

<b>TAMPA GENERAL HOSPITAL PATIENT SERVICES</b>	<b>DEPARTMENT:</b> Women's and Children's - Protocol <b>MANUAL:</b> OB Suite Standards Manual
<b>SUBJECT:</b> Intermittent Auscultation of the Fetal Heart Rate	<b>MANUAL CODE:</b> I-1 <b>PAGE:</b> 1 of 5
<b>ISSUED BY:</b> Patient Services	<b>EFFECTIVE:</b> 4/16 <b>REVISED:</b>
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**PURPOSE:** To describe the technique for intermittent auscultation (IA) of the fetal heart rate (FHR), identify the appropriate patient for IA and define criteria for continuation and discontinuation of IA.

**DEFINITION:** Intermittent auscultation with doppler is a tool for surveillance of the FHR during labor. With regard to neonatal outcomes, evidence from numerous randomized controlled trials has demonstrated IA and continuous external fetal monitoring (CEFM) are equivalent methods of Intrapartum fetal surveillance. IA offers many benefits to the laboring woman including comfort, freedom of movement, hydrotherapy, non-traditional and out of bed positioning for labor and second stage. IA additionally confers the benefit of decreased cesarean sections, operative vaginal delivery and increased patient satisfaction.

**RESPONSIBILITY:** Labor and Delivery Nursing  
Certified Nurse Midwives  
Obstetrics and Gynecology Attending and Resident Physicians

#### I. INCLUSION / EXCLUSION CRITERIA

##### A. Inclusion:

1. Gestational age 36 weeks or greater
2. Vertex presentations
3. Singleton pregnancy
4. Fetal heart rate tracing upon admission (including L&D triage) of at least 20 minutes with normal baseline rate and rhythm, presence of moderate variability (6-25 bpm). Category I

##### B. Exclusion:

1. Maternal contraindications:
  - a. Preeclampsia
  - b. Chronic uncontrolled HTN
  - c. Gestational Hypertension requiring antihypertensive therapy or evidence of growth restriction
  - d. Diabetes requiring medication
  - e. Previous cesarean in active labor or history of other significant uterine surgery
  - f. Suspected placenta abruption or placenta previa
  - g. History of or current significant cardiac disorders
  - h. Cigarette smoking greater than 1 pack per day
  - i. Current illicit drug use
  - j. Active respiratory infections including tuberculosis or influenza; or systemic illness including sepsis.
  - k. Other severe medical or obstetrical problem
2. Fetal contraindications:
  - a. Intrauterine growth restriction
  - b. Multiple gestation

- c. Gestational age less than 36 weeks
  - d. Isoimmunization
  - e. Major anomalies unless decided upon by OB team
  - f. In utero infections (TORCH infections)
  - g. Other severe fetal complications
3. Intrapartum contraindications:
- a. Abnormal vaginal bleeding not considered bloody show
  - b. Thick meconium (includes any meconium not considered thin)
  - c. Chorioamnionitis
  - d. Epidural anesthesia
  - e. Pitocin Induction/Augmentation.
  - f. Cervidil and Misoprostol ripening

## II. GUIDELINE

### A. Assessment:

1. Obtain baseline continuous fetal heart rate tracing of at least 20 minutes duration. If normal baseline rate and rhythm identified with the presence of moderate variability (6-25bpm) category 1 then IA may be initiated.  
If patient has a tracing in L&D triage or at Genesis HealthPark on the same day as admission that meets the above criteria for IA, then another 20 minute tracing may not need to be repeated on labor and delivery unless clinically indicated.
2. Perform Leopold's maneuvers to assist in optimal placement of auscultation device.
3. Assess uterine activity for onset, duration, and frequency of contractions.
4. Determine maternal pulse.
5. Place Doppler or US electronic fetal monitor over fetal back or chest.
6. Determine fetal heart rate by listening between contractions. Palpate maternal pulse each time auscultation is performed in order to differentiate maternal from fetal heart rate. Note and document palpable fetal movement.
7. Assess fetal heart rate for 30 to 60 seconds immediately after a uterine contraction in order to assess fetal response to the uterine contractions (UC).
  - a. Frequency of auscultation for the low risk patient is as follows:
    - 1) Latent Labor: every 1 hour
    - 2) Active Labor: every 15-30 minutes
    - 3) Second Stage (pushing phase): every 5- 15 minutes
  - b. Assess FHR before:
    - 1) Artificial rupture of membranes (AROM)
    - 2) Administration of analgesia
    - 3) Discharge of patient (CEFM may be used)
    - 4) Ambulation
  - c. Assess FHR after:
    - 1) AROM or spontaneous rupture of membranes
    - 2) Vaginal Exam
    - 3) Recognition of abnormal uterine activity patterns
    - 4) Recognition of abnormal vaginal bleeding
    - 5) Ambulation

### B. Criteria for discontinuation of IA: (see Appendix A - Auscultate FHR Algorithm)

1. Baseline FHR less than 110 bpm or greater than 160 bpm
2. Irregular rhythm

3. Decreases in FHR auscultated despite interventions
4. Presence of contraindication
5. Difficulty distinguishing between maternal heart rate and FHR
6. Unit acuity and staffing preventing adherence to intermittent auscultation protocol

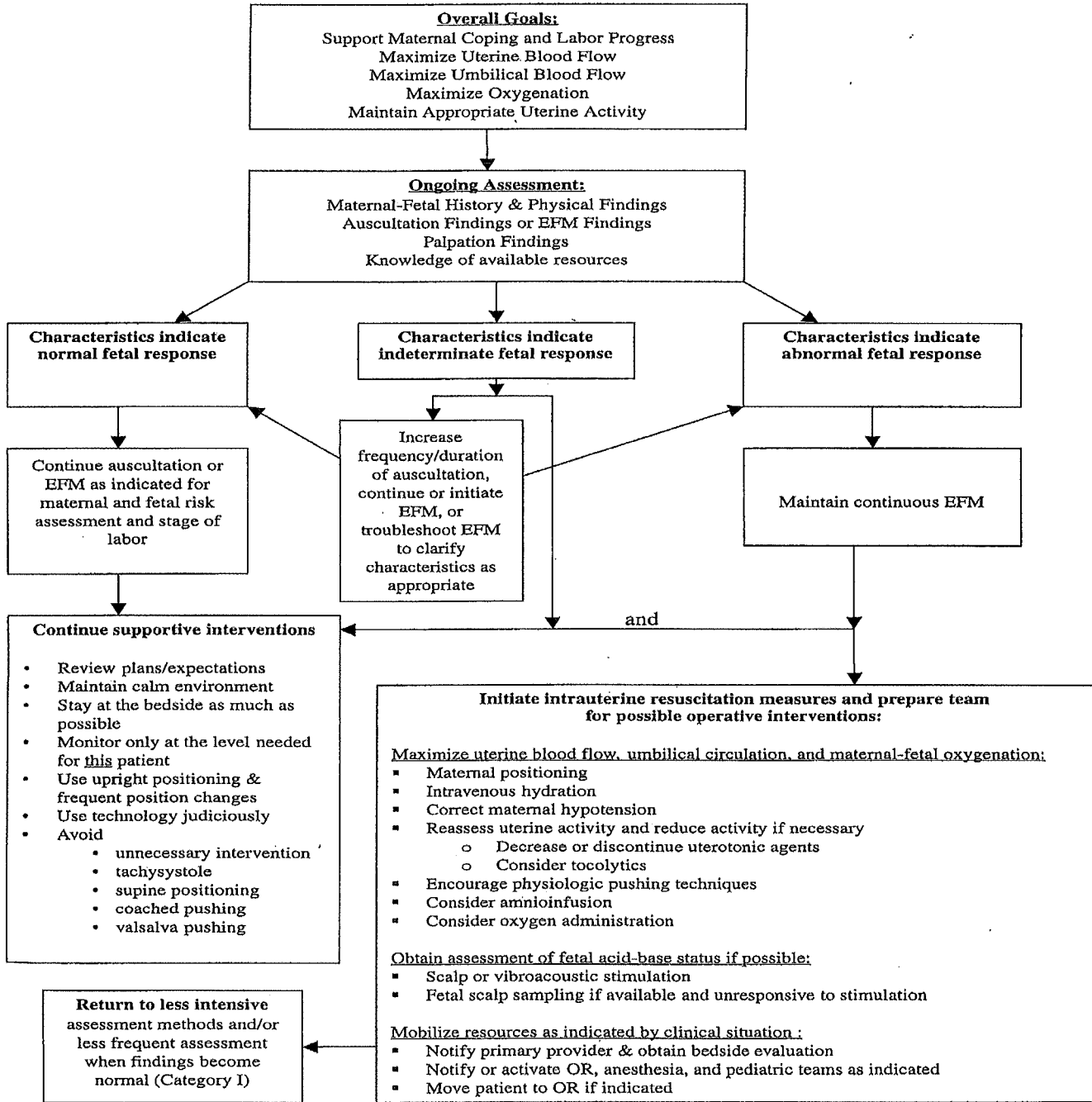
C. Special Cases:

1. Parenteral Narcotics: If a patient desires narcotics for pain relief, IA may be initiated or continued as specified in the IA guidelines.
2. Nitrous Oxide: If a patient desires Nitrous Oxide for pain relief, IA may be initiated or continued as specified in the IA guidelines.
3. Oligohydramnios: In cases of oligohydramnios not associated with other fetal or maternal complications, (for example postdates oligohydramnios in an otherwise healthy mother and baby) if a negative contraction stress test (CST) is obtained, intermittent auscultation may be used.
4. Cervical Ripening with cervical ripening balloon catheter (without Pitocin): Patient should be continuously monitored for a period of 30 minutes before and 30 minutes after placement. After that time, if the FHR meets criteria for IA then IA may be initiated or continued. If a pattern of uterine tachysytole is assessed, initiate continuous fetal monitoring in order to closely observe fetal response.

D. Documentation:

1. Definitions:
  - a. An increase shall be defined as it pertains to intermittent auscultation as an audible increase in fetal heart rate.
  - b. A decrease shall be defined as it pertains to intermittent auscultation as an audible decrease in fetal heart rate.
2. Documentation of baseline fetal heart rate, presence or absence of increases or decreases and presence of palpable fetal movement shall be documented in the EMR.

FIGURE 4-1 Fetal Heart Monitoring Decision Tree



REFERENCES:

American Academy of Pediatrics, The American College of Obstetricians and Gynecologist (2012): Guidelines for perinatal care,(7<sup>th</sup> edition).

American College of Obstetricians and Gynecologists (2009). Intrapartum fetal heart rate monitoring: Nomenclature, interpretation, and general management principles. Washington D.C.: ACOG Practice Bulletin Number 106, (Reaffirmed 2013).

Association of Women's Health, Obstetric and Neonatal Nurses (2013). Cervical ripening, labor induction and augmentation Washington, D.C.: Association of Women's Health, Obstetric and Neonatal Nurses, (4<sup>th</sup> edition).

Association of Women's Health, Obstetric and Neonatal Nurses. Fetal heart monitoring principles and practices. Washington (DC): Association of Women's Health, Obstetric and Neonatal Nurses, 2009.

Association of Women's Health, Obstetric and Neonatal Nurses (2012). Fetal Assessment: Clinical Position Statement. 2000.

APPENDIXES

Appendix A - Auscultate FHR Algorithm.

From "Fetal Heart Monitoring: Principles and Practice", N. Feinstein & P. McCartney (4th edition.) 2009, p.73.