reassure her that even professionals cannot always identify true labor and false labor. Also, tell her that important preparations occur during late pregnancy, such as softening of the cervix, even if obvious progress like cervical dilation has not yet occurred.

TEACHING

Review guidelines for returning to the birth center and explain that these are only guidelines and she should return if she has any concerns. Returning with false labor is better than entering in advanced labor or developing complications at home. The woman is not the first and will not be the last in this situation.
Evaluation

The woman and her support person should describe guidelines for returning to the birth center. These include regular contractions, leaking of amniotic fluid, bleeding other than bloody show, and decreased fetal movement.

Application of the Nursing Process

True Labor

The admission assessment may confirm that the woman is in true labor, or true labor may be evident after observation. Nursing diagnoses and collaborative problems change during labor because the intrapartum period is an active process. Problems covered in this chapter relate to fetal oxygenation, maternal discomfort, and maternal injury.

Nursing diagnoses often interact during labor. For example, high anxiety reduces effectiveness of pain-relief measures by interfering with relaxation. A maternal fluid volume deficit can alter fetal oxygenation because less blood is available to circulate to the placenta.

FETAL OXYGENATION

Assessment

The main assessments related to fetal well-being are the following (see Table 13-1 and Box 13-1):

- Fetal heart rate evaluation
- Amount and character of amniotic fluid and time of rupture
- Maternal vital signs
- Contractions: frequency, duration, intensity, and resting interval

Analysis

Several factors can reduce fetal oxygen, nutrient, and waste exchange, such as maternal hypotension and hypertension, maternal fever, excessively strong and long contractions (tetanic), and compression of the umbilical cord. The healthy fetus usually tolerates labor well, and the nurse simply needs to be alert for problems. Therefore a valid collaborative problem is “Potential Complication: Fetal Compromise” (see box). See Chapter 14 for other FHR characteristics associated with fetal compromise.

Planning

Client-centered goals are not made for collaborative problems as they are for nursing diagnoses. Planning includes nursing responsibilities to (1) promote normal placental function and (2) observe for and report problems to the physician or nurse-midwife.

Interventions

PROMOTING PLACENTAL FUNCTION

Maternal positioning is the primary measure to promote placental function during normal labor. The supine position should be avoided because it can cause the woman’s uterus to compress her aorta and inferior vena cava (aorticocaval compression), reducing blood flow to the placenta. If she must be in the supine position for a procedure such as catheterization, a small pillow or folded blanket under one hip shifts her uterus to maintain good placental blood flow.

Conditions Associated with Fetal Compromise

- Fetal heart rate outside the normal range for a term fetus: 110-160 bpm for a term fetus
- Meconium-stained (greenish) amniotic fluid
- Cloudy, yellowish, or foul-smelling amniotic fluid (suggests infection)
- Excessive frequency or duration of contractions (reduces placental blood flow)
- Incomplete uterine relaxation and intervals shorter than 60 seconds between contractions (reduces placental blood flow)
- Maternal hypotension (may divert blood flow away from the placenta to ensure adequate perfusion of the maternal brain and heart)
- Maternal hypertension (may be associated with vasospasm in spiral arteries, which supply the intervillous spaces of the placenta)
- Maternal fever (38° C [100.4° F] or higher)

CRITICAL TO REMEMBER

OBSERVING FOR CONDITIONS ASSOCIATED WITH FETAL COMPROMISE

If conditions associated with fetal compromise are identified, assess the fetus more frequently and notify the birth attendant.
**Evaluation**

Evaluation of client goals and expected outcomes does not apply to a collaborative problem. Throughout labor, compare actual data with the norms for the mother and fetus.

**DISCOMFORT**

**Assessment**

See Table 13-1 for continuing assessments of the laboring woman.

**Analysis**

Women vary in their responses to labor’s pain and the choices of pain management methods. The woman with choices for pain management and support for her choices has an increased sense of control over her birth experience. The woman who successfully masters the pain and other physical demands of labor is more likely to view her experience as positive. Her support person also is likely to feel more satisfaction with the experience.

Pain and anxiety are related nursing diagnoses. Excess anxiety reduces pain tolerance, and pain worsens anxiety. The nurse clusters assessment data to determine which is the primary problem. For example, several cues suggest that anxiety is primary, such as a previous poor experience during birth and expressions of worry and concern. However, if contractions are intense and labor is progressing quickly, the primary nursing diagnosis would be pain. Of these two options, the nursing diagnosis selected for this discussion is “Pain related to effects of uterine contractions.”

**Planning**

The elimination of labor’s pain is not realistic. Although highly effective pharmacologic methods exist, they cannot be implemented until the woman is in established labor. Therefore appropriate goals and expected outcomes related to pain include the following:

1. During labor the woman will state that her chosen method or methods of pain management are satisfactory and will tell the nurse if others are needed.
2. By discharge from the birth facility the woman’s support person will express satisfaction with having provided labor support.
3. By discharge from the birth facility the woman will describe her birth experience as positive.

**Interventions**

Labor pain management includes measures to promote comfort and specific methods to relieve pain, such as breathing techniques and medication (see Chapters 11 and 15).

**PROVIDING COMFORT MEASURES**

Ordinary measures reduce irritating surroundings that impair a woman’s ability to relax and use coping skills.

**LIGHTING.** Soft, indirect lighting is soothing, whereas a bright overhead light is irritating. Bright lights imply a hospital (“sick”) atmosphere rather than a normal event like birth. A bright, overhead light should be used only when needed. A small flashlight is handy if the woman wants her room dark.

**TEMPERATURE.** Labor is work, and women in labor are often hot and perspiring. Cool, damp washcloths on the woman’s face and neck promote comfort (Figure 13-3). Keep an ample supply of damp washcloths available and change them often to keep them cool. The woman should wear socks if her feet are cold. An electric fan circulates air in the labor room and directs a breeze on the woman. Be sure that the fan does not blow on the infant after birth, which might cause hypothermia.

**CLEANLINESS.** Bloody show and amniotic fluid leak from the woman’s vagina during labor. The nurse should change the sheets and gown as needed to keep her dry and comfortable. Her preferences should be the guide because she may not want to be disturbed during late labor. Change the disposable underpad regularly to reduce microorganisms that may ascend into the vagina. A folded towel or bath blanket absorbs larger quantities of amniotic fluid than the pad alone.

**MOUTH CARE.** Ice chips (Figure 13-4), frozen juice bars, and hard candy on a stick reduce the discomfort of a dry mouth. If oral intake is contraindicated, brushing the teeth (without swallowing water) and simply rinsing the mouth is helpful to the woman. Many women appreciate a moist washcloth applied to their lips.

**BLADDER.** A full bladder intensifies pain during labor and can delay fetal descent. It may cause pain that remains
after an epidural is instituted. Remind the woman to empty her bladder at least every 2 hours, and check her suprapubic area that often or more frequently if she has had large amounts of fluids.

**POSITIONING.** Occasionally, a specific maternal position is helpful to reduce discomfort and assist the labor process. Encourage the woman to assume any position she finds comfortable (other than the supine) and change positions frequently (Figure 13-5). Frequent changes reduce discomfort from constant pressure, help the fetus adapt to the pelvic contours, and promote fetal descent.

Upright positions benefit labor by adding the force of gravity to uterine contractions. Women who labor upright often need less analgesia and have more effective contractions. Studies also have shown improved blood gases and pH levels in the newborns of women who labored upright (Mayberry et al., 2000b).

### POSITIONS FOR FIRST STAGE

<table>
<thead>
<tr>
<th>Standing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ADVANTAGES</strong></td>
</tr>
<tr>
<td>Adds gravity to force of contractions to promote fetal descent.</td>
</tr>
<tr>
<td>Contraction are less uncomfortable and more efficient.</td>
</tr>
<tr>
<td>Variation: Standing, leaning forward with support reduces back pain because fetus falls forward, away from the sacral promontory.</td>
</tr>
<tr>
<td><strong>DISADVANTAGES</strong></td>
</tr>
<tr>
<td>Tiring over long periods.</td>
</tr>
<tr>
<td>Continuous electronic fetal monitoring is not possible without telemetry.</td>
</tr>
<tr>
<td><strong>NURSING IMPLICATIONS</strong></td>
</tr>
<tr>
<td>If the woman has intravenous fluid infusing, give her a rolling pole. Encourage her to alternate walking with other positions whenever she tires or desires to do so.</td>
</tr>
<tr>
<td>Remind the woman and her partner when she should return to the labor area for evaluation of the fetal heart rate and her labor status.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Sitting Upright</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ADVANTAGES</strong></td>
</tr>
<tr>
<td>Uses gravity to aid fetal descent.</td>
</tr>
<tr>
<td>Can be done when sitting on side of bed, in a chair, or on the toilet.</td>
</tr>
<tr>
<td>Can be used with continuous electronic fetal monitoring.</td>
</tr>
<tr>
<td>Avoids supine hypotension.</td>
</tr>
<tr>
<td><strong>DISADVANTAGES</strong></td>
</tr>
<tr>
<td>May increase suprapubic discomfort.</td>
</tr>
<tr>
<td>Contraction are the most efficient when the woman alternates sitting with other positions.</td>
</tr>
<tr>
<td><strong>NURSING IMPLICATIONS</strong></td>
</tr>
<tr>
<td>A rocking chair is soothing.</td>
</tr>
<tr>
<td>Place a pillow on a chair with a disposable underpad over the pillow to absorb secretions.</td>
</tr>
<tr>
<td>Use pillows or a footstool to keep the short woman’s legs from dangling.</td>
</tr>
<tr>
<td>Encourage the woman to alternate positions periodically; for example, she can alternate walking with sitting or sitting with side lying.</td>
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</tbody>
</table>

*Figure 13-5* ■ Common maternal positions for labor. Many maternal labor positions can be adapted for the first stage and second stage of labor. **A.** Positions for first stage. **B.** Positions for pushing in second stage.
Sitting, Leaning Forward with Support

**ADVANTAGES**
Same as for sitting.
Reduces back pain because fetus falls forward, away from sacral promontory.
Partner or nurse can rub back or give sacral pressure to relieve back pain.

**DISADVANTAGES**
Same as for sitting.

**NURSING IMPLICATIONS**
Same as for sitting.

---

Semi-Sitting

**ADVANTAGES**
Same as for sitting.
Aligns long axis of uterus with pelvic inlet, which applies contraction force in the most efficient direction through pelvis.

**DISADVANTAGES**
Same as for sitting.
Does not reduce pain as well as the forward-leaning positions.

**NURSING IMPLICATIONS**
Same as for sitting.
Raise bed to about a 30- to 45-degree angle.
Encourage the woman to use sitting (leaning forward) or side lying if she has back pain so that the caregiver can rub her back or apply sacral pressure.

*Figure 13-5, cont’d* For legend see page 287.
### Side-Lying

**ADVANTAGES**
- Is a restful position.
- Prevents supine hypotension and promotes placental blood flow.
- Promotes efficient contractions, although they may be less frequent than with other positions.
- Can be used with continuous fetal monitoring.

**DISADVANTAGES**
- Does not use gravity to aid fetal descent.

**NURSING IMPLICATIONS**
- Teach the woman and her partner that although the contractions are less frequent, they are more effective.
- This position offers a break from more tiring positions.
- Use pillows for support and to prevent pressure: at her back, under her superior arm, and between her knees.
- Use disposable underpads to protect the pillow between the woman’s knees from secretions.
- Some women like to put their superior leg on the bed rail; if the woman wants this variation, pad the bed rail with a blanket to prevent pressure.
- If she wants to remain recumbent, she should use this position to promote placental blood flow.

### Kneeling, Leaning Forward with Support

**ADVANTAGES**
- Reduces back pain because fetus falls forward, away from sacral promontory.
- Adds gravity to force of contractions to promote fetal descent.
- Can be used with continuous fetal monitoring.
- Caregivers can rub her back or apply sacral pressure.
- Promotes normal mechanisms of birth.

**DISADVANTAGES**
- Knees may become tired or uncomfortable.
- Tiring if used for long periods.

**NURSING IMPLICATIONS**
- Raise the head of the bed, and have the woman face the head of the bed while she is on her knees.
- Another method is for the partner to sit in a chair, with the woman kneeling in front, facing her partner, and leaning forward on him or her for support.
- Use pillow under the knees and in front of the woman’s chest, as needed, for comfort.
- Encourage her to change positions if she becomes tired.

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*Figure 13-5, cont’d* For legend see page 287.

*Continued*
Hands and Knees

**ADVANTAGES**
- Reduces back pain because the fetus falls forward, away from the sacral promontory.
- Promotes normal mechanisms of birth.
- The woman can use pelvic rocking to decrease back pain.
- Caregivers can rub the woman’s back or apply sacral pressure easily.

**DISADVANTAGES**
- The woman’s hands (especially wrists) and knees can become uncomfortable.
- Tiring when used for a long time.
- Some women are embarrassed to use this position.

**NURSING IMPLICATIONS**
- Encourage the woman to change to less tiring positions occasionally.
- Ensure privacy when encouraging the reluctant woman to try this position if she has back pain.
- A second hospital gown with the opening in front covers her back and hips but may be too warm.
- The birthing ball can provide support when in a kneeling position.

**POSITIONS FOR PUSHING IN SECOND STAGE**

### Adaptations of First Stage Positions for Pushing

**STANDING**
This position may be tiring, and access to the woman’s perineum is difficult. Because the infant could fall to the ground if birth occurs rapidly, provide padding under the mother’s feet. Gravity aids fetal descent.

**HANDS AND KNEES**
Advantages and disadvantages are similar to those during first-stage labor. In addition, caregivers must reorient themselves because the landmarks are upside down from their usual perspective.
- A variation is for the mother to kneel and lean forward against a beanbag or the side of the bed. This variation reduces some of the strain on her wrists and hands.

**SIDE-LYING**
The woman flexes her chin on her chest and curls around her uterus as she pushes. She pulls on her flexed knees or the knee of the superior leg as she pushes.

**SEMI-SITTING**
Many women prefer this because they have the security of a back rest; it is also familiar to caregivers and allows easy observation of the perineum. Elevate the woman’s back at least 30 to 45 degrees so that gravity aids fetal descent.
- The woman pulls on her flexed knees (behind or in front of them) as she pushes. She should keep her head flexed and her sacrum flat on the bed to straighten the pelvic curve.
“Back labor” commonly occurs, in which the back of the fetal head puts pressure on the woman’s sacral promontory (occiput posterior position). The discomfort of back labor is difficult to relieve with medication alone. Positions that encourage the fetus to move away from the sacral promontory, such as those in which the mother uses the hands-and-knees position or leans forward over a birthing ball (a sturdy ball similar to a beach ball), reduce back pain and enhance the internal rotation mechanism of labor. Smaller versions of the birthing ball are available for use when the mother is sitting and leaning forward.

**WATER.** Water in the form of a shower, tub, or whirlpool is relaxing for many women (see Chapter 15). However, a bath may slow labor if used in latent labor. It should be used in active labor or if persistent, nonproductive contractions during early labor have caused the woman to become very fatigued (Simkin, 2002).

**TEACHING**
Teaching the woman in labor is a continuously changing task.

**FIRST STAGE.** Many women become discouraged because several hours are needed to reach 4 or 5 cm of cervical dilation. They believe that the last 5 cm will take as long as the first 5 cm. From a time standpoint, 5 cm is more like two thirds of the way through first-stage labor rather than half of the way because the rate of dilation increases during the active phase.

A woman’s urge to push usually occurs when her cervix is fully dilated and effaced and the fetus descends to about a +1 station and internally rotates. However, as she nears the second stage, the fetus may descend enough to give her an urge to push before full cervical dilation. If her cervix, which is usually 8 or 9 cm dilated at this time, yields easily to downward pressure, pushing in response to her spontaneous urge rarely causes problems, especially if this is a second or later vaginal birth.

Either of two problems may occur if she pushes against a cervix that does not easily yield to pressure from the fetal presenting part:
- The cervix may become edematous, which can block progress.
- The cervix may be lacerated.

Teach the woman to exhale in short breaths if pushing is likely to injure her cervix or cause cervical edema.

**SECOND STAGE.** The woman may need help to trust the sensations from her body and push most effectively during second-stage labor. Nursing research is growing in labor nursing support and has resulted in inclusion of care based on more solid evidence. Examples of evidence-based practice for second stage labor include actions that do not try to arbitrarily shorten this stage and actions that consider each woman’s sensations of actions she should take.
Two hours was once accepted as the upper limit for the duration of the second stage, with little evidence of the benefits of restricting the second stage or the accuracy of this time limit. A second stage longer than 2 hours is now recognized as safe as long as the mother and fetus show no signs of compromise.

Women push most effectively when they feel the reflexive urge to do so. Women having epidural analgesia with modern techniques usually detect an urge to push, although the urge may not be as strong as in women who did not have regional analgesia. Many women do not immediately feel the urge to push when the cervix is fully dilated, even if no regional analgesia such as an epidural is administered. A brief slowing of contractions often occurs at the beginning of the second stage. Pushing vigorously sooner than the onset of the reflexive urge may contribute to birth canal injury because her vaginal tissues are stretched more forcefully and rapidly than if she pushed spontaneously and in response to her body’s signals. The mother may be frustrated and uncomfortable because she is asked to do something that does not feel right to her.

The technique of delaying pushing until the reflex urge to push occurs may be called any of several names, including delayed pushing, laboring down, rest and descend, and passive pushing. Delayed pushing has been shown to have a lower incidence of variable FHR decelerations, less maternal fatigue, and Apgar scores equal to those of women who pushed immediately on full cervical dilation (Mayberry et al., 2000a; Minato, 2000/2001; Roberts, 2003).

**Positions.** Squatting is an ideal position for pushing because it enlarges the pelvic outlet slightly and adds the force of gravity to the mother’s efforts, which is an advantage if she has a small pelvis or the fetus is large. Some women push effectively while sitting on the toilet because that is where they are accustomed to giving in to the sensation of rectal pressure. Pushing while sitting on a birthing ball and pulling against a squatting bar on the bed or playing “tug of war” with another person provides a similar gravitational advantage. Women may find that pulling on something from above is efficient. Her upper torso should be in front of her pelvis to allow her coccyx to move backward as the fetus descends deeply into her pelvis (Simkin, 2003). Squatting is not possible for all women having epidurals because the block may cause leg weakness, although women can gain some of the position’s advantages using sitting and semi-sitting positions.

If the mother pushes in a sitting or semi-sitting position, teach her to curve her body around her uterus in a C shape rather than arching her back. For greatest effectiveness the woman should pull on her knees, handholds, or a squatting bar while pushing. She should maintain a similar C shape to her upper body if she pushes on her side.

**Method and Breathing Pattern.** Support the woman’s spontaneous pushing techniques if they are effective. The woman should push with her abdominal muscles while relaxing her perineum. If she needs coaching, teach her to begin by taking a breath and exhaling and then to take another breath and exhale while pushing for 4 to 6 seconds at a time. Sustained pushing while holding a breath (Valsalva maneuver or “purple pushing”) or pushing more than four times per contraction reduces blood flow to the placenta and is fatiguing. Another deep breath that is more like a sigh helps her relax after the contraction.

- A woman who is modest or fears losing control may inhibit her best pushing efforts if she is instructed to push as if she were having a bowel movement, particularly if she is in a bed or chair. An anatomically correct image is to teach the woman to push down and out under her symphysis (pubic bone), following the pelvic curve. Seeing a diagram of the pelvis helps her to visualize the curve.

**PROVIDING ENCOURAGEMENT**

Success breeds success. Tell the woman when her labor is progressing. If she can see that her efforts are effective, she has more courage to continue. Help her touch or see the baby’s head with a mirror as crowning occurs.

Praise the woman and her support person when they use breathing and other coping techniques effectively. This reinforces their actions, gives them a sense of control, and conveys the respect and support of the nurse. If one technique is not helpful after a reasonable trial (three to five contractions), encourage them to try other techniques.

**GIVING OF SELF**

The importance of the nurse’s caring presence cannot be overlooked as a component of labor support. Even independent women may become dependent during labor and need human contact. Many times the woman simply needs reassurance that all is going well and the nurse is there for her. The nurse’s presence helps to allay her fears of abandonment and conveys safety, acceptance, support, and comfort.

Although the woman and her support person may have prepared for childbirth, they often welcome suggestions and affirmation from the nurse. They are more likely to use the techniques they learned if the nurse helps them use them. The nurse’s presence, gentle coaching, and encouragement help the woman have confidence in her own body and fitness to give birth.

- Labor nursing is a contact sport. Laboring women need the human support of a skilled, empathic, and intuitive nurse at the bedside—coaching them, reassuring them, and most of all, being there for them. This degree of support cannot be matched by the nurse who spends more time observing a fetal monitor at a central nurses’ station than in the company of the laboring mother.

**OFFERING PHARMACOLOGIC MEASURES**

Birth is usually a normal process, and the prepared woman and labor partner can deliver their infant without medication if they choose to do so. However, many do choose pharmacologic pain management. The nurse must be informative but neutral when explaining about available pain medication.

Some women may have a firm goal of avoiding pain medication during labor. A woman who planned an unmedicated birth may interpret the nurse’s information about available medication as pressure for her to take medication. If the woman takes the medication offered, she may
later feel that she “gave in” at a “weak moment,” thus reducing her sense of mastery over her birth. She may feel disappointed and guilty because she took medication despite her planned unmedicated birth.

Other women may plan to use a specific method such as epidural analgesia. If something prevents use of a chosen method, the woman may be upset about this unexpected development in her birth experience. Although the event may not be what she wanted, encouraging the woman to express her feelings helps her put it into perspective.

CARING FOR THE BIRTH PARTNER

The woman’s support person is an integral part of her labor care. Her labor partner can provide care and comfort, which support the woman’s ability to give birth. However, do not expect too much of the support person or make assumptions about the type and amount of involvement desired.

Some partners are coaches in the true sense of the word, actively assisting the woman through labor. Others want the woman and nurse to lead them and tell them how to help. They are eager to do what they can but expect instructions about methods and timing. Many couples see the partner’s role as encouraging, offering moral support, and simply being there for the woman.

Imposing unrealistic expectations of leadership, care, and comfort on the partner makes the birth experience unnecessarily stressful. To ensure a positive experience for both, accept whatever pattern of support the partner is able and willing to provide and is comfortable to the couple. Without taking over or diminishing this role, provide any support that the partner cannot.

Encourage the partner to conserve physical strength, eat, and drink liquids. The partner may have missed sleep during the hours of early labor and may need a break. Encouraging the partner to eat a meal or snack may be necessary. Some partners think that they should not eat because the laboring woman is not doing so. However, hypoglycemia has caused more than one support person to faint at the time of birth and miss the main event.

Evaluation

Achievement of the three goals or expected outcomes occurs if the following conditions are met:

1. The woman indicates satisfaction with her method of pain management or requests nursing assistance to find other, more satisfactory methods.
2. The woman’s support person expresses satisfaction with having provided labor support by the time of discharge.
3. The woman describes her birth experience as positive by the time of discharge.

The first nursing diagnosis regarding pain management is continually reevaluated throughout labor. The ability of the woman’s support person is also continually evaluated. The last nursing diagnosis is evaluated after the woman and her significant other have had time to begin putting the birth experience into perspective.

PREVENTION OF INJURY

Assessment

Nursing assessments of the mother and fetus continue as the woman nears birth. During the second stage, observe the woman’s perineum to determine when to make final birth preparations.

The exact time for final birth preparations varies according to the woman’s parity, overall speed of labor, and fetal station. Preparations are usually completed when crowning in the nullipara reaches a diameter of about 3 to 4 cm. The multipara is prepared sooner, usually when her cervix is fully dilated and the fetal head is well down in the pelvis but before much crowning has occurred.

Analysis

The woman is vulnerable to injury immediately before and after birth for several reasons: (1) altered physical sensations such as intense pressure and effects of medication, (2) positional changes for birth, and (3) unexpectedly rapid progress. The nursing diagnosis selected for the laboring woman near the time of birth is “Risk for Injury (maternal) related to altered sensations and positional or physical changes.”

Planning

The nurse’s primary objective is to prevent and minimize injuries that can occur during final birth preparations and because of a sudden birth. The goal or expected outcome for this nursing diagnosis is that the woman does not have a preventable injury such as muscle strains, thrombosis, and lacerations during birth.

Interventions

Transferring the woman to the delivery site and positioning her in the birthing bed is the first step in the sequence of events that culminates in the birth of the baby (Figures 13-6 to 13-8). During the period around birth, the nurse reduces factors that contribute to maternal injuries.
Transfer and Positioning for Birth

**Action:** When the woman is almost ready to give birth, transfer her to the delivery room or position the birthing bed. The exact time varies with several factors (such as overall speed of labor and rate of fetal descent). **Rationale:** Rushed, last-moment preparations are anxiety-producing for the woman, her partner, and the nurse. Remaining in the birth position for a long time can be tiring.

**Action:** Continue observing her perineum while making final preparations for birth. **Rationale:** Birth may occur unexpectedly, and the nurse should be prepared to “catch” the infant if the attendant (physician or nurse-midwife) is not in the room.

**Action:** Continue observing the fetal heart rate (FHR) with continuous monitoring or intermittent auscultation. **Rationale:** Detects changes in fetal condition that may require interventions by the attendant to speed birth.

**Action:** Elevate the woman’s back, shoulders, and head with a wedge (on a delivery table) or by raising the head of the birthing bed. **Rationale:** Allows more effective maternal pushing and uses gravity to aid fetal descent.

**Action:** Stirrups or foot rests to support the woman’s legs and feet may be used on a birthing bed. Pad the surface. **Rationale:** Reduces pressure, preventing venous stasis and possible thrombus formation.

**Action:** When placing the woman’s legs in stirrups, elevate them and remove them simultaneously. Do not separate her legs widely. **Rationale:** Reduces strain on muscles and ligaments.

**Prepping and Draping**

**Action:** After the woman is in position, cleanse the perineal area with a sterile iodophor and water preparation unless she is allergic. Use warm water to dilute the iodophor scrub. **Rationale:** Removes secretions and feces from perineal area.

**Action:** After hand washing, apply sterile gloves for the prep procedure. Take a fresh sponge to begin each new area, and do not return to a clean area with a used sponge. Six sponges are needed. The proper order and motions are as follows:

1. Use a zig-zag motion from clitoris to lower abdomen just above the pubic hairline.

2, 3. Use a zig-zag motion on the inner thigh from the labia majora to about halfway between the hip and knee. Repeat for the other inner thigh.

4, 5. Apply a single stroke on one side from clitoris over labia, perineum, and anus. Repeat for the other side.

6. Use a single stroke in the middle from the clitoris over the vulva and perineum. **Rationale:** Prevents cross-contamination or recontamination of an area that is already clean.

**Action:** The attendant may apply sterile drapes if desired. **Rationale:** A vaginal birth is a clean procedure rather than a sterile one because the vagina is not sterile. Sterile drapes are unnecessary, but some attendants may prefer to use them.

**Birth of the Head**

**Action:** If an episiotomy is needed, the attendant will perform it when the head is well crowned (see Chapter 20). **Rationale:** Minimizes blood loss from the episiotomy.

**Action:** As the vaginal orifice encircles the fetal head, the attendant applies gentle pressure to the woman’s perineum with one hand while applying counterpressure to the fetal head with the other hand (Ritgen’s maneuver). The attendant may ask the mother to blow so that she avoids pushing, or to push gently. **Rationale:** Controls the exit of the fetal head so that it is born gradually rather than popping out; this minimizes trauma to the maternal tissues.

![Figure 13-7 - Sequence for delivery.](image-url)
TRANSFERRING TO A DELIVERY ROOM

Most births occur in a combination labor, delivery, and recovery room. Occasionally the woman must be transferred to a separate room for vaginal birth. If so, she should be transferred early to avoid rushed, last-minute preparations that cause anxiety for everyone.

POSITIONING FOR BIRTH

Upright positions promote effective pushing and take advantage of gravity. Squatting is a good position for uncomplicated birth but limits accessibility to the woman’s perineum and may not be an option for women having epidural analgesia. Squatting, during which the upper body leans forward, promotes expulsive efforts, directs the fetus efficiently toward the pelvic outlet, and increases the diameters of the pelvic outlet.

Other upright positions for the birth include standing and kneeling upright positions. The semirecumbent position limits movement of the coccyx as the fetus descends during birth but maintains some advantages of gravity. Sitting on a birthing bed with a cutout for the perineal area maintains many advantages of squatting and may be less tiring. The hands-and-knees position may be helpful if the fetus is in the occiput posterior position and to rotate wide fetal shoulders.

Many women and birth attendants are more comfortable using stirrups and foot rests to support the woman’s legs and feet and make her perineum more accessible. If she cannot move her legs because of motor block from anesthesia,
raise and lower her legs together and do not separate them too widely. Surfaces that contact the popliteal space behind the knee should be padded because of veins near the surface, on which pressure could lead to thrombus formation. The woman’s upper body should be in a semi-reclining or sitting rather than a flat position.

**OBSERVING THE PERINEUM**

The exact time at which a woman is ready to give birth is an educated guess. A woman who has been having a slow labor may suddenly make rapid progress. Birth is near when the fetal head swings anteriorly in the mechanism of extension as the occiput slips under the symphysis pubis. Observe the woman’s perineum, especially during late second-stage labor. A classic sign of imminent birth is the mother’s urgent cry, “The baby’s coming!” Look at her perineum, and if the baby will be born before the physician or nurse-midwife arrives, remain calm and support the infant’s head and body with gloved hands as it emerges (Table 13-2). The support person should push the call button to summon help.
E. Birth of the anterior shoulder. The attendant gently pushes the fetal head toward the woman’s perineum to allow the anterior shoulder to slip under her symphysis. The bluish skin color of the fetus is normal at this point; it becomes pink as the infant begins air breathing.

F. Birth of the posterior shoulder. The attendant now guides the fetal head upward toward the woman’s symphysis to allow the posterior shoulder to slip over her perineum.

G. Completion of the birth. The attendant supports the fetus during expulsion. Note that the fetus has excellent muscle tone, as evidenced by facial grimacing and flexion of the arms and hands.

H. Cord clamping. While the infant is in skin-to-skin contact on the mother’s abdomen, the attendant doubly clamps the umbilical cord. The cord is then cut between the two clamps. Samples of cord blood are collected after it is cut.

I. Birth of the placenta. The attendant applies gentle traction on the cord to aid expulsion of the placenta. This placenta is expelled in the more common Schultze mechanism, with the shiny fetal surface and membranes emerging. Note the fetal membranes that surrounded the fetus and amniotic fluid during pregnancy. The chorionic vessels that branch from the umbilical cord are readily visible on the fetal surface of the placenta.

Figure 13-8 ■ Vaginal birth.
Evaluation

The goal or expected outcome for this nursing diagnosis is evaluated throughout the postpartum period because injuries such as muscle strains or thrombus formation are not evident until later (see Chapter 17). The birth attendant notes lacerations after the baby’s birth and makes necessary repairs.

CHECK YOUR READING

12. How might maternal hypotension or hypertension affect the fetus?
13. What position should the woman avoid during labor? Why? What if the woman must be in this position temporarily?
14. What general measures can make the woman more comfortable during labor? How can the nurse support the woman’s labor partner?
15. Why is watching the perineum as a woman pushes important?

NURSING CARE DURING THE LATE INTRAPARTUM PERIOD

Responsibilities during Birth

The nurse’s responsibilities during birth may include the following:

- Preparation of a delivery table with sterile gowns, gloves, drapes, solutions, and instruments (see Figure 13-6)
- Perineal cleansing preparation
- Initial care and assessment of the newborn

- Administration of medications (usually oxytocin) to contract the uterus and to control blood loss (see Drug Guide 16-1). The anesthesiologist or nurse-anesthetist also may give maternal medications.

A nurse or resuscitation team from the nursery is usually present if the newborn is at risk for problems such as respiratory depression and if problems occurred during labor. A person certified to provide neonatal resuscitation must be present at all births.

Personal protective equipment, including eye shields, should be worn as protection from fluid splashing and blood spurting as the cord is cut. The newborn is covered with blood, amniotic fluid, vernix, and other body substances. Persons involved in infant care should wear gloves and other needed protective equipment until after the first bath to avoid contact with potentially infectious secretions.

Responsibilities after Birth

Intrapartum nursing care extends through the fourth stage of labor and includes care of the infant, mother, and family unit (for more information, see also Chapters 17 through 23).

CARE OF THE INFANT

Nursing care of the newborn includes supporting cardiopulmonary and thermoregulatory function and identifying the infant. In addition, assess the infant for approximate gestational age (see p. •••) and examine for obvious anomalies and birth injuries. A full neonatal assessment may be delayed for about 1 hour to give the family a chance to meet their new member and initiate breastfeeding.
MAINTAINING CARDIOPULMONARY FUNCTION. Assess the infant’s Apgar score (see Table 13-2) at 1 and 5 minutes (and at 10 minutes if response is poor) after birth for rapid evaluation of early cardiopulmonary adaptation. If the Apgar score is 8 or higher, no intervention is needed other than promoting normal respiratory efforts. If the infant is obviously in distress (no or low heart rate and respirations, limp muscle tone, lack of response to stimulation, blue or pale color), interventions to correct the problem are instituted immediately rather than waiting for the 1-minute Apgar score.

Place the infant on a prewarmed warmer, suctioning secretions from the mouth and nose with a bulb syringe as needed. Avoid keeping the infant in a head-dependent position without a specific indication; the position limits diaphragmatic movement because of upward pressure from the intestines. When a vigorous cry and minimal secretions are established, place the baby in a flat position or turned to one side with the head flat or slightly elevated. Suction secretions from the infant’s mouth and nose with a bulb syringe as needed. Suction with a catheter may be necessary for more copious secretions.

SUPPORTING THERMOREGULATION. Hypothermia raises the infant’s metabolic rate and oxygen consumption, worsening any respiratory problems. Place the infant on a prewarmed warmer and quickly dry with warm towels to reduce evaporative heat loss. The head should be dried well because substantial heat loss can occur from the head, which is about one fourth of the neonate’s body surface area. The stimulus of drying the skin promotes vigorous crying and lung expansion in most healthy infants.

Skin-to-skin contact with a parent also maintains the infant’s temperature and promotes bonding between the infant and parent. Avoid coming between the infant and the radiant heat source in the warmer. The infant should be wrapped in dry warm blankets when not in the warmer or making skin-to-skin contact. Remove wet linens, replacing them with warm and dry ones. A stockinet cap further reduces heat loss if it is placed on the baby’s dry head. A cap is not worn while the infant is in the radiant warmer because the cap slows transfer of heat to the baby.

IDENTIFYING THE INFANT. Bands with matching imprinted numbers and identifying information are the primary means to ensure that the right baby goes to the right mother after any separation (Figure 13-9). Check that imprinted band number and mother’s name are identical on each set of bands and have the parent(s) verify this information at the time of banding. Apply two bands on the infant, one on an arm and another on an ankle, or one on each ankle to prevent facial scratching. Infant bands are applied more snugly than those worn by an adult, with about one adult fingerwidth of slack in the bands. Trim the excess band ends and apply the longer band to the mother’s wrist. The mother’s primary support person usually wears a fourth band. The infant will not be released to any adult who is not wearing a band with a matching name and number. A set of bands is needed for each baby in a multiple birth. Some facilities take an early photo of the infant, when the infant is often alert, which serves two purposes: as a keepsake for the parents and identification in the event of abduction.

CARE OF THE MOTHER

Nursing care of the mother during the fourth stage of labor focuses on observing for hemorrhage and relieving discomfort (Table 13-3).

OBSERVING FOR HEMORRHAGE. Important assessments related to hemorrhage are the woman’s vital signs, uterine fundus, bladder, lochia, and perineal and labial areas (see Chapter 17).

Vital Signs. Assess the woman’s temperature when fourth-stage care begins. Blood pressure, pulse, and respirations should be assessed every 15 minutes during the first hour. A rising pulse is an early sign of excessive blood loss because the heart pumps faster to compensate for reduced blood volume. The blood pressure falls as the blood volume diminishes, but this is a late sign of hypovolemia. A rising pulse may also reflect medications administered.

Fundus. The most common reason for excessive postpartum bleeding is that the uterus does not firmly contract and compress open vessels at the placental site. Assess the firmness, height, and positioning of the uterine fundus with each vital sign assessment. The fundus should be firm, in the midline, and below the umbilicus (about the size of a large grapefruit). If the fundus is firm, no massage is needed; if it is soft (boggy), it should be massaged until it is firm. Nipple stimulation from the infant’s sucking releases oxytocin from the mother’s posterior pituitary gland to maintain firm uterine contraction. Oxytocin in IV solution or administered intramuscularly has the same effect.

Bladder. A full bladder interferes with contraction of the uterus and may lead to hemorrhage. A full bladder is suspected if the fundus is above the umbilicus or displaced to one side, usually the right. The first two voidings are often measured until it is evident that she voids without difficulty and empties her bladder completely. Each voiding is usually at least 300 to 400 ml if she is emptying her bladder. If no contraindication such as altered sensation is present, the mother can walk to the bathroom (with assistance the first few times). She should sit on the side of the bed to make sure she is not lightheaded, move her legs back and
and the physician or nurse-midwife should be notified.

Lochia. Assess for lochia with each vital sign and fundal assessment. The amount of lochia seems large to the inexperienced nurse and new mother. Perineal pads vary in their absorbency, but saturation of one standard pad (one that does not contain a cold pack) within the first hour is a guideline for sorbency, but saturation of one standard pad (one that does not contain a cold pack) within the first hour is a guideline for the maximal normal lochia flow. Turn her to check for lochia pooling under the mother’s buttocks and back. Small clots may be present, but the presence of large clots is not normal

Ice packs. Apply an ice pack to the perineum promptly after vaginal birth to reduce edema and limit hematoma formation. Some perineal pads include chemical cold packs. These pads absorb less lochia than ordinary pads, so this should be considered when estimating pad saturation. Ice packed into a glove is cheaper and colder than a chemical cold pack, although it melts quickly.

Analgesics. Afterpains and perineal pain respond well to mild oral analgesics. Regular urination reduces the severity of afterpains because the uterus contracts most effectively. The nurse should encourage the woman to take analgesics on a regular schedule to stay ahead of both perineal and afterpain discomfort.

WARMTH. A warm blanket shortens the chill common after birth. A portable radiant warmer provides warmth to both the mother and infant. The mother may enjoy warm drinks initially.

PROMOTING EARLY FAMILY ATTACHMENT

The first hour after birth is ideal for parent-infant attachment because the healthy neonate is alert and responsive. Provide privacy while unobtrusively observing the parents and infant. The infant can remain in the parent’s arms while the nurse takes vital signs and suctions small amounts of secretions. Many newborn admission assessments can be performed while the parent holds the baby. (See Box 13-2 for possible nursing diagnoses for the intrapartum family.)
Nursing Care during Labor and Birth

CHAPTER 13

NURSING CARE PLAN

Normal Labor and Birth

ASSESSMENT: Cathy Taggart, 17 years old, is a gravida 1, para 0, who is admitted in early labor. Her cervix is 3 cm dilated and completely effaced, and the fetus is at a 0 station. Her membranes are intact. Cathy’s husband, Tim, is with her. They did not attend childbirth classes. Cathy is holding Tim’s hand tightly and breathing rapidly with each contraction. She says in a shaky voice, “I’m so scared. I’ve never been in a hospital before. I just don’t know if I can do this.”

NURSING DIAGNOSIS: Anxiety related to unfamiliar environment and lack of birth preparation

GOALS/EXPECTED OUTCOMES: Cathy will:
1. Express being less anxious after admission procedures are completed.
2. Have a relaxed facial expression and body posture between contractions.

INTERVENTION RATIONALE

1. Maintain a calm and confident manner when caring for Cathy. Express confidence in her ability to give birth.
2. Use therapeutic communication when talking with Cathy. Adapt communication to the situation, simplifying explanations and directions as labor intensifies.
3. Determine the couple’s plans for birth, and work within them as much as possible.
4. Stay with Cathy as much as possible during labor.
5. Orient Cathy to the labor room, and explain procedures and equipment she will encounter.

1. Calm provides reassurance that labor is normal and that she has the resources within her to manage it.
2. Clarity identifies dominant concerns so that they can be properly addressed. Intense physical sensations reduce the ability to comprehend complex information.
3. Determining their plan enhances their sense of control and helps them have a satisfying birth experience.
4. A nurse can provide reassurance through human contact and can reduce fears of abandonment.
5. Information reduces fear of the unknown.

EVALUATION: Cathy relaxes a bit after talking with the nurse and slows her breathing. Cathy says, “I feel a little better now. I hope I can have my baby before you go home.”

ASSESSMENT: Cathy’s admission vital signs are all normal: temperature, 37.1° C (98.8° F); pulse, 88; respirations, 20; and blood pressure, 112/70 mm Hg. The fetal heart rate averages 140 to 150 beats per minute (bpm). Her contractions occur every 4 minutes, last 50 seconds, and are of moderate intensity.

POTENTIAL COMPLICATION: Fetal compromise

GOALS/EXPECTED OUTCOMES: Goals are not formulated for a potential complication because the nurse cannot independently manage fetal compromise. The nurse will:
1. Take actions to promote normal placental function.
2. Observe for and report signs associated with fetal compromise.

INTERVENTION RATIONALE

1. Encourage Cathy to use any position she desires except the supine. If she lies flat, a wedge should be placed under one hip to displace her uterus to one side.
2. Assess and document the fetal heart rate using the guidelines in Table 13-1. Report rates or patterns that are not reassuring. Assess the fetal heart rate more frequently if deviations from normal are identified. (Refer to Chapter 14 for detailed information.)
3. When the membranes rupture, observe the color, odor, and approximate amount of fluid, and note the time of rupture. Note the fetal heart rate after rupture.
4. Assess contractions when the fetal heart rate is assessed. Report incomplete uterine relaxation between contractions or excessively strong or long contractions (longer than 90-120 sec or having <30 sec of full relaxation). Keep in mind that the fetus with risk factors may not tolerate even less-than-normal labor contractions.

1. The supine position can cause aortocaval compression, reducing blood flow to the placenta.
2. Observation allows prompt identification of changes in the rate or of abnormal rates. Fetal heart rate assessments that are outside expected limits need corrective action and should be reported for possible medical intervention.
3. Meconium-stained fluid may be associated with fetal compromise and should be reported. Cloudy, yellow, or foul-smelling fluid suggests infection. Prolonged rupture of membranes increases the risk of infection. A low fetal heart rate suggests significant cord compression.
4. Most placental exchange occurs during the interval between contractions. Contractions that are too long or have an inadequate interval between them decrease the time available for the intervillous spaces of the placenta to eliminate wastes and refill with oxygenated blood and nutrients.

Continued
The Family during Birth

INTERVENTION RATIONALE

5. Assess Cathy's blood pressure, pulse, and respirations every hour. Assess her temperature every 4 hr until her membranes rupture, then every 2 hr. If elevated, assess temperature every 2 hr or more frequently.

5. Maternal hypotension or hypertension can decrease blood flow to the placenta. Maternal fever increases the fetal temperature and metabolic rate, possibly raising fetal demand for oxygen beyond the mother’s ability to supply it. A rising maternal pulse or fetal heart rate may precede the temperature elevation.

6. See the nursing care plan in Chapter 14, pp. 330–332, for additional interventions if signs of fetal compromise occur.

6. This nursing care plan addresses basic actions to promote fetal oxygenation and identify possible problems.

EVALUATION: Because no client goal is established for a potential complication, evaluation is not done. The fetal heart rate remains approximately the same, and there are no signs of fetal compromise. Cathy finds that sitting in a rocking chair is most comfortable.

ASSESSMENT: In 1 ½ hours Cathy’s cervical dilation progresses to 5 cm and the fetus descends to a +1 station. Her contractions occur every 3 minutes, last 60 seconds, and are of strong intensity. The fetal heart rate remains near its admission level. Cathy is having difficulty relaxing between contractions and is complaining of back pain. She is relieved that her labor is progressing normally.

NURSING DIAGNOSIS: Pain related to effects of uterine contractions

GOALS/EXPECTED OUTCOMES: Cathy will express assurance that she can manage labor pain satisfactorily.

INTERVENTION RATIONALE

1. Encourage Cathy to try positions such as standing or sitting and leaning forward, side-lying, leaning over the back of the bed, or on her hands and knees. Remind her to change positions about every half hour or when she feels the need for a change.

1. These positions shift the weight of the fetus away from the sacral promontory, reducing back pain. Alternating positions relieves strain and constant pressure and also helps the fetus adapt to the pelvis.

2. Teach Tim to rub or apply firm pressure to Cathy’s back. Ask her where the best place is and how hard to press. Apply powder to the area rubbed.

2. Back rubs or firm pressure counteract some of the back pain. Powder decreases friction and promotes skin comfort.

3. Offer thermal pain management options:
   a. A warm blanket or warm pack applied to her back.
   b. Cold packs applied to her back.
   c. Alternating warm and cold packs, or use of them for 20 minutes on and 20 minutes off.
   d. Warm water in a shower or whirlpool.

3. Thermal stimulation interferes with transmission of pain impulses. Changing the thermal stimulation prevents habituation. Nipple stimulation in a shower or whirlpool causes release of oxytocin from the posterior pituitary and enhances contractions.

4. Teach Cathy simple breathing and relaxation techniques (see Chapter 11).

4. Breathing techniques provide distraction from pain and give her a sense of control. Relaxation enhances a woman’s ability to manage pain and enhances normal labor processes.

5. Observe Cathy’s suprapubic area and palpate for a full bladder at least every 2 hours. Remind her to void if she has not done so recently.

5. A full bladder contributes to discomfort and can prolong labor by obstructing fetal descent.

6. Tell Cathy about her progress in labor. Explain that she will probably begin to dilate faster now that she has entered active labor.

6. Encouragement and the knowledge that her efforts are having the desired results increase a woman’s willingness to continue.

7. Tell Cathy what pharmacologic pain relief measures are available to her.

7. Knowing available options gives the woman a sense of control because she can choose whether she wants these measures. (This action may be done during early labor to give a woman more time to consider her options.)

EVALUATION: Cathy continues to have back pain that is 6 on a 0-to-10 scale but says that she is more comfortable sitting on the side of the bed with her head on a pillow on the overbed table. Tim rubs her back during contractions. She says she is able to manage the pain because it is less between contractions and does not want medication yet.
Normal Labor and Birth—cont’d

ASSESSMENT: After another 2 hours Cathy is quite uncomfortable and requests pain medication. She is occasionally feeling an urge to push. Cathy cries and says she is “losing it” and “can’t take it anymore.” Tim asks anxiously, “What’s wrong? Is Cathy OK? Why is she acting this way?” The fetal heart rate remains near the admission range and shows no signs suggesting fetal compromise. Contractions occur every 2 minutes, last 70 seconds, and are strong.

Cathy’s cervix is now 8 cm dilated and the station is +1. She asks for pain relief but does not want an epidural. Butorphanol (Stadol), 1 mg slow IV push, helps her regain control and work with her contractions. She avoids pushing by blowing out at the peak of each contraction.

Cathy is fully dilated in 45 minutes, and the fetal station is +2. She pushes spontaneously several times with each contraction but tends to stiffen her back and push on the bed with her arms with each push. She pushes for about 10 to 15 seconds at a time, holding her breath each time. She prefers a semi-sitting position.

NURSING DIAGNOSIS: Deficient knowledge: Effective pushing techniques

GOALS/EXPECTED OUTCOMES: After instruction in more effective pushing techniques, Cathy will use the techniques until the birth occurs.

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<thead>
<tr>
<th>INTERVENTION</th>
<th>RATIONALE</th>
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<tr>
<td>1. Observe Cathy’s perineum for fetal crowning with each push.</td>
<td>1. A woman having her first baby can still give birth rapidly. Observation permits the nurse to maintain her safety and that of the baby should rapid birth occur.</td>
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<td>2. Encourage Cathy to exhale as she pushes strongly for about 4–6 sec at a time.</td>
<td>2. Prolonged pushing against a closed glottis reduces blood return to the heart and maternal oxygen saturation and decreases placental blood flow, especially if it is done with every contraction.</td>
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<td>3. Teach Cathy techniques to make each push more effective: a. Instruct her to flex her head with each push. b. Instruct her to pull against her flexed knees (or handholds on the bed) as she pushes, curving her body around her uterus. Encourage upright positions, including squatting. c. Have her push toward the vaginal outlet. d. Help her relax her perineum as she pushes down. e. Keep her sacrum flattened against the bed when she pushes in a semi-sitting position. 4. Do not talk to Cathy unnecessarily between contractions.</td>
<td>a. Flexing her head directs each push downward into the pelvic cavity. b. Pulling provides leverage to gain a more effective push from the abdominal muscles. Upright positions take advantage of gravity, and squatting enlarges the pelvic outlet slightly. c. The vagina is the anatomically correct direction. d. Relaxation reduces soft-tissue resistance to fetal descent. e. A flat sacrum straightens the pelvic curve somewhat (and is similar to squatting). 4. Silence allows her to conserve her energy for pushing efforts.</td>
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EVALUATION: Cathy pushes more effectively with the nurse coaching her during each contraction. In another hour she gives birth to a 3346-g (7-lb, 6-oz) boy. The baby’s Apgar scores are 9 at both 1 and 5 minutes. Cathy has a small first-degree laceration that is sutured with a local anesthetic. The new family gets acquainted during the recovery period.

Assist the mother to nurse during the recovery period if she plans to breastfeed. The infant is usually attentive and nurses briefly. Early nipple stimulation helps initiate milk production and contract the uterus.

When the parents are ready, siblings, other family members, and friends should be allowed to visit. Help siblings see and touch their new brother or sister by putting a stool at the bedside or letting them sit on the bed.

Toddlers are often upset by the separation from their mother and may not be interested in the new baby. With supervision, children of preschool age or older may sit in a chair and hold the baby. School-age children are often fascinated by the new baby and surroundings and ask many questions. Adolescents react in various ways. They may be excited and eager to be a substitute parent, or they may be embarrassed about their parents’ obvious sexuality “at their age.”

Observe for signs of early parent-infant attachment. Parent behaviors are tentative at first, progressing from fingertip touch to palm touch to enfolding of the infant. Parents usually make eye contact with the infant and talk to the baby in higher-pitched, affectionate tones.

Cultural variations should be considered when assessing early attachment (see Chapters 18 and 21). The nurse should be knowledgeable about the typical practices of the populations commonly served. In some cultures great attention to the newborn is considered unlucky (“evil eye”). (See p. 000.)
Some women do not have symptoms typical of true labor. They should enter the birth center for evaluation if they are uncertain and have concerns other than those listed in the guidelines.

- The childbearing family’s first impression on admission to the intrapartum unit is important to promote a therapeutic relationship with caregivers and a positive birth experience.
- Initial intrapartum assessments quickly evaluate maternal and fetal health and labor status.
- The fetus is the more vulnerable of the maternal-fetal pair because of complete dependence on the mother’s physiologic systems.
- The normal fetal heart rate at term averages 110 beats per minute (bpm) at the lower limit and 160 bpm at the upper limit. Other reassuring signs include regular rhythm, presence of accelerations, and absence of decelerations.

Persistent contraction frequencies closer than every 2 minutes or more than 5 contractions in 10 minutes, durations of longer than 90 seconds, and intervals shorter than 60 seconds may reduce placental blood flow and fetal oxygen, nutrient, and waste product exchange.

- A maternal supine position can reduce placental blood flow because the uterus compresses the aorta and inferior vena cava.
- General comfort measures promote the woman’s ability to relax and cope with labor.
- Regular changes in position during labor promote maternal comfort and help the fetus adapt to the pelvis.
- The nurse must be alert for signs of impending birth: The woman may state, “The baby’s coming,” make grunting sounds, and bear down.

The priority nursing care of the newborn immediately after birth is to promote normal respirations, maintain normal body temperature, and promote attachment.

- The priority nursing care of the mother after birth is to assess for hemorrhage and promote firm uterine contraction, promote comfort, and promote parent-infant attachment.

### Answers to Critical Thinking Exercise 13-1, p. 275

The woman’s behavior may have changed for several reasons, so the nurse must not make assumptions. For example, she may have felt insulted that the nurse found it necessary to ask her questions about illicit drug use. Or she may use other drugs and herbal preparations (legal or illicit) but prefer not to admit it. However, she may simply have been surprised at the question about drug use. The nurse should delay asking any sensitive questions until alone with the woman. Women often want their family to remain with them during the admission assessment but may not admit substance use and physical abuse in their presence. Nonverbal cues, such as a quick denial, avoidance of eye contact, and vague responses, are clues that the woman may not be answering these questions truthfully. The nurse should follow up on maternal behaviors privately to clarify underlying facts. A nurse may also be surprised that a woman does not hesitate to answer questions about her illegal drug use, regardless of who is present.

### Answers to Critical Thinking Exercise 13-2, p. 282

Assess the fetal heart rate for at least 1 minute to identify any abnormal rate or pattern. Note the time of rupture and the appearance, odor, and approximate amount of amniotic fluid. Report the findings to the physician or nurse-midwife because green, meconium-stained amniotic fluid may be associated with fetal compromise. A foul or strong odor is associated with infection. The fetal heart rate should be assessed more often, and an electronic fetal monitor is usually applied if not already in place. Notify the resuscitation team for possible endotracheal suctioning immediately after birth.

### References & Readings


Cude, G. (2004). Do men have a role in maternal-newborn nursing? The male student nurse experience. AWHONN Lifelines, 8(4), 342-347.


