I. Purpose:

To provide safe, quality care for labor patients admitted to Vanderbilt University Medical Center (VUMC).

II. Policy:

This policy outlines the nursing care and management of the labor patient.

III. Additional Competencies Required:

Unit based orientation

IV. Specific Information:

A. Admission:

1. Admission history:
   a. Collect information for the obstetric admission history.
   b. Review prenatal records to help identify high risk patients.
2. Medication history
   a. Obtain list of patient’s current medications, vitamins, supplements, and alternative therapies.
   b. Document current medication list via the Pre-Admission Medication List (PAML) in the electronic medical record within 8 hours of admission.

3. Initial Vital Signs- Obtain an initial set of baseline vital signs (blood pressure, pulse, respirations and temperature) for all labor patients.

4. Physical assessment completed on admission includes
   a. Complete head to toe physical assessment;
   b. Falls Risk assessment;
   c. Braden Skin Score assessment; and
   d. Pain assessment.

5. Labor assessment
   a. Assess and document onset of labor, including date and time.
   b. Cervical exam – perform on admission when appropriate to assess dilation, effacement, station, position and fetal presentation. A cervical exam is omitted in the presence of a known placenta previa or if increased bleeding is present and placental location is unknown.
   c. Membrane status - Assess time of rupture, characteristics of fluid (color, odor, amount) and any visual confirmation of rupture.
   d. Presence or absence of bloody show - Note presence or absence of bloody show and amount.

6. Fetal Heart Rate and Uterine Activity Assessment
   a. Obtain initial 20 minute electronic fetal monitor strip
   b. If intermittent auscultation or intermittent monitoring is selected as the primary method of surveillance, the patient must have a Category I fetal heart rate tracing prior to the initiation of intermittent fetal heart rate monitoring.
   c. Initial documentation of contraction pattern includes:
      i. Frequency of contractions;
      ii. Duration of contractions;
      iii. Intensity of contractions by palpation of uterus; and
      iv. Resting tone in between contractions by palpation of uterus.

7. Notify provider immediately of any of the following signs/symptoms:
   a. Advanced dilation/Imminent delivery;
   b. Temperature >100.4;
c. Sustained heart rate >110 or <60;
d. Blood pressure >140/90 or <90/60;
e. Respiratory rate >24 or <16;
f. Category II or III fetal heart rate tracing;
g. Uterus that is not relaxed to palpation, and/or uterine tachysystole as defined as >5 uterine contractions of >30 seconds duration in a 10 minute period averaged over 30 min. when no response to nursing interventions;
h. Increased bleeding;
i. Analgesia/anesthesia needs of the patient;
j. Membrane status; and/or
k. Significant findings on physical exam.

B. On-going Assessments of Labor Patient:

1. Vital Signs
   a. Temperature
      i. If membranes are intact, assess temperature every four hours.
      ii. If rupture of membranes has occurred, assess temperature every two hours.
      iii. If the maternal temperature is elevated above 38.0 degrees centigrade (100.4 degrees Fahrenheit), assess temperature every one hour.
      iv. Notify provider of elevated temperature greater than 38.0 degrees centigrade (100.4 degrees Fahrenheit).
   b. Assessments for patients in labor without regional anesthesia
      i. Assess and document heart rate, blood pressure and respiratory rate every four hours.
      ii. Notify provider and increase frequency of assessments to at least every hour if the following occur:
         a. Sustained heart rate >110 or <60;
         b. Blood pressure >140/90 or <90/60; and/or
         c. Respiratory rate >24 or <16.
      iii. Vital sign frequency may be increased per provider order, based on patient condition.
   c. Assessment for patients laboring with regional anesthesia
      i. Refer to policy Epidural Analgesia: Nursing Care of the Pregnant Patient in Labor and Delivery.
      ii. Heart rate, blood pressure and respiratory rate are assessed and documented every hour. Immediately
following initiation or re-dosing of regional block, monitor fetal heart rate and maternal vital signs. Fetal heart rate may be assessed every 5 minutes for the first 15 minutes. More or less frequent monitoring may be indicated based on maternal or fetal factors, such as the maternal-fetal response to medication, maternal-fetal condition, and the stage of labor.

iii. Monitor pulse oximeter readings during epidural placement and for the initial hour after epidural placement. If oxygen saturation readings are stable, continue pulse oximeter may be discontinued after the initial period. Maintain pulse oximeter monitoring availability.

iv. Notify provider of any vital sign changes that occur during epidural placement or re-dosing.

2. Fetal Heart Rate – refer to policy Fetal Heart Rate Monitoring for assessment parameters to include when assessing the fetal heart rate. Fetal monitoring assessments and documentation of these assessments are performed in accordance with provider order.

a. Maternal and fetal risk factors include, but are not limited to: suspected fetal growth restriction (IUGR); preeclampsia; type 1 diabetes; abnormal antepartum test results (e.g. non-stress test, biophysical profile, contraction stress test); preterm labor; multiple gestation; maternal cardiac disease; fetal congenital defect or anomaly; and induction or augmentation of labor using oxytocin.

b. Latent Phase, Low Risk Patients (no maternal or fetal risk factors).

i. Assess and document fetal heart rate and uterine activity every thirty minutes when continuous electronic fetal heart rate monitoring is in use. Once a Category I fetal heart rate tracing is documented and the patient has been evaluated by the provider, the frequency of fetal monitoring, including assessments and documentation, may be changed only by provider order.

ii. Latent Phase, High Risk Patients (maternal and/or fetal risk factors are present)- Assess and document fetal heart rate and uterine activity every 30 minutes or per provider orders.

iii. Active Labor, Low Risk Patients (no maternal or fetal risk factors).
iv. Assess and document fetal heart rate and uterine activity every 30 minutes in the first stage of labor and every 15 minutes in the second stage of labor.

v. If intermittent auscultation or intermittent monitoring is selected as the primary method of surveillance and the patient has a Category I fetal heart rate tracing, the frequencies of assessments may be the same as those listed as above. With intermittent fetal monitoring, the nurse documents the fetal heart rate before, during and after the contraction. The FHR is auscultated for a full 60 seconds after the contraction in order to assess the fetal response to the contraction. Contractions are assessed using palpation.

c. Active Labor, High Risk Patients (maternal and/or fetal risk factors are present.
   i. Fetal heart rate and uterine activity are assessed every 15 minutes in the first stage of labor and every 5 minutes in the second stage of labor.
   ii. In the second stage of labor for high risk patients, the nurse remains at the bedside and documents a summary statement regarding fetal heart rate responses during this period.
   iii. If a summary statement is planned, the nurse documents the assessments every 15 minutes rather than every five minutes.

3. Uterine Activity
   a. Uterine activity assessments should occur with the same frequency as the fetal heart rate assessments.
   b. When an internal uterine pressure catheter (IUPC) is in place:
      i. Assess and document the uterine resting tone. Verify relaxation between contractions with palpation if there is any concern regarding uterine resting tone.
      ii. Document the Montevideo Units (MVU) with every fetal heart rate assessment.
      iii. See Appendix E in the policy Fetal Heart Rate Monitoring for a complete discussion of the use of an IUPC and how to calculate MVUs.
   c. Tachysystole Management
i. Uterine Tachysystole, defined as >5 uterine contractions of >30 seconds duration in a 10 minute period averaged over 30 min., will be identified and interventions initiated within 20 min. of its development. Interventions are based on what fetal heart rate category is identified at the time.

a) Normal FHR/Category I fetal heart rate tracing with uterine tachysystole:
   1) Assist mother to a lateral position.
   2) Administer IV fluid bolus of approximately 500 ml Lactated Ringer’s solution (defer to provider if patient has history of cardiac or renal compromise).
   3) If uterine activity has not returned to normal after 10-15 minutes, decrease pitocin, if applicable, to a rate by at least half; if uterine activity has not returned to normal after 10-15 more minutes, discontinue oxytocin until uterine activity is less than 5 contractions in 10 minutes.

b) Indeterminate or Abnormal FHR/Category II or III fetal heart rate tracing with uterine tachysystole:
   1) Discontinue oxytocin, if applicable.
   2) Assist mother to a lateral position.
   3) Administer IV fluid bolus of approximately 500 ml Lactated Ringer’s solution (defer to provider if pt. has history of cardiac or renal compromise).
   4) Administer oxygen at 10L/min via non-rebreather facemask if the interventions above do not resolve the indeterminate or abnormal FHR pattern. Discontinue oxygen as soon as possible based on the fetal heart rate pattern.
   5) Notify primary provider.
   6) If no response to above interventions, 0.25 mg terbutaline may be given intravenously or
subcutaneously, per provider order. A bedside evaluation by the provider is required prior to administration of terbutaline.

4. Amniotic Fluid Status
   a. When rupture of membranes occurs note the following:
      i. Time of Rupture
      ii. Nature of the fluid (clear, bloody, meconium stained, etc)
      iii. Amount of fluid (large, small, scant, absent)
      iv. If the rupture is spontaneous or artificial
      v. If the rupture is artificial, note by whom
      vi. If meconium is present, notify charge nurse and Neonatal Intensive Care Unit team
      vii. If the amniotic fluid changes in characteristics, notify provider of any changes.

5. Cervical Exam
   a. The nurse may perform a digital cervical exam to check dilation, effacement, position, and fetal presentation as needed to assess labor progress
   b. Assess vaginal bleeding and bloody show. Note amount and characteristics when appropriate. Notify provider if bleeding is bright red or increases in amount.
   c. Limit vaginal exams when membranes are ruptured.

6. Intake and Nutrition
   a. Patients may have clear liquid diet if ordered.
   b. Measure and record all intake.
   c. If ordered, initiate IV access with an 18 gauge catheter.
   d. IV access may be maintained as a heparin lock per orders.
   e. Administer IV fluids per orders.

7. Output and Elimination
   a. Encourage voiding every 2 to 3 hours.
   b. Measure and record urinary output.
   c. Patients with bladder distension or who are unable to void may be catheterized per order.
   d. An indwelling catheter may be considered for those patients remote from delivery and when multiple in and out catheterizations are anticipated. Placement of an indwelling catheter requires a provider order.
8. Activity
   a. Following the admission assessment, the low risk labor patient with a Category I fetal heart rate tracing or negative contraction stress test may ambulate per provider orders
   b. Instruct the patient to return to her room every 30 minutes for assessment and documentation of the fetal heart rate.
   c. High risk labor patients are not candidates for ambulation
   d. Encourage patients to change position every 1 to 2 hours if resting in the bed.

9. Pain Management
   a. Assess patient’s pain level per hospital guidelines, as outlined in the policy Pain Management Guidelines.
   b. Provide nursing care for labor patients receiving epidural analgesia as outlined in the policy Epidural Analgesia: Nursing Care of the Pregnant Patient in Labor and Delivery
   c. Options for pain management can include but are not limited to:
      i. Medicated pain management
         a) IV narcotic administration per orders.
         b) Epidural analgesia per orders.
      ii. Non-medicated pain management interventions:
         a) Breathing/relaxation
         b) Repositioning
         c) Massage
         d) Emotional support
         e) Imagery
         f) Diversion
         g) Distraction
         h) Imagery
         i) Self hypnosis
         j) Hydrotherapy during labor

10. Physical reassessment:
    a. Assess with any change in nursing provider.
    b. Assess with significant change in patient status.
    c. Assess any problem areas identified on initial assessment.

11. Falls Risk
    a. Assess patient’s fall risk per hospital guidelines, as outlined in the policy Falls Prevention Program.
    b. Reassess patient’s fall risk following epidural placement.

C. Second Stage of Labor

1. Latent or Passive Fetal Descent Phase
a. Assess the patient’s urge to push.

b. Delay maternal pushing efforts until the patient feels the urge to push unless contraindicated by maternal or fetal condition.

c. Assess the patient’s position to promote optimal maternal-fetal oxygen exchange while resting prior to pushing.

d. Assess the patient’s bladder. Encourage voiding or catheterize patient if bladder is distended.

e. Assess the patient’s pain level to ensure adequate pain relief during this phase.

2. **Active Pushing Phase**

a. Assess the patient’s progress during active pushing, including effectiveness of pushing efforts and descent of the presenting fetal part.

b. Assess fetal status during pushing, especially the fetal heart rate response to maternal pushes.

   i. To prevent signal ambiguity for viable pregnancies, a maternal pulse oximeter will be placed on every patient during the active pushing phase of the second stage of labor if an FSE is not in place.

   ii. If the patient declines use of a maternal pulse oximeter, then reassessment of maternal and fetal status is indicated when a fetal heart rate acceleration occurs with pushing during second stage of labor.

c. Support and facilitate the patient’s spontaneous pushing efforts.

d. Evaluate the effectiveness of multiple pushing positions (e.g., lateral, semi-fowler’s, upright, standing, kneeling,).

e. Evaluate fetal position during this phase and encourage frequent maternal position changes related to the fetal position to assist with fetal descent (for example if fetal position is occiput posterior, change maternal position to facilitate rotation of the fetal head).

f. Avoid uterine tachysystole during this phase

g. Continue to evaluate the maternal bladder and encourage the patient to void or provide intermittent catheterization if bladder distention is noted and the patient is unable to void.

h. Avoid fundal pressure.

i. Avoid perineal massage.

D. **Vaginal Delivery**
1. Assist providers as directed.
2. Newborn Evaluation:
   a. Notify NICU team to be present at delivery for gestational age <37 weeks, meconium stained amniotic fluid, fetal anomaly, Category III fetal heart rate tracing, and/or any other situations for which the RN or Provider feel the NICU team’s presence is indicated.
   b. Perform initial assessment and resuscitation of the newborn at delivery in accordance with the guidelines of the American Heart Association and the American Academy of Pediatrics Neonatal Resuscitation Program. Refer to Routine Newborn Care policy for assessment parameters.
   c. Assign Apgar scores at 1 minute and 5 minutes of life. If the 5 minute Apgar score is less than 7, assign additional scores every 5 minutes for up to 20 minutes. Communicate Apgar scores to the nursery team when transferring care of the newborn to the nursery staff.
   d. Weigh newborn using Labor and Delivery scale. Weight is measured in kilograms.
   e. After obtaining provider order, administer intramuscular Aquamephyton within 2 hours of birth according to policy Routine Newborn Care.
   f. After obtaining provider order, administer a 1 centimeter ribbon of sterile ophthalmic ointment containing erythromycin in the lower conjunctival sac of both eyes by 1 hour after delivery according to Routine Newborn Care.
   g. Perform blood glucose on newborn via heelstick within first hour of birth for newborns at risk for hypoglycemia, including those who are less than 37 weeks gestation, whose mothers are diabetic, who are LGA, SGA, or IUGR, and newborns who demonstrate signs and symptoms of hypoglycemia (e.g. irritability, lethargy, hypothermia, jittery, etc.). Repeat blood glucose every hour after initial test for a total of three blood glucose readings. Notify Newborn Nursery RN immediately for any newborn blood glucose reading of 40 mg/dl or less.
   h. Place identification bracelets on both ankles of the newborn. Include mother’s name, delivery date and time, and sex of newborn. Place bracelets with a matching number on the wrists of the mother and person she designates to receive other bracelet. Parent/family and infant should have matching bracelets on for the newborn's
entire stay. Newborn identification is applied in the delivery area prior to separation. Refer to policy Patient Identification.

i. Complete footprint sheet for further identification prior to newborn leaving Labor and Delivery. Include maternal fingerprint and newborn footprints.

j. Infants are transported in a bassinette.

k. Upon admission to the nursery, compare identification number on the bracelets to the identification number on the footprint sheet by Labor and Delivery staff and nursery staff.

E. Recovery Care following Vaginal Delivery (Immediate Postpartum Period, including first hour after delivery and until patient is stable)

1. Vital Signs
   a. Monitor blood pressure, pulse and respirations every 15 minutes for 1 hour or until patient is stable.
   b. Monitor temperature within one hour of delivery. If temperature is >38 degrees Celsius (> 100.4 degrees Fahrenheit), notify provider and repeat temperature in one hour. If temperature is <36 degrees Celsius (< 96.8 degrees Fahrenheit) place warm blankets on patient and monitor temperature every 30 minutes until normothermic.
   c. If the patient becomes hypotensive and symptomatic, begin fluid bolus of LR or NS, administer oxygen and notify house officer.
   d. If patient demonstrates signs and symptoms of respiratory compromise, monitor SaO2 continuously and document every 15 minutes x 4. Notify provider and apply oxygen via face mask or nasal cannula if SaO2 < 95%.

2. Maternal Assessment
   a. Complete head to toe physical assessment due to change in patient status.
   b. Perineum and Fundus
      i. Administer pharmacy prepared IV solution of 15 units of oxytocin (Pitocin®) in 250 milliliters of normal saline at a rate of 125 ml/hr via infusion pump. Postpartum oxytocin is administered immediately following delivery of the baby or placenta, based on the provider order. Record administration initiation time and document hourly intake. If patient does not have IV access,
administer 10 units of oxytocin IM per provider order.

ii. Palpate uterine fundus for position, height and tone. Uterine massage is indicated if the uterus is not firmly contracted. Support the lower uterine segment during massage to prevent uterine prolapsed or inversion.

iii. Assess amount and character of lochia noting any clots.

iv. Inspect perineum for bleeding, edema, hemorrhoids, hematoma and breakdown of episiotomy.

v. Increase frequency of assessment if hypotonic uterus or abnormal bleeding noted. Abnormal findings which may require intervention include fundus above the umbilicus; fundus deviated to right or left, fundus soft or boggy to palpation, presence of clots > 1-2cm, or bleeding which soaks one or more peripads in less than one hour.

vi. Apply ice pack with protective covering to perineum following vaginal delivery for the first 24 hours unless patient declines.

vii. Instruct patient to rinse perineum with warm water in pericare bottle after each void, rinsing from front to back. Change peripad and/or ice pack following each void and PRN. Report excessive bleeding (greater than one pad per hour) or pain to health care provider.

c. Input and Nutrition
   i. Assess IV site for appearances and patency initially and every two hours.
   ii. Record IV intake until IV discontinued.
   iii. Provide oral nutrition as requested and tolerated by patient, unless otherwise ordered.

d. Output and Elimination
   i. Assess for bladder distention with each fundal assessment.
   ii. 200ml and a palpable bladder is noted, the patient may be catheterized (in and out x 1).
   iii. If patient is unable to void and bladder is distended, perform in and out straight catheterization.

e. Pain- Assess patient’s pain level per hospital guidelines, as outlined in the policy, Pain Management Guidelines.

3. Maternal-infant bonding
a. Upon delivery and if maternal and infant status allows, place infant skin to skin with the patient, both covered with a blanket.
b. Initiate and assist patient with breastfeeding according to patient’s preference and if maternal and infant status allows.

4. Post Anesthesia Recover
   a. Following regional anesthesia, assess and document for return of sensory and motor function every 15 minutes until normalization or transfer to postpartum care (then resume assessment per postpartum standards).
   b. Following regional anesthesia, assess and document for return of sensory and motor function every 15 minutes until normalization or transfer to postpartum care (then resume assessment per postpartum standards).

5. Transfer to Postpartum Care
   a. Transfer patient to postpartum care after 1 hour and when patient is stable.
   b. Provide complete report using Situation, Background, Assessment, Recommendation (SBAR) format to the nurse assuming postpartum care of the patient. Refer to policy Hand-off Communication.

V. Clinical Implications:

Notify provider for any of the following:

A. Spontaneous rupture of membranes, unsure status of amniotic membranes, meconium or blood-stained amniotic fluid;
B. Vaginal bleeding beyond bloody show;
C. Vital signs outside parameters of provider orders;
D. Imminent delivery;
E. Category II or III fetal heart rate tracing;
F. Uterus that is not relaxed to palpation, and/or uterine tachysystole as defined as >5 uterine contractions of >30 seconds duration in a 10 minute period averaged over 30 min. when no response to nursing interventions;
G. Significant physical assessment findings;
H. Absence of cervical change; and/or
I. Deterioration or change in patient condition as outlined in policy Physician Notification for Change in Patient Condition.

VI. Patient/Family Education:
Educate patient/family at the level of their understanding of the following:

A. The labor plan of care;
B. Frequency of labor assessments;
C. Pain management options available; and
D. All treatments and procedures.

VII. Documentation:

Document the following per protocol listed above in the patient’s medical record:

A. Admission
   1. Obstetric Admission History
   2. Pre-Admission Medication History
   3. Initial Vital Signs
   4. Physical assessment
   5. Labor assessment
   6. Fetal heart rate and uterine activity assessment

B. On-going Assessments
   1. Vital signs
   2. Fetal heart rate
   3. Uterine activity
   4. Amniotic fluid status
   5. Cervical exam
   6. Intake and Nutrition
   7. Output and elimination
   8. Activity
   9. Pain management
   10. Physical reassessment
   11. Falls risk
   12. Medication Administration

C. Second Stage of Labor- Document interventions and assessments performed.

D. Delivery- Document delivery details in L&D Delivery Summary.

E. Recovery-Document interventions and assessments performed.

F. Document patient and family education in teaching record.
G. Initiate appropriate labor plan of care pathway and document patient’s progress on the pathway.

VIII. References:


Clinical Policy Manual:

CL 30-02.09 Falls Prevention Program

CL 30-08.04 Hand-Off Communication

CL 30-02.04 Pain Management Guidelines

CL 20-06.08 Physician Notification for Change in Patient Condition
IX. **Endorsement:**

OB Patient Care Committee

X. **Approval:**

Sandra J. Smith, RN
Manager, Labor and Delivery

Bennett Spetalnick, MD
Medical Director, Labor and Delivery

Robin Mutz, RNC, MPPM, NEA-BC
Administrative Director, Women’s Patient Care Center