N432 Labor and Delivery Concept map template

Medications

Ephedrine/Sulfate (pressors): **Dose**:5-10mg, **Frequency:** every 5min/PRN **Route**: IV **Pharmacological class:** Adrenergic **Therapeutic class**: Vasopressors **Reason:** hypotension may occur due to receiving anesthesia. **Key nursing assessments**: Assess heart rate and blood pressure prior to, during, and after administration (Davis's Drug Guide, 2020).

Fentanyl (SUBSYS)/Ropivacaine (Naropin): **Dose:**2-0.2mcg/ml premix 12ml/hr., **Frequency:** Once continuous, **Route**: Injection into epidural space, **Pharmacological class**: Opioid, **Therapeutic class**: Opioid analgesic, **Reason:** Provides premedication prior to epidural procedure, **Key nursing assessments**: Monitor patients respiratory rate and Neuro status prior to and after administration (Jones & Bartlett Learning, 2022).

Lidocaine/Xylocaine: Dose:20ml, **Frequency**: Once, **Route**: Injection, **Pharmacological class**: Amide derivative **Therapeutic class:** Class 1B antiarrhythmic, local anesthetic, **Reason**: Epidural procedure, this was used as a local anesthetic, **Key nursing assessments:** Monitor patients for signs of respiratory depression, assess patient liver and renal function prior to giving the injection (Jones & Bartlett Learning, 2022).

Naloxone/Narcan: **Dose:**0.5mg, **Frequency**: Once, **Route**: IM, **Pharmacological class:** Opioid antagonist, **Therapeutic class**: Antidote **Reason**: Opioid reversal/sedation, **Key nursing assessments:** Assess the clients vitals prior to giving the medication. Monitor the client for tachycardia (Jones & Bartlett Learning, 2022).

Pitocin/Oxytocin: **Dose:**0.001-0.02 units/min, **Frequency:** Continuous, **Route**: IV, **Pharmacological class:** Oxytocic's **Therapeutic class:** Hormones **Reason**: to induce

Prenatal & Current Lab Values/Diagnostics

Prenatal labs

Group Beta Strep Swab: Negative, **Normal range:** Positive or Negative

Blood Type: A Positive, **Normal range:** A, B, AB, O

RH Factor: Positive, **Normal range:** Positive or Negative

Rubella Titer: Non-reactive, **Normal range:** Non-reactive/Immune or Non-immune.

HIV: Negative, **Normal range:** Negative

Hepatitis B & C: Non-reactive, **Normal range:** Non-reactive/Negative

Chlamydia & Gonorrhea: Negative, **Normal range:** Negative

Drug Test: Negative, **Normal:** Negative

Urine: Trace Ketones, **Normal range:** Negative, **Rational:** Patient may have ketones in urine due to dehydration. "If you have ketones in your urine during pregnancy, it may be a sign that you aren't consuming enough calories or that you have gestational diabetes" (Cleveland Clinic, 2022, para 2). "You can usually manage your ketone levels with diet and lifestyle changes or medication" (Cleveland Clinic, 2022, para 2).

Current Lab Values

RBC: 4.74mcL, **Normal range:** 3.80-5.30mcL

Hgb: 13.9g/dL, **Normal range:** 12.0-15.8g/dL

HCT: 41.2%, **Normal range:** 36.0-47.0%

Platelets: 245mcL, **Normal range:** 140-440mcL

WBC: 11.90mcL, **Normal range:** 4.00-12.00mcL

Neutrophils: 67.3%, **Normal range:** 47.0-73.0%

Lymphocytes: 24.6%. **Normal range:** 18.0-42.0%

Demographic Data

Admitting diagnosis: Labor

Secondary diagnosis: N/A

Age of client: 23

Weight in kgs: 113.4kg

Allergies: Prednisone

Date of admission: February 21,2024

Support person present: The client has her mother, grandmother and husband present.

Presentation to Labor and Delivery

Electronic Fetal Heart Monitoring: (At the beginning and the end of shift.)

Baseline EFH: 135

2nd Baseline EFH: 135

Variability: Moderate

2nd Variability: Moderate

Accelerations: Yes

2nd Accelerations: Yes

Decelerations: None

2nd Decelerations: Variable decelerations

Contractions: 1 contraction

2nd Contractions: 3 contractions

-frequency 3-4 minutes apart, 2nd set 3.5-4 minutes apart

-length 60-90 seconds, 2nd set 60-90 seconds

-strength Moderate (chin) upon palpation, 2nd set moderate (chin)

-patient's response Patient stated that her pain is tolerable and is 3/10 using the pain scale. 2nd response, patients pain level is a 2/10 using the pain scale. Patient is resting sitting up in bed and states she feels less pain after receiving the epidural.

1/2/2024

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Client is a 23year-old female, gravida1 para0. Client presented to labor and delivery with complaints of leaking fluid. The nurses assessed the client and observed positive fetal movement. L&D nurses placed the client on continuous monitoring for mom and baby. Client has had no complications throughout her pregnancy. Estimated delivery date is February 24, 2024, client is currently 39w5d.

Medical History

Prenatal History: Gravida1Para0

Previous Medical History: Gastritis, plantae fasciitis, ovarian cyst.

Surgical History: Client doesn't have any surgical history.

Family History: Brother has only one kidney, Grandmother had cancer (type of cancer not stated).

Social History: Patient states she never smoked, used drugs, or smokeless tobacco. Patient used alcohol occasionally prior to pregnancy.

Active Orders

Vitals Q4: It is important that the patients' vitals are being taken to detect abnormalities. This patient has also been experiencing episodes hypotension.

Bed rest: The doctor put bed rest in as an active order after the patient received an epidural. Epidurals can cause maternal hypotension and loss of sensation throughout the legs.

Strict intake and output Q8: Strict intake and output ensures proper hydration. Monitoring intake and output allows the healthcare team to identify any imbalances. Monitoring this also helps with determining weight loss or gain.

Monitor FHT continuous: Monitoring FHT allows the healthcare team to keep an eye on fetal well-being and observe signs of fetal distress.

Monitor uterine contractions: Monitoring uterine contractions allows the healthcare team to see how much the patient is bleeding, and to assess signs of labor progression.

Maintain IV continuous: It is important for the patient to have a continuous IV in case of a medical emergency. A continuous IV allows the patient to receive required medication and fluids.

Tachysystole management for category 1 interpretation PRN: This is an important active order because it helps the nurses to focus on fetal well-being and reduce the risk for potential complications.

Check circulation: Checking the patients' circulation ensures that blood flow is reaching all extremities.

Clear liquid diet: Patient was nauseas, and may have to have a c-section if there is no progression within the cervix. Food before a procedure is not recommended.

Continuous pulse ox: Continuous pulse ox helps nurses ensure the patients oxygen levels are within normal limits, If the patient has low O2 levels this decreases oxygen to baby.

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Stages of Labor
Stage 1 "During the first stage of labor, the fundamental change underlying the process is progressive dilation of the cervix" (Ricci et al., 2020). "Cervical dilation is gauged subjectively by vaginal examination and is expressed in centimeters" (Ricci et al., 2020). "The first stage ends when the cervix is dilated to 10 cm in diameter and is large enough to permit the passage of a fetal head of average size" (Ricci et al., 2020). "The fetal membranes usually rupture during the first stage, but they may have burst earlier or may even remain intact until birth" (Ricci et al., 2020). "For the primigravida, the first stage of labor can last up to 20 hours without being considered prolonged" (Ricci et al., 2020). The first stage of labor consists of 3 phases: latent, active and transition. During the latent phase the cervix begins to dilate and become effaced. Cervix dilates at least 3-4cm, during the active phase the cervix dilates from around 4-7cm and finally the transition phase where the cervix is 8-10cm dilated. If the patient requests an epidural, it is usually given in the first stage of labor. This nursing students' patient received an epidural after being in labor for five hours, at this time the patient is 3.5cm and 50% effaced. The epidural is usually placed in the lower back between the epidural space which surrounds the spinal cord. The patient received the epidural at 9:22am and about 30 minutes later the patients' blood pressure dropped to 88/50, the patient became pale and diaphoretic. The patient then received 10cc of ephedrine to bring back up her blood pressure. The patients' blood pressure went back normal to 110/55 after about 10 minutes. Due to the patients' blood pressure being low she was given a nonrebreather mask to ensure the baby was getting an adequate amount of oxygen due to moms' hypotension. This procedure was performed by the anesthesiologist. After the patient vitals were stable the patient stated she lost sensation in her legs from the epidural. The patient did not experience any further complications.
Stage 2 During the second stage of labor the cervix is completely dilated. At this time the baby is moving its way through the birth canal. The patients' contractions are becoming stronger and more intense throughout the second stage of labor. The patient may feel a burning sensation as crowning develops urging the mother to push. Pushing can last for a few minutes or a few hours. "In the second stage of labor, the perineum bulges, and there is an increase in bloody show" (Ricci et al., 2020). "The fetal head becomes apparent at the vaginal opening but disappears between contractions: when the top of the head no longer regresses between contractions, it is said to have crowned" (Ricci et al., 2020). This stage of labor is challenging but yet thrilling for the mother. Focusing on pushing techniques and providing nonpharmacological treatment is important in this stage; however, pain management options are available such as an epidural. Increased vaginal bleeding, a decrease in contractions, and pressure into the pelvic area can indicate that the client is progressing to the third stage of labor. "Contractions occur every 2 to 3 minutes, last 60 to 90 seconds, and are described as strong by palpation" (Ricci et al., 2020). "Parity, delayed pushing, use of epidural analgesia, maternal body mass index, birth weight, pelvis shape, occiput posterior position, and fetal station at complete dilation all have been shown to affect the length of the second stage of labor" (Ricci et al., 2020). "A longer duration of the second stage of labor is associated with adverse maternal out-comes, such as higher rates of puerperal infection, third-and fourth-degree perineal lacerations, and postpartum hemorrhage (Hutchison et al., 2019). "During this expulsive stage, the mother usually feels more in control and less irritable and agitated" (Ricci et al., 2020). She is focused on the work of pushing" (Ricci et al., 2020). Blood pressure is usually normal in the stage but it can increase, heart rate will increase due to pushing during contraction and respirations will be slightly elevated.

Stage 3

The third stage of labor begins right after the baby is born and usually lasts up to 30 minutes. During the third stage of labor the placenta will be expelled from the uterus, after the placenta is delivered the patient may experience a sense of relief and or decreased pain. Contractions are continued throughout this stage of labor to ensure appropriate delivery and detachment of the placenta. Contractions will be less intense than the first and second stage of labor. The patient may notice increased bleeding and pelvic pressure. Blood pressure, heart rate and respirations may be slightly increased due to the body's physiological response to the intense contractions and pushing. Administration of uterotonic medications can help prevent excess bleeding, by helping the uterus contract. It is essential for nurses to assess for signs of placental separation, and monitor the clients' vitals for any abnormalities. Globular shaped uterus, gush of blood, and lengthening umbilical cord are all signs that indicate the client is progressing to another stage. "The third stage of labor includes the birth of the newborn and ends with the separation and birth of the placenta" (Ricci et al., 2020). "The ideal placement for the newborn immediately following the birth is on the mother's abdomen, in skin-to-skin contact which promotes a positive transition from intrauterine to extrauterine life" (Ricci et al., 2020). "Expulsion of the placenta with controlled traction of the cord, and uterine fundal message after placental expulsion (WHO, 2018b).
Prompt and effective management is paramount to saving the lives of these women, and prevention measures can be initiated in the third stage of labor" (Ricci et al., 2020).

Nursing Diagnosis 1 Risk for infection related to ROM as evidenced by leaking fluid.	**Nursing Diagnosis 2** Risk for C-section related to slow cervical progression as evidenced by dilation going from 3cm to only 3 1/2 after 6 hours of labor.	**Nursing Diagnosis 3** Knowledge deficit related to epidural as evidenced by this being the patients first birthing experience and not fully understanding the procedure along with its side effects.
Rationale for the Nursing Diagnosis This nursing diagnosis was chosen due to an increased risk for infection. After membranes rupture, the amniotic sac (protection) that surrounds the fetus is no longer intact, which can allow bacteria to travel to the uterus causing an infection.	**Rationale for the Nursing Diagnosis** This nursing diagnosis was chosen for this patient because if labor is not progressing as expected, it may be recommended that the client has a c-section to ensure safety for both her and the baby.	**Rationale for the Nursing Diagnosis** This nursing diagnosis was chosen because this is the patients first experience with childbirth and learning about the epidural procedure allows the patient to ask questions regarding the procedure and be make a significant decision on whether she wants the epidural or not.
Interventions **Intervention 1:** Monitor the patients vitals and	**Interventions** **Intervention 1:** Encourage the mother to change positions frequently, ensure the environment is	**Interventions** **Intervention 1:** Educate the patient on possible side effects that may occur after receiving an

temperature Q2. **Rationale: "**The nurse plays a vital role during the procedure in monitoring the mother as well as the fetus, she also notes the color of the draining amniotic fluid and documents the findings in the medical chart" (Heba Mahdy et al., 2019). "After the procedure, she assesses the maternal temperature every two hours and watches out for any signs of infection" (Heba Mahdy et al., 2019). **Intervention 2:** Provide the client with education on how to recognize signs of infection and when to call the provider. **Rationale:** Adequate knowledge could translate to proper health behavior to prevent infection, including hand hygiene (Caruso, 2021).	calm and quiet. **Rationale: "**Upright/changing positions frequently not only helps women cope with the pain of labor, but the use of gravity brings the baby down, and movement of the bones of the pelvis helps the baby find the best fit" (Ondeck, 2019). **Intervention 2:** Administer Pitocin, which helps promote cervical dilation. **Rationale: "**Pitocin's naturally produced counterpart oxytocin stimulates the uterus and causes contractions during labor" (Taylor, 2023).	epidural. **Rationale: "**Epidurals may cause your blood pressure to suddenly drop. For this reason, your blood pressure will be routinely checked to help ensure adequate blood flow to your baby" (American Pregnancy Association, 2020) "If there is a sudden drop in blood pressure, you may need to be treated with IV fluids, medications, and oxygen" (American Pregnancy Association, 2020). **Intervention 2:** Provide support devices, and assist the client with mobility. **Rationale:** "An epidural anesthetic temporarily numbs the spinal nerves, which then blocks pain signals in a certain region of your body depending on where along your spine your provider injected the epidural" (Cleveland Clinic, 2021). "Epidural anesthesia can provide temporary pain relief or a temporary total lack of feeling" (Cleveland Clinic, 2021).
Evaluation of Interventions The patients' vitals will remain within normal limits along with no signs of infection.	**Evaluation of Interventions** The rate of cervical dilation will show progression, contractions will become more frequent. This will reduce the patients' risk for c-section.	**Evaluation of Interventions** The patient will be aware of the epidurals side effects, patient will ask for assistance when changing positions.

References (3):

American Pregnancy Association. (2020, September 26). *What is an Epidural*. American Pregnancy Association. https://americanpregnancy.org/healthy-pregnancy/labor-and-birth/what-is-an-epidural/

Caruso, S. (2021). *Risk for Infection Nursing Diagnosis & Care Plan*. NurseTogether. https://www.nursetogether.com/risk-for-infection-nursing-diagnosis-care-plan/

Cleveland Clinic. (2021, October 14). *Epidural: What It Is, Procedure, Risks & Side Effects*. Cleveland Clinic. https://my.clevelandclinic.org/health/treatments/21896-epidural

Cleveland Clinic. (2022, June 27). *Ketones In Urine During Pregnancy: What It Means*. Cleveland Clinic. https://my.clevelandclinic.org/health/symptoms/23157-ketones-in-urine-during-pregnancy

Davis's Drug Guide. (2020). *Davis's Drug Guide Online | DrugGuide.com*. Drugguide.com. https://www.drugguide.com/ddo/

Heba Mahdy, Glowacki, C., & Gossman, W. G. (2019, July 30). *Amniotomy*. Nih.gov; StatPearls Publishing. https://www.ncbi.nlm.nih.gov/books/NBK470167/

Jones & Bartlett Learning. (2022). *2022 Nurse's Drug Handbook.* (21st ed.). Jones & Bartlett Learning.

Ondeck, M. (2019). Healthy Birth Practice #2: Walk, Move Around, and Change Positions Throughout Labor. *The Journal of Perinatal Education*, *28*(2), 81–87. https://doi.org/10.1891/1058-1243.28.2.81

Ricci, S., Kyle, T., & Carman, S. (2020). *Maternity and Pediatric Nursing*. Lippincott Williams & Wilkins.

Taylor, M. (2023). *What Is Pitocin Induction?* What to Expect. https://www.whattoexpect.com/pregnancy/labor-and-delivery/pitocin-induction/

#definition