

## Labor & Delivery Worksheet

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

Name:

**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: Dilation during the latent phase is 0 to 5 cm (Durham et al., 2023).</p> <p>Length of stage: The mean length of the latent phase of labor is 11.8, with 95% of patients completing the latent phase by 30 hours, for primiparas and 9.3 hours, with 95% completing the latent stage by 24.5 hours, for multiparas (Durham et al, 2023).</p> <p><b>Contractions</b></p> <p>Duration: The duration of contractions is irregular, but becomes more regular as labor progresses during the latent phase (Durham et al., 2023).</p> <p>Frequency: Contractions start to increase from irregular to regular during the latent phase (Durham et al., 2023).</p> <p>Strength: The strength of contractions in the latent phase increase from slightly</p>	<p>During the latent phase, a laboring person may have blood-tinged vaginal discharge, and the membranes may be ruptured or intact. The laboring person may experience cramps, back-ache, request pain medication, be excited to begin labor, and/or talkative. The laboring person's pulse can increase due to increased cardiac output of 15-25%, gastrointestinal motility decreases, and cervical dilation from 0-5 cm is used to assess progression. The laboring person will also have increased pain as labor progresses (Durham et al., 2023).</p>	<p>Expected interventions for the laboring person include assisting with positioning, encouraging movement, avoiding the supine position, assessing the bladder status, encouraging voiding every 2 hours, assessing vital signs every hour, implementing pain control strategies, and monitoring pain levels every 30 minutes. It is important to encourage support and family involvement, work with the patient and the support system to assess needs, expectations, and desires for this labor, provide comfort measures, promote safety, and this is the best time to provide education to the laboring person. An IV is inserted for saline fluids and medications to be administered, and laboratory tests should be run. Perform a sterile vaginal exam only when necessary to prevent infection to assess cervical dilation, effacement, status of membranes, and vaginal bleeding. The laboring person's mental and emotional status should be</p>

<p>uncomfortable to painful as labor progresses toward the active phase (Durham et al., 2023).</p>		<p>monitored frequently and reviewing the birthing plan is done during the latent phase of labor.</p> <p>Expected interventions for the fetus include assessing the fetal heart rate and response to labor every 30 minutes, monitoring during position changes to assess tolerance, performing Leopold's maneuvers for fetal position, and institute uterine resuscitation interventions for category 2 and category 3 fetal heart tracings (Durham et al., 2023).</p>
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<p><b>Active phase</b></p> <p>Dilation: Dilation during the active phase is 6 to 10 cm (Durham et al., 2023).</p> <p>Length of stage: The mean rate of dilation is 1.2-1.5 cm per hour, and this can be more rapid for multiparas (Durham et al., 2023).</p> <p><b>Contractions</b></p> <p>Duration: The duration of contraction is 45-60 seconds during the active phase (Durham et al., 2023).</p> <p>Frequency: Contractions occur every 2-3 or 2-5 minutes, but no more than 5 in a 10-minute period, during the active phase (Durham et al., 2023).</p> <p>Strength: Contractions are moderate to strong and</p>	<p>Characteristics the laboring person may experience an increase in blood-tinged mucus, and the membranes may be ruptured or intact. The laboring person may turn more inward, become focused on contractions, become worried or panicked, request pain medications, and they will benefit from continuous labor support. The laboring person will experience an increase in the frequency of contractions from irregular to regular every 2-5 minutes and the fetal descent will continue. The laboring person may have increased discomfort, difficulty concentrating, bloody show, nausea, vomiting, backache, trembling, diaphoresis, feel exhausted, become more vocal with primal noises and facial expressions, and they may experience the urge to bear down or push (Durham</p>	<p>Expected interventions during the active phase include assessing the fetus every 15 to 30 minutes for low-risk patients and every 15 minutes for high-risk patients if using intermittent monitoring, monitoring vital signs every hour and temperature every 2 hours, performing necessary vaginal exams to assess cervical changes and fetal descent, pain assessment, medication administration as ordered, monitor and evaluate effectiveness of the epidural or other pain medications, and monitoring intake and output. Offering oral fluids as per orders, clear explanations and updates of progress, promoting comfort measures, assisting with elimination, encouraging breathing and relaxation techniques, communicating with other members of the healthcare teams regarding updates on</p>
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<p>increase in intensity during the active phase (Durham et al., 2023).</p>	<p>et al., 2023).</p>	<p>the patient's status, incorporating the support person in the care of the patient, adjusting the environment to promote comfort for the patient, and providing reassurance to the patient will all be necessary for the nursing staff. The nurse will also assist with positioning, while avoiding the supine position, and monitor the fetal response to position changes. Fetal interventions would be to monitor the fetal heart rate and response to labor every 30 minutes, institute resuscitation interventions for category 2 and category 3 fetal heart tracings (Durham et al., 2023).</p>
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<b>2<sup>nd</sup> Stage of Labor</b>	<b>Characteristics that could be seen</b>	<b>Expected Interventions</b>
<p>Length of stage: The length of the 2<sup>nd</sup> stage of labor is 0-2 hours, depending on the patient's status, urge to push, and risk factors. Most primiparas will deliver within 3 hours of active pushing and multi-paras will deliver within 2 hours (Durham et al., 2023).</p> <p><b>Contractions</b></p> <p>Duration: The duration of contractions during the 2<sup>nd</sup> stage of labor are 45 to 60 seconds (Durham et al., 2023).</p> <p>Frequency: Contractions occur ever 2-3 minutes with</p>	<p>Characteristics during the 2<sup>nd</sup> stage are the laboring person feeling an intense urge to bear down or push, a burning sensation as the fetus crowns, intense contractions occurring more frequently, bloody show increases, the perineum flattens and bulges, and the 2<sup>nd</sup> stage may last longer for women with epidurals (Durham et al., 2023).</p>	<p>Assessing the laboring person's vitals every hour, well-being and pain every 5-15 minutes, urge to push when the fetus reaches the pelvic floor, sterile vaginal exams when necessary to assess the patient's progression and fetal stage, bladder status, and encourage voiding every 2 hours. The laboring person may want to rest, need assistance changing positions, and assist the patient into a comfortable and effective pushing position, while changing positions as needed to help the fetus's descent. Preparing and assisting the support person for delivery and to support</p>

<p>no more than 5 in a 10 minute period during the 2<sup>nd</sup> stage of labor (Durham et al., 2023).</p> <p>Strength: The strength of contractions are intense with an urge to bear down or push (Durham et al., 2023).</p>		<p>the patient during labor and delivery. The nurse should instruct the woman to push with the urge to bear down, explain the need for vaginal examinations and ask permission, provide comfort measures, provide reassurance and encouragement, be kind and empathetic, attend to perineal hygiene as needed, advocate for the laboring person's wishes pertaining to delivery, check resuscitation equipment for the infant in ready, notify necessary staff of imminent delivery, and provide assistance, support, and encouragement to the support person as needed. Assess the fetal heart rate, response to position changes, response to labor and pushing, and institute uterine resuscitation interventions for category 2 and category 3 fetal heart tracings (Durham et al., 2023).</p>
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<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 starts after the delivery of the neonate until the delivery of the placenta. The average length of the 3<sup>rd</sup> stage of labor is 5 minutes, with 90% of laboring patient's delivering the placenta within 13-15 minutes (Durham et al., 2023).</p>	<p>Characteristics to look for are mild contractions, a gush of blood before placental delivery, the umbilical cord length increases, and the placenta is delivered. The laboring person will likely feel relief and have skin-to-skin time with the neonate (Durham et al., 2023).</p>	<p>Expected interventions are to check the placenta for complete delivery, uterine massage, and uterotonic medications as ordered. Vital sign assessments are performed every 15 minutes for the first 2 hours. Assess the laboring person's well-being, pain, and respond quickly to status changes. Fetal interventions include APGAR scoring, vitals, skin-to-skin if the neonate is</p>

		stable, keeping the neonate warm, and immediate resuscitation measures if needed (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)	NST is a screening tool that uses fetal heart rate patterns and accelerations as an indicator of fetal well-being. Acceleration in the FHR is a sign of fetal well-being. This is the most commonly used fetal surveillance and is considered noninvasive. The FHR and fetal activity is monitored with external transducers for 20 to 40 minutes (Durham et al., 2023).	Clinical findings include increases 15 beats above baseline for 15 seconds twice or more in 20 minutes. In fetuses less than 32 weeks gestation, two accelerations peaking at least 10 BPM above baseline and lasting 10 seconds in 20-minute period is reactive. 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. The presence of repetitive variable decelerations that are longer than 30 seconds requires further assessment of amniotic fluid or prolonged monitoring (Durham et al., 2023).
Biophysical profile (BPP)	A BPP is an ultrasound assessment of fetal status along with an NST. This is an intrauterine Apgar score in respond to a high proportion of false-positive NSTs and CSTs. It uses real-time ultrasound with EFM to assess NST reactive, fetal movement, tone, breathing, and amniotic fluid volume. The combination accounts for acute changes in fetal NST,	BPP consists of an NST with the addition of 30 minutes of ultrasound observation. Clinical findings are NST reactive, fetal breathing movements of one or more episodes of rhythmic breathing movements of 30 seconds or movement withing 30 minutes, fetal movement of three or more discrete body or limb movements in 30 minutes, fetal tone of one or

	<p>breathing, flexion, and extension, as well as changes influenced over time and oxygenation (Durham et al., 2023).</p>	<p>more fetal extremity extensions with return to fetal flexion or opening and closing of the hand is expected within 30 minutes, and amniotic fluid volume pocket that measures at least 2 cm in two planes perpendicular to each other. A score of 2 or 0 is assigned to each of the five components. A total score of 8/10 is reassuring, and a score of 6/10 is equivocal and may indicate possible fetal asphyxia. A score of 4/10 is nonreassuring and indicates probable fetal asphyxia, and a score of 2/10 or lower indicates almost certain fetal asphyxia, which prompts immediate delivery (Durham et al., 2023).</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>First trimester ultrasounds are performed to confirm intrauterine pregnancy, confirm fetal cardiac activity, detect multiple gestation, assessment of amnionicity and chorionicity of multiples, visualization during chorionic villus sampling, estimate gestational age, evaluate uterine structures, detect missed abortion, tubal, or ectopic pregnancy, or hydatidiform mole, evaluate vaginal bleeding, and screen for aneuploidy. This test is used for diagnostic or as an investigative tool to determine if further testing is likely necessary, how many fetuses there are, parental reassurance, and determination of risk factors</p>	<p>First trimester ultrasound clinical findings are the presence of gestational sac(s), gestational age, fetal growth, fetal anatomy, fetal cardiac activity, determination of an intrauterine pregnancy, and as an aid for ultrasound-guided procedures. Second trimester ultrasounds clinical findings are fetal number and location, fetal cardiac activity, fetal position and presentation, placental location, fetal activity, fetal growth and age, viability, cervical length measurement, modified BPP (AFI and NST), amount of amniotic fluid, visual assistance for some invasive procedures, and biophysical profile including fetal tone, movement, breathing, fluid,</p>

	<p>for the patient or fetus. Second semester ultrasounds are performed to confirm gestational age and due date, fetal weight and gestational age, placental location, detect fetal anomalies, evaluate vaginal bleeding, visualize for diagnostic tests and external version, fetal cardiac activity, and fetal number, size, position, amnionicity, and chorionicity. This test is used to screen for abnormalities to direct patient care for the patient and the fetus and to determine fetal growth and age, and how many fetuses there are (Durham et al., 2023).</p>	<p>and NST (Durham et al., 2023).</p>
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**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 estimates the dilation of the cervical opening by sweeping the examining finger from the margin of the cervical opening on one side to that on the other (Durham et al., 2023, p. 652). Dilation is measured from 0 to 10 cm (Durham et al., 2023, p. 246). Cervical effacement estimates the shortening of the cervix from 2 cm to paper thin measured by palpation of cervical length with the fingertips (Durham et al., 2023, p. 652).

2. List five possible non-pharmacological interventions assisting in relieving pain during labor. **(5 points)**

Five possible non-pharmacological interventions are relaxation and breathing techniques, massage and effleurage, sacral counterpressure, hydrotherapy, positioning, and warm and cold packs (Durham et al., 2023, pp. 281-282).

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

FHR variability refers to the fluctuation in the baseline FHR that are irregular in amplitude and frequency. Cycles portray the peak to trough of the heart rate within its baseline range over a minute. It is the most important predictor of adequate fetal oxygenation and fetal reserve during

labor. Variability can include accelerations and decelerations, which are periodic changes related to contractions and persist over time or episodic changes not associated with contractions (Durham et al., 2023, pp. 312-313).

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, with approximately 50% of women GBS positive who are colonized will transmit GBS to the neonate via vertical transmission. About 1-2% of infections result in invasive GBS with permanent neurological sequelae. To test for GBS, a swab of the patient's vagina is collected and cultured between 35-37 weeks. If the patient has a positive result and a vaginal birth, intrapartum prophylactic antibiotics are given. If a cesarean section with intact membranes is performed, antibiotics are not necessary (Durham et al., 2023, p. 206).

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

Admission labs include a CBC, a hold clot or a type-and-screen depending on risk profile, urinalysis, possible drug screen, and tests to assess for preeclampsia or other pregnancy complications may be ordered as needed (Durham et al., 2023, p. 262).

Assessments on admission would be baseline vitals, FHR, uterine contractions, review of the prenatal record, health history, and birthing plan. The nurse should assess the patient's report of onset of labor and characteristics related to contractions and rupture of membranes if applicable. A sterile vaginal exam should be performed to check cervical dilation, effacement, vaginal bleeding/discharge, and position of the baby. The nurse should palpate the patient's abdomen using the Leopold maneuver. The nurse should also check the patient's deep tendon reflexes, signs of edema, heart and lung sounds, pain and discomfort, and emotional status. The nurse should provide explanations and ask permission before procedures (Durham et al., 2023, pp. 262-67).

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

Each contraction has a resting phase or uterine relaxation period that allows the uterine muscle a pause for rest. The frequency of a contraction is the time from the beginning of one contraction to the beginning of another. It is recorded in minutes (e.g., occurring every 3 to 4 minutes). The duration is the time from the beginning of a contraction to the end of the contraction. It is recorded in seconds (e.g., each contraction lasts 45 to 50 seconds) (Durham et al., 2023, p. 245).

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

Early decelerations is a visually apparent gradual decrease in FHR from baseline to nadir taking more than 30 seconds. The nadir occurs at the same time as the peak of the contractions. Onset, nadir, and recovery match the onset, peak, and end of the contraction. These are a response to contractions when the fetal head is under pressure due to the contraction, increasing intracranial pressure, decreasing cerebral blood flow which also decreases P02. There are no interventions necessary for early decelerations (Durham et al, 2023, p. 300 and 314-315).

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

Late deceleration is a visually apparent gradual decrease of FHR from baseline to nadir taking more than 30 seconds. Nadir occurs at the peak of the contraction. Onset, nadir, and recovery occur after the respective onset, peak, and end of the contraction. It is always periodic. These are caused from a lack of oxygen and fetal intolerance to labor. Interventions would be changing position, discontinuing oxytocin, IV bolus, O2 administration, notify the provider, and preparing for delivery (Durham et al, 2023, pp. 300 and 317-318).

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

Variable decelerations are visually apparent abrupt decreases in the FHR from baseline to nadir taking less than 30 seconds. The decrease in FHR is greater or equal to 15 bpm and less than 2 minutes in duration. They can be periodic or intermittent. These are caused by cord compressions. Interventions can be position changes, sterile vaginal exam to determine cord compression if membranes are ruptured, O2 administration, decrease or discontinue oxytocin, modify pushing, decrease pain and anxiety, notify the provider, and prepare for delivery (Durham et al, 2023, pp. 300 and 314).

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 (Pitocin) and is the recommended first-line drug used to induce contractions and to increase tonicity of the uterus to control postpartum bleeding and prevent postpartum hemorrhage. It also has vasopressor and antidiuretic properties. Side effects of oxytocin are hypotension, tachycardia, and water retention (Durham et al, 2023, p. 274).

Inappropriate use of oxytocin include uterine tachysystole, uterine rupture, fetal intolerance of labor, or fetal death (Durham et al., 2023, p. 29). Nursing assessments and interventions include education to the patient about oxytocin and side effects, assessing the need for induction, taking vital signs, and monitoring FHR. If used to prevent PPH, the uterus should be midline and firm, lochia should be moderate and not heavy with minimal clots, uterine massage as needed, and closely monitor the patient (Durham et al., 2023, p. 457).

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

**Magnesium sulfate can be used as a tocolytic, but is primarily used for fetal neuroprotection and relaxes smooth muscle. Side effects of this medication include lethargy, drowsiness, flushing, diaphoresis, nausea, vomiting, headache, pulmonary edema, loss of DTRs, respiratory depression, chest pain, hypotension, cardiac arrest, and maternal death. It can cause neonate depression for the fetus. Nursing assessments and interventions remaining at bedside for loading dose, assessing vital signs, DTRs, and respiratory status. The nurse should monitor serum magnesium levels, keep calcium gluconate available for antidotal purposes, and monitor strict intake and output. When monitoring respiratory, discontinue magnesium sulfate if RR is lower than 12 breaths per minute or 4 breaths below baseline (Durham et al., 2023, p. 162).**

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

1. Risk for acute pain related to uterine contractions, and stretching of the cervix, birth canal, and introitus as evidenced by progression of labor (Durham et al, 2023, p. 243).

2. Risk for fatigue related to the child bearing process as evidenced by the duration of labor (Durham et al, 2023, p. 243).

3. Deficient knowledge related to the birthing process as evidenced by ineffective pushing (Durham et al, 2023, p. 243).

### **Attach References**

Durham, R. F., Chapman, L. & Miller, C. (2023). *Davis Advantage for Maternal-Newborn Nursing: Critical Components of Nursing Care* (4th ed., p. 481-573). F. A. Davis Company.