

## Labor & Delivery Worksheet

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

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Date: 06/20/2024

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

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

1 <sup>st</sup> Stage of Labor	Characteristics that could be seen	Expected Interventions
<p><b>Latent phase</b></p> <p>Dilation: effacing, dilation from 0-5 cm.</p> <p>Length of stage: Mean length: 11.8 hrs for primiparas, 9.3 hrs for multiparas. For 95% of patients, latent phase is completed by 30 hours and 25.5 hours for multiparous (Durham et al., 2023).</p> <p><b>Contractions</b></p> <p>Duration: 11.8 hours, with 95% of patients completing latent phase by 30 minutes (Durham et al., 2023).</p> <p>Frequency: become stronger, more regular, and more frequent over time (Durham et al., 2023).</p> <p>Strength: becomes stronger, increasing in frequency.</p>	<p>Nurses could expect the patient to be both excited and apprehensive about the start of labor (Durham et al., 2023). Patients should be able to talk and relax during contractions (Durham et al., 2023). It is also common for women to choose to stay home during this phase (Durham et al., 2023). Because of the length of this phase, laboring patients could begin to feel distressed and lose confidence in themselves (Durham et al., 2023). Telephone assessments and support could help these mothers increase their satisfaction and reduce epidural and oxytocin use (Durham et al., 2023).</p>	<p>General measures need to be taken such as obtaining admission history, check results of routine laboratory tests and any special tests, ask about childbirth plan, and complete a physical assessment (body system, VS, heart and lung sounds, height and weight) (Durham et al., 2023). Fundal height measurement, FHR, position, and station, uterine activity, including contraction frequency duration and intensity needs to be assessed (Durham et al., 2023). Status of membranes (intact or ruptured) and cervical dilation and degree of effacement are also important to assess during this phase (Durham et al., 2023). Routine laboratory tests need to be taken (Durham et al., 2023).</p>
<p><b>Active phase</b></p> <p>Dilation: 6 to 10 cm</p>	<p>We will see maternal discomfort increase. When mother is getting closer</p>	<p>Fetal status needs to be monitored either intermittent or continuous, pain</p>

<p>Length of stage: typically dilates at a rate of 1.2 to 1.5 cm per hour, much more quickly than the latent phase (Durham et al., 2023).</p> <p><b>Contractions</b></p> <p>Duration: Every 2-3 minutes, no more than 5 in a 10-minute period (Durham et al., 2023).</p> <p>Frequency: occurring every 2 to 5 minutes (Durham et al., 2023).</p> <p>Strength: Contractions increase in intensity, occurring every 2-5 minutes with duration of 45 to 60 seconds (Durham et al., 2023).</p>	<p>to 10 cm in dilation, nurses could be exhaustion and increased difficulty concentrating, increase in bloody show, N/V, backache, trembling, diaphoresis (especially along the upper lip and facial area), and maternal may have a strong urge to bear down or push and become more vocal with primal noises and facial expressions (Durham et al., 2023).</p>	<p>assessment (order pain meds or epidural anesthesia), and evaluate progression in labor (Durham et al., 2023). Fetus assessment needs to be every 15 to 30 minutes for low-risk patients and every 15 minutes or continuous for high-risk patients (Durham et al., 2023). Monitor maternal BP and RR every hour, and temperature every 2 hours unless membranes are ruptured, then every hour (Durham et al., 2023). Encourage breathing and relaxation methods. Monitor I&amp;O, offer oral fluids as ordered (if pt. has epidural, then only ice chips) (Durham et al., 2023). Comfort measures.</p>
<p><b>Transition Phase</b></p> <p>Dilation: 8 to 10 cm</p> <p>Length of stage: Can last from 15 minutes to an hour (Bellefonds, 2023).</p> <p><b>Contractions</b></p> <p>Duration: contractions become closer together and can last from 60-90 seconds (Bellefonds, 2023).</p> <p>Frequency: Can occur about every 2 to 3 minutes.</p> <p>Strength: intense and painful</p>	<p>This phase is the final part of the active phase of labor and can be the most intense and painful part (Durham et al., 2023). Patients could experience pressure in their back and rectum (Bellefonds, 2023). Nurses can expect 8 cm to full dilation to 10 cm in this phase (Bellefonds, 2023). Patients could also experience a physical demand and feeling drained (Bellefonds, 2023).</p>	<p>Nurses will want to support the patient to resist the urge to push until dilation is complete (Bellefonds, 2023). Other interventions could be to instruct the patient on breathing exercises, administer order for epidural if patient requests, support patient and family, and monitor FHR to evaluate how the fetus is tolerating labor (Bellefonds, 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: Stage begins when the cervix is fully dilated to 10 cm until the delivery of the baby (Durham et al., 2023).</p> <p><b>Contractions</b></p> <p>Duration: 45-60 seconds long.</p> <p>Frequency: every 3-5 minutes</p> <p>Strength: women feel an intense urge to push or bear down when the baby reaches the pelvic floor (Durham et al., 2023). Contractions are intense and may occur with greater frequency (Durham et al., 2023).</p>	<p>Signs of placental separation will be that the uterus rises upward, umbilical cord lengthens, a sudden trickle of blood is released from the vaginal opening, and the uterus changes its shape to globular (Durham et al., 2023).</p> <p>Other characteristics could be the urge for maternal to bear down and push, if mother does not have an epidural, they could feel a burning sensation as the fetus crowns, we do not want the mother to push longer than 3 hours, contractions will be intense and may occur with greater frequency, and a bloody show increase (Durham et al., 2023).</p> <p>This stage may last longer for women with epidurals, and the perineum flattens, and the rectum and vagina will bulge (Durham et al., 2023).</p>	<p>Assessment of contractions frequency, duration and intensity (Durham et al., 2023).</p> <p>Maternal vital signs, fetal response to labor via FHR, amniotic fluid with rupture of membranes, and the coping status of woman and partner all need to be assessed within this stage (Durham et al., 2023).</p> <p>Interventions: Supporting woman and partner in active decision making, supporting involuntary bearing-down efforts; encourage no pushing until strong desire or until descent and rotation of fetal head well advanced, provide instructions, assistance, pain relief, use maternal positioning to enhance descent and reduce pain, and prepare for assisting with delivery (Durham et al., 2023).</p> <p>Interventions with birth: Cleansing of perineal area and vulva, assisting with birth, suctioning of newborn, and umbilical cord clamping, providing immediate care of newborn (drying, apgar score, and identification) (Durham et al., 2023).</p>

<b>3<sup>rd</sup> Stage of Labor</b>	<b>Characteristics that could be seen</b>	<b>Expected Interventions</b>
<p>Length of stage: This stage lasts from birth of baby, until delivery of the placenta (Durham et al., 2023).</p>	<p>Healthcare professionals should see a rise of the uterus into a ball shape, lengthening of the umbilical cord at the</p>	<p>Interventions: Instruct to push when separation is apparent, give oxytocin if ordered, assist</p>

	introitus, and a sudden gush of blood from the vagina (Durham et al., 2023).	mother to comfortable position, provide warm, apply ice to perineum area if episiotomy, explain assessments to come, monitor mothers' physical status, record birthing statistics, and document birth in birth book (Durham et al., 2023).
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**Reference (1):****Complete the Following: (10 points)****Submit in-text citations in APA format**

<b>Diagnostic Test</b>	<b>Description and Rationale</b>	<b>Clinical findings</b>
Non-stress test (NST)	An NST is a screening tool that uses FHR patterns and accelerations as an indicator of fetal well-being (Durham et al, 2023). This test is an accepted method for evaluating fetal status. We could see this done for mothers with a high-risk complication such as HTN, DM, multiple gestations, trauma, or bleeding (Durham et al, 2023). Mothers may also report lack of fetal movement and placental abnormalities could also be a reason to have this test done (Durham et al, 2023).	The NST is considered reactive when the FHR increases 15 beats above baseline for 15 seconds twice or more than 20 minutes (Durham et al, 2023). If fetus is <32 wks gestation, two accelerations peaking at least 10 bpm above baseline and lasting 10 secs in a 20 min period is reactive (Durham et al, 2023). Nonreactive NST is without FHR accelerations in 40 min. (Durham et al, 2023). If NST has multiple variable decelerations, lasting longer than 30 min, further assessment of amniotic fluid or prolonged monitoring needs done (Durham et al, 2023).
Biophysical profile (BPP)	This is an ultrasound assessment of the fetal status along with an NST. These are indicated in pregnancies with a high risk of fetal hypoxia and placental insufficiency such as DM or HTN (Durham et al, 2023).	Fetal breathing movements: one or more rhythmic breathing movements of 30 seconds or movement within 30 min. is expected (Durham et al, 2023). Fetal movement: looking for 3 or more discrete body or limb movements in 30 minutes (Durham et al, 2023).

		<p>Fetal tone: one or more fetal extremity extensions with return to fetal flexion or opening and closing of the hand expected within 30 min (Durham et al, 2023).</p> <p>Amniotic fluid volume: a pocket of amniotic fluid that measures at least 2 cm in two planes perpendicular to each other is expected (Durham et al, 2023).</p> <p>NST reactive.</p>
<p>Ultrasound (US)</p> <ul style="list-style-type: none"> <li>• 1<sup>st</sup> Trimester</li> <li>• 2<sup>nd</sup> Trimester</li> </ul>	<p>Ultrasound is the use of high-frequency sound waves to produce an image of an organ or tissue (Durham et al, 2023). A standard ultrasound in the first trimester is done to confirm pregnancy and calculate gestational age. In the second trimester, a standard ultrasound is done to evaluate fetal presentation, quantification of amniotic fluid volume, documentation of the presence or absence of cardiac activity, placental position in relationship to the cervix, appropriate fetal biometric measurements, and determination of fetal number (Durham et al, 2023).</p>	<p>1<sup>st</sup> trimester ultrasounds will identify the number and measurements of yolk sacs, gestational sacs, embryos, and fetuses. It will also be able to detect fetal cardiac activity (Durham et al, 2023). 2<sup>nd</sup> trimester ultrasounds will detect fetal number and location, fetal HR, fetal position and presentation, placental location, amniotic fluid volume assessment, biometric measurements to estimate fetal age and weight, cervical length measurement (Durham et al, 2023). Ultrasound will also be used in BPP and NST testing (Durham et al, 2023).</p>

**Reference (1):**

**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 os (Durham et al, 2023). The cervix dilates from closed (less than 1 cm in diameter) to 10 cm in diameter (Durham et al, 2023). When the cervix hits 10 cm in diameter, the cervix is completely dilated and will no longer be palpated on vaginal assessments (Durham et al, 2023). Effacement is the softening, shortening, and thinning of the cervix (Durham et al, 2023). Before the labor phase starts, the cervix is 2 to 3 cm long (Durham et al, 2023). When completely effaced, the cervix becomes paper thin (Durham et al, 2023). The degree of effacement is measured in percentages (Durham et al, 2023). These percentages go from 0% to 100%. 0% meaning no effacement, and 100% meaning completely effaced (Durham et al, 2023).

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

1. Relaxation and breathing techniques (Durham et al, 2023).
2. Positioning (Durham et al, 2023).
3. Hydrotherapy (Durham et al, 2023).
4. Warm and cold packs (Durham et al, 2023).
5. Guided imagery, relaxation, distraction, and focal points (Durham et al, 2023).

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

Baseline variability is when there is a fluctuation in the baseline of the fetal heart rate (Durham et al, 2023). These fluctuations are irregular and frequent (Durham et al, 2023). These cycles show the rise and fall of the FHR within its baseline range over a minute (Durham et al, 2023). Baseline variability is the best prediction for adequate fetal oxygenation and fetal reserve during labor (Durham et al, 2023).

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

If a mother tests positive for GBS, there is risk for premature labor and neonatal prematurity may occur (Durham et al, 2023). There is also maternal intrapartum fever for prolonged ROM for more than 12 hours (Durham et al, 2023). Transmission of GBS from mother to infant at birth is 50% to 75% probability (Durham et al, 2023). It is recommended that routine cultures of vagina and rectum should be done between 36- and 37-weeks' gestation (Durham et al, 2023). To help treat mothers that test positive, ampicillin or penicillin during labor should be administered (Durham et al, 2023). Instructions on the importance of GBS antibiotics need to be discussed (Durham et al, 2023). Nursing staff should also assess for signs and symptoms of fever or sepsis during prenatal care through delivery (Durham et al, 2023).

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

The labs that need to be completed on admission to labor and delivery are a routine urinalysis, including protein and glucose) and CBC (Durham et al., 2023). A hold clot or a type-and-screen, depending on risk profile, could also be screened (Durham et al., 2023). A syphilis screening, HbsAg screening, GBS, HIV (with woman's consent), and possible drug screening if not included in prenatal history also needs to be done on admission (Durham et al., 2023). Assessments that need to be done are a fetal assessment, assessment of psychological status, mothers' knowledge, experience, and expectations, vital signs, vaginal examinations, uterine contractions, pain level, coping ability, FHR and amniotic fluid (Durham et al., 2023). Fundal height measurements, position and station, status of membranes, and cervical dilation and degree of effacement are also important upon assessment (Durham et al., 2023).

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

The frequency, duration, tone, and intensity of contractions can be assessed by palpation (Durham et al, 2023). When the uterus contracts, palpation by the nurse is done by placing her fingertips on the fundus of the uterus and assessing the degree of tension as the contraction occurs (Durham et al, 2023).

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

Early decelerations are when there are visually apparent decrease and return of the fetal heart rate. They occur simultaneously with a contraction. The nadir occurs at the peak of the contraction (Durham et al, 2023). The cause of this could be because the fetal head is applying pressure that stimulates the vagal nerve. Another cause of this could be fetal head compression that results in an increased intracranial pressure, that decreases transient cerebral blood flow, and corresponds with a decrease in partial pressure of oxygen (Durham et al, 2023). Early decelerations are benign, and no interventions are needed (Durham et al, 2023).

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

A late deceleration is when there is a visually apparent decrease in the FHR that is symmetrical and gradual with a uterine contraction (Durham et al, 2023). The nadir of deceleration occurs after the peak of the contraction (Durham et al, 2023). These could be caused by a fetal response to transient or chronic uteroplacental insufficiency, a decrease in availability of oxygen because of uteroplacental insufficiency, or suppression of the fetal myocardium (Durham et al, 2023). The nurse should change the mothers' position to promote fetal oxygenation (Durham et al, 2023). Oxytocin needs to be discontinued to reduce uterine activity (Durham et al, 2023). Hydration is assessed and an IV bolus of fluids needs to be administered to promote fetal oxygen (Durham et al, 2023). Administration of oxygen at 10 L/min via nonrebreather face mask to improve fetal oxygen status might also be intervention needed (Durham et al, 2023).

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

A variable deceleration is a visually apparent sudden decrease in the FHR that happens in less than 30 seconds from the baseline to nadir (Durham et al, 2023). These decelerations can be periodic or episodic and may vary in duration, depth, and timing in relation to a uterine contraction (Durham et al, 2023). The decrease of the FHR is at least 15 bpm lasting at least 15 seconds but less than 2 minutes in duration (Durham et al, 2023). Causes of this could be an umbilical cord occlusion, umbilical cord compression that triggers a vagal response that shows the FHR, and/or sudden descent of the vertex late in the active phase of labor (Durham et al, 2023). Interventions for variable decelerations will be to change mothers' position to help promote fetal oxygenation, perform a sterile vaginal examination to evaluate cord and labor progress and perform fetal scalp stimulation, amnioinfusion if ordered, administer 10 L/min via nonrebreather, decrease or discontinue oxytocin, and consider the need to tocolytic to reduce uterine contractions (Durham et al, 2023).

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 contractions and increase tonicity of the uterus (Durham et al, 2023). It is used during the third stage of labor and in the immediate postpartum period to prevent

postpartum hemorrhage (Durham et al, 2023). Side effects of this drug are hypotension, tachycardia, and water retention (Durham et al, 2023). Nurses need to assess FHR in response to uterine contraction, maternal vital signs, maternal response and administer pain medications PRN, and I&O (Durham et al, 2023). Some nursing interventions would be to get a signed consent for oxytocin, monitor strength, frequency, and duration of uterine contractions, evaluate uterine resting tone by palpation, and decrease or discontinue in the event of uterine tachysystole or indeterminate or abnormal fetal status (Durham et al, 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 as a vasodilator blocking neuromuscular transmission (Durham et al., 2023). It helps slow down contractions in preterm labor and aids in lessening the intensity and frequency of contractions (Durham et al., 2023). We will also see this used with mothers that have a history of hypertension or gestational hypertension (Durham et al., 2023). Side effects are a urine output less than 25-30 mL/hr., respirations less than 12, diminished DTRs, and bradycardia (Durham et al., 2023). Nurses need to make sure they are assessing I&O hourly, DTRs, continuous FHM, respirations, BP, and heart rate (Durham et al., 2023). Accurate assessments are very important because early recognition of worsening disease could increase maternal and neonatal outcomes (Durham et al., 2023). Other nursing interventions that need to be done is to administer antihypertensives as ordered (BP higher than 160/110), assess for CNS changes including headache, visual changes, and deep tendon reflexes, assess for s/s of pulmonary edema, assess for epigastric pain or RUQ pain indicating liver involvement, daily weights to assess for fluid retention, and check urine for proteinuria (Durham et al., 2023).

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

1. Risk for decreased cardiac output related to hypotension as evidenced by the patient receiving a local anesthetic combined with an opioid (Phelps, 2023).

2. Risk for infection related to rupture of amniotic membranes as evidenced by prolonged laboring phase (Phelps, 2023).

3. Risk for acute pain related to muscle contractions as evidenced by verbalization of pain, along with moaning and crying (Phelps, 2023).

### **Attach References**

Bellefonds, C. (2023, February 24). *What are the stages of labor and how long does labor last.* What to Expect. <https://www.whattoexpect.com/pregnancy/labor-and-delivery/childbirth-stages/three-phases-of-labor.aspx>

Durham, R. F., Chapman, L. L., & Miller, C. S. (2023). *Maternal-Newborn Nursing* (4th ed.). F.A. Davis Company.

Phelps, L. L. (2023). *Nursing diagnosis reference manual* (12th ed.). Wolters Kluwer.