

## Labor & Delivery Worksheet

This worksheet is due in the drop box by 2359 CST the night before your assigned labor and delivery clinical day.

Name: Brittney Burns

Date: May 21, 2024

**Complete the following: (30 points)**

**Submit in-text citations in APA format**

<b>1<sup>st</sup> Stage of Labor</b>	<b>Characteristics that could be seen</b>	<b>Expected Interventions</b>
<p><b>Latent phase</b></p> <p>Dilation: 0 to 5 cm (Durham &amp; Miller, 2023).</p> <p>Length of stage: 11.8 hours for primiparas, 9.3 hours for multiparas (Durham &amp; Miller, 2023).</p> <p><b>Contractions</b></p> <p>Duration: 30-60 minutes</p> <p>Frequency: Every 30-60 minutes</p> <p>Strength: Mild to moderate</p>	<p>Talkative/Anxious/Excited</p> <p>Amniotic fluid for color, amount, consistency, and odor</p> <p>Vaginal bleeding or bloody show for amount and characteristics of vaginal discharge</p> <p>Signs of edema (Durham &amp; Miller, 2023).</p>	<p>Assist with positioning; encourage movement.</p> <p>Avoid supine position.</p> <p>Monitor fetal response to position changes.</p> <p>Implement pain control strategies.</p> <p>Respond to changes in maternal status (Durham &amp; Miller, 2023).</p>

<p><b>Active phase</b></p> <p>Dilation: 6 to 10 cm</p> <p>Length of stage: 0- 2hrs</p> <p><b>Contractions</b></p> <p>Duration: 2-3 minutes</p> <p>Frequency: Every 2–3</p>	<p>Exhaustion and increased difficulty concentrating</p> <ul style="list-style-type: none"> <li>• Increase of bloody show</li> <li>• Nausea and vomiting</li> <li>• Backache: complaints of back pressure, hand goes over hip, pressing on area</li> </ul>	<p>Assist with positioning; encourage movement.</p> <p>Avoid supine position.</p> <p>Monitor fetal response to position changes.</p> <p>Implement pain control strategies.</p>
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<p>minutes, no more than 5 in a 10-minute period</p> <p>Strength: Moderate, regular</p>	<ul style="list-style-type: none"> <li>• Trembling</li> <li>• Diaphoresis, especially along the upper lip and facial area</li> <li>• May have a strong urge to bear down or push and become more vocal with primal noises and facial expressions (Durham &amp; Miller, 2023).</li> </ul>	<p>Respond to changes in maternal status (Durham &amp; Miller, 2023).</p>
<p><b>Transition Phase</b></p> <p>Dilation: 8 to 10 cm</p> <p>Length of stage: 30 minutes – 2 hours</p> <p><b>Contractions</b></p> <p>Duration: 60-90 seconds</p> <p>Frequency: 60-90 seconds</p> <p>Strength: Moderate/strong with an urge to bear down.</p> <p>(Allina Health, 2023)</p>	<p>Hiccups, nausea, vomiting, shaking and pelvic pressure (Allina Health, 2023)</p>	<p>Many women will want to rest; assist the patient into a comfortable resting position, changing positions as needed.</p> <p>Monitor fetal response to position changes.</p> <p>Avoid supine position.</p> <p>Implement pain control strategies.</p> <p>Respond to changes in maternal status (Durham &amp; Miller, 2023).</p>

<b>2<sup>nd</sup> Stage of Labor</b>	<b>Characteristics that could be seen</b>	<b>Expected Interventions</b>
<p>Length of stage: 0-2 hours</p> <p><b>Contractions</b></p> <p>Duration:</p> <p>Frequency: every 2–3 minutes</p> <p>Strength: Moderate/strong with an urge to bear down.</p>	<p>Crowning</p> <p>Increased irritability</p> <p>Sweat</p> <p>Spontaneous rupture of the membranes (Ricci et al., 2021)</p>	<p>Many women will want to rest; assist the patient into a comfortable resting position, changing positions as needed.</p> <p>Monitor fetal response to position changes.</p> <p>Avoid supine position.</p> <p>Implement pain control strategies.</p>

		Respond to changes in maternal status (Durham & Miller, 2023).
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3 <sup>rd</sup> Stage of Labor	Characteristics that could be seen	Expected Interventions
Length of stage: 30 minutes  (Ricci et al., 2021)	Sudden gush of dark blood. Umbilical cord protruding from vagina Expelled placenta (Ricci et al., 2021)	Administer uterotonic medication per order.  Respond to changes in - maternal status (Durham & Miller, 2023).

**Reference (1):**

Durham, R. F., Chapman, L., & Miller, C. S. (2023). *Davis advantage for maternal-newborn nursing: Critical components of nursing care*. F.A. Davis Company.

Ricci, S. S., Kyle, T., & Carman, S. (2021). *Maternity and pediatric nursing*. Wolters Kluwer.

*Stages of labor*. Pregnancy | Giving birth. (2023). <https://www.allinahealth.org/health-conditions-and-treatments/health-library/patient-education/beginnings/giving-birth/stages-of-labor>

**Complete the Following: (10 points)**

**Submit in-text citations in APA format**

Diagnostic Test	Description and Rationale	Clinical findings
Non-stress test (NST)	The NST is a screening tool that uses FHR patterns and accelerations as an indicator of fetal well-being (Durham & Miller, 2023).	The NST is considered reactive when the FHR increases 15 beats above baseline for 15 seconds twice or more in 20 minutes (Durham & Miller, 2023).  In fetuses less than 32 weeks' gestation, two accelerations peaking at least 10 bpm above baseline and lasting 10 seconds in a 20-minute period

		<p>is reactive (Durham &amp; Miller, 2023).</p> <p>Nonreactive NST is one without sufficient FHR accelerations in 40 minutes and should be followed up with further testing such as an ultrasound or biophysical profile (Durham &amp; Miller, 2023).</p> <p>Presence of repetitive variable decelerations that are longer than 30 seconds requires further assessment of amniotic fluid or prolonged monitoring (Durham &amp; Miller, 2023).</p>
Biophysical profile (BPP)	The BPP is an ultrasound assessment of fetal status along with an NST (Durham & Miller, 2023).	According to Durham et al 2023, a BPP consists of an NST with the addition of 30 minutes of ultrasound observation for five indicators: FHR reactivity, fetal breathing movements, fetal movement, fetal tone, and measurement of amniotic fluid. NST reactive.
Ultrasound (US)	Ultrasonography is the use of high-frequency sound waves to produce an image of an organ or tissue (Durham & Miller, 2023).	Accurate assessments of gestational age, fetal growth, and detection of fetal and placental abnormalities. Noninvasive. Provides information on fetal structures and status (Durham & Miller, 2023).

**Reference (1):**

Durham, R. F., Chapman, L., & Miller, C. S. (2023). *Davis advantage for maternal-newborn nursing: Critical components of nursing care*. F.A. Davis Company.

**For the remainder of this assignment, submit in-text citations in APA format. Attach Reference page.**

1. What is cervical dilation and effacement? How are each of these measured? **(5 points)**

Cervical Dilation is the enlargement or opening of the cervical (Durham & Miller, 2023). Effacement is the softening, shortening, and thinning of the cervix (Durham & Miller, 2023). Cervical dilation is measured by a closed cervix which measures at 0 and an open cervix which is 10 cm open. The degree of effacement is measured in percentage and goes from 0% (not effaced) to 100% (completely effaced) (Durham & Miller, 2023).

2. List five non-pharmacological methods that can relieve pain during labor. **(5 points)**

Massage, Pressure on precise anatomical locations, Water immersion, Breathing techniques, heat and/or cold therapy, Transcutaneous Electrical Nerve Stimulation (TENS), and Positioning and Movement (Nori et al, 2023).

3. What is variability in fetal monitoring? **(2 points)**

Baseline variability refers to the fluctuations in the baseline FHR that are irregular in amplitude and frequency. Cycles portray the peak to trough (rise and fall) of the heart rate within its baseline range over a minute (Durham & Miller, 2023).

Variability is described as follows:

- Absent: Amplitude range is undetectable
- Minimal: Amplitude range is undetectable below 5 bpm range
- Moderate: Amplitude from peak to trough, 6 bpm to 25 bpm Moderate variability reliably predicts a well-oxygenated fetus with normal acid–base balance at the time.
- Marked: Amplitude range is greater than 25 bpm (Durham & Miller, 2023).

4. How can GBS influence care in labor and delivery? When and how is this tested? What treatments/ interventions are completed? **(5 points)**

GBS is the leading cause of newborn infection. Vertical transmission of bacteria usually occurs during labor or after rupture of the membranes (Durham & Miller, 2023).

CDC recommends routine cultures of vagina and rectum between 36 and 37 weeks' gestation (Durham & Miller, 2023).

Treat positive test results with ampicillin or penicillin during labor. For women with a penicillin allergy, cefazolin is recommended for those with a low risk for anaphylaxis and clindamycin is the alternative for women with a high anaphylactic risk (Durham & Miller, 2023).

5. What labs are completed on every woman on admission to labor and delivery? What assessment would be completed? **(2 points)**

Laboratory tests, which may include complete blood count (CBC); a hold clot or a type-and-screen, depending on risk profile; urinalysis, including protein and glucose; and possible drug screening. Additional screening may include laboratory tests to assess for pre-eclampsia or other pregnancy complications (Durham & Miller, 2023).

6. How is duration and frequency of contractions measured? **(5 points)**

Frequency of contractions is expressed in minutes or seconds and is determined by counting the number of contractions in a 10-minute period, counting from the start of one contraction to the start of the next contraction in minutes. It is recorded in minutes (i.e., frequency of contractions is every 3 minutes). Frequency of contractions can be expressed in a range: for example, UCs every 2 to 3 minutes (Durham & Miller, 2023).

Duration of contractions is measured in seconds by counting from the beginning to the end of one contraction. Because contractions often vary in their duration, this is typically calculated for several contractions and expressed as a range (Durham & Miller, 2023).

7. Define an early deceleration, identify causes and interventions? **(2 points)**

Early deceleration is defined as a symmetrical decrease and return of fetal heart rate (FHR) that is associated with uterine contraction (Choe, 2023).

As early decelerations are not associated with decreased fetal oxygenation or metabolic acidosis, they do not require any treatment. However, it is crucial to continue to monitor FHR tracings throughout labor to recognize any patterns that may be a concern regarding changes in the acid-base status of the fetus (Choe, 2023).

No interventions are needed at this stage (Durham & Miller, 2023).

8. Define a late deceleration, identify causes and interventions? **(2 points)**

Late deceleration is thought to be related to transient fetal hypoxia. During uterine contractions, uterine and placental blood vessels are compressed, and blood flow is reduced (Kauffmann & Silberman, 2023). Interventions are directed at causes of late decelerations. Consider tocolytics. Consider delivery. (Durham & Miller, 2023).

Causes:

- Fetal response to transient or chronic uteroplacental insufficiency :
  - Decreased availability of O<sub>2</sub> because of uteroplacental insufficiency
  - Suppression of the fetal myocardium
  - Late decelerations are not completely understood:
    - Usually related to placental insufficiency (in which case they are often accompanied by decreased or absent FHR variability).
    - Late decelerations with moderate variability reflect a compensatory response and are not associated with significant fetal acidemia.
    - Late decelerations with minimal or absent variability reflect hypoxia and represent a risk of significant fetal acidemia.
    - Fetal hypoxia stimulates chemoreceptors when it is acute (i.e., recently occurring) and, if prolonged, results from direct myocardial depression.
  - Maternal-related factors associated with decreased uteroplacental circulation include:
    - Hypotension from regional anesthesia, supine positioning, or maternal hemorrhage
    - Maternal hypertension, gestational or chronic
    - Placental changes affecting gas exchange such as postmaturity or placental abnormalities
    - Decreased maternal hemoglobin or oxygen saturation from severe anemia or cardiopulmonary disease
    - Uterine tachysystole (Durham & Miller, 2023).

9. Define variable decelerations, identify causes and interventions? **(2 points)**

Variable decelerations are associated with the umbilical cord's compression and may occur in the presence or absence of uterine contraction. These variable decelerations are triggered once the umbilical artery becomes compressed, resulting in arterial occlusion, decreased oxygenation, peripheral vasoconstriction, and comparatively abrupt reflex bradycardia (Kauffmann & Silberman, 2023).

Causes:

- Umbilical cord occlusion.
- Umbilical cord compression triggers a vagal response that slows the FHR, usually related to decreased cord perfusion.

- This results in initial compression of the umbilical vein (decreased Po<sub>2</sub> and chemoreceptor stimulation) and then compression of the more muscular umbilical arteries (fetal hypertension with resultant baroreceptors stimulation; remember that hypertension is often accompanied with a corresponding drop in heart rate).
- Prolonged cord compression produces a decrease in Po<sub>2</sub> with direct myocardial depression, adrenal activation, and sometimes rebound tachycardia.
- Variable decelerations can also occur with sudden descent of the vertex late in the active phase of labor (i.e., head compression).
  - These appear different from early decelerations in that they are usually not repetitive or smooth or regular in shape (Durham & Miller, 2023).
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10. Oxytocin: what is this medication used for in labor and delivery? Identify side effects, nursing assessments, and interventions. **(10 points)**

Oxytocin is used to induce labor and to help with postpartum hemorrhage (Frandsen & Smith Pennington, 2021). Common side effects of oxytocin administration include the following: erythema at the site of injection, intensified contractions, more frequent contractions, nausea, vomiting, stomach pain, and loss of appetite. Serious adverse effects that require monitoring after oxytocin administration include cardiac arrhythmias, seizures, anaphylaxis, confusion, hallucinations, extreme increase in blood pressure, and blurred vision (Osilla & Sharma, 2023).

The nurse must do the following: Assess the character and amount of amniotic fluid. Assess the character and amount of bloody show. Assess the maternal response, including level of discomfort and pain and effectiveness of pain management and labor support PRN every 30 minutes. Assess vital signs (VS) per policy, generally every 2 hours. Assess input and output (I&O) for fluid overload (Durham & Miller, 2023). An intervention that is essential is to monitor patient fluids (both intake and outtake) while administering oxytocin and the frequency of uterine contractions, patient blood pressure, and heart rate of the unborn fetus (Osilla & Sharma, 2023).

11. Magnesium Sulfate: What is this medication used for in labor and delivery? Identify side effects, nursing interventions, and nursing assessments. **(10 points)**

Magnesium sulfate is used to prevent and control seizures in preeclampsia or eclampsia. The side effects of taking this drug include but are not limited to dyspnea, diaphoresis, hypermagnesemia, hypotension, confusion, decrease reflexes, dizziness, syncope, vomiting, and magnesium toxicity (NDH, 2023).

The nurse should remain at bedside for loading dose assessing vital signs, oxygen saturation, and DTRs. Assess DTRs. Assess respiratory status, including rate, rhythm, and depth, and auscultate lungs (Durham & Miller, 2023).

Interventions include but is not limited to: Monitor serum magnesium levels; therapeutic levels are 4 to 8 mg/dL. Keep calcium gluconate available for use as an antidote: 1 g (10 mL of a 10% solution). Monitor strict intake and output. If RR is lower than 12, or 4 breaths per minute below baseline or oxygen saturation lower than 95%, magnesium sulfate should be discontinued (Durham & Miller, 2023).

12. What are 3 nursing diagnoses that can be identified in labor and delivery? **(10 points)**

1. Risk for infection as related to the premature rupture of the amniotic membrane as made evident by preterm labor (Phelps, 2023).
2. Risk for fatigue related to the child birthing process as made evident by insufficient physical endurance (Phelps, 2023).
3. Risk for decreased cardiac output as related to the birthing as made evident by process alterations in the client's blood pressure (Phelps, 2023).

## Attach References

### References

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