### Electronic Fetal Monitoring exam

The chart shows the percentage distribution of questions on the Electronic Fetal Monitoring exam across the major content categories covered on the examination.

The major focus is on Pattern Recognition and Intervention. Lesser emphasis is on Physiology, and Fetal Assessment Methods with EFM Monitoring Equipment and Professional Issues having the lowest percentage of content covered on the exam.
EXAM OUTLINE

Exam Outline

This is an outline of topics and areas which may be included in the Electronic Fetal Monitoring examination.

Percentages identified for the topic areas represent a range of the number of test questions assigned to each content area and therefore might total more or less than 100 percent. These ranges do not necessarily reflect the content of future exams.

10.00 Electronic Monitoring Equipment (5%)
(External and Internal, Artifact, Signal Ambiguity, Failure and Troubleshooting)

11.00 Physiology (11%)
- Uteroplacental
- Factors affecting Fetal Oxygenation

12.00 Pattern Recognition and Intervention (70%)
- Fetal Heart Rate Baseline
- Fetal Heart Rate Variability
- Abnormal Uterine Activity
- Fetal Dysrhythmias
- Maternal Complications
- Uteroplacental Complications
- Fetal Complications
- Fetal Heart Rate Accelerations
- Fetal Heart Rate Decelerations
- Normal Uterine Activity

13.00 Fetal Assessment Methods (9%)
(Auscultation, Fetal Movement and Stimulation, Nonstress Testing, Biophysical Profile, Cord Blood and Acid Base Balance)

14.00 Professional Issues (5%)
(Legal, Ethics, Patient Safety and Quality Improvement)
EXAMINATION CONTENT

ASSOCIATED COMPETENCIES

• Apply knowledge of maternal-fetal assessment methods when selecting electronic fetal monitoring or intermittent auscultation to evaluate fetal status.

• Interpret data from the electronic fetal monitor to differentiate between actual fetal data and equipment failure.

• Use knowledge of the advantages and disadvantages of electronic fetal monitoring to provide information to the pregnant patient and her support person(s).

• Apply knowledge of fetal heart rate regulation to the interpretation of electronic fetal monitoring data.

• Identify and interpret the significance of fetal heart rate patterns.

• Interpret data from electronic fetal monitoring to differentiate between normal and abnormal fetal heart rate patterns.

• Apply knowledge of common pregnancy complications to the development of a comprehensive plan of care based on electronic fetal monitoring data.

• Apply knowledge of uteroplacental and maternal-fetal physiology as they relate to fetal oxygenation.

• Identify indications for adjunct fetal assessment and incorporate findings into the plan of care.

• Incorporate knowledge of current practice and legal practices into nursing care.
STUDY GUIDE

ELECTRONIC MONITORING EQUIPMENT

- Fetal heart rate monitoring
  - Internal
  - External
- Uterine monitoring
  - External
  - I UPC
- Equipment failure and troubleshooting
  - Artifact Detection
  - Signal Ambiguity

PHYSIOLOGY

- Uteroplacental
  - Uteroplacental circulation
  - Fetal circulation
  - Fetal heart regulation
- Factors affecting fetal oxygenation
  - Uterine activity
  - Maternal factors
  - Anesthesia
  - Drugs (Therapeutic & Recreational)
  - Placental factors
  - Umbilical blood flow
  - Acid base and cord blood gases
PATTERN RECOGNITION AND INTERVENTION

- Fetal baseline heart rate
  - Bradycardia
  - Tachycardia
  - Variability
  - Sinusoidal

- Fetal heart rate variability
  - Identification
  - Causes

- Abnormal uterine activity
  - Decreased blood flow
  - Response to hypertonus
  - Tachysystole

- Fetal dysrhythmias
  - Supraventricular tachycardia
  - Congenital heart block
  - Ectopic beats

- Maternal Complications
  - Preterm Labor
  - Hypertension
    - Gestational hypertension
    - Preeclampsia-eclampsia
    - HELLP syndrome
    - Chronic (essential)
  - Postdates Pregnancy
  - Diabetes
    - (Gestational, Type 1, Type 2)
  - Multiple gestations
  - Infections
  - Maternal obesity

- Uteroplacental complications
  - (previa, abruption)
  - Uterine rupture/scar dehiscence

- Fetal complications
  - Injury
  - Cord compression
  - Hypoxemia
  - Demise

- Fetal heart rate accelerations

- Fetal heart rate decelerations
  - Early
  - Variable
  - Late
  - Prolonged

- Normal uterine activity
  - Resting tone
  - Contractions
    - Frequency
    - Duration
    - Intensity

FETAL ASSESSMENT METHODS

- Auscultation
- Fetal movement and stimulation
- Nonstress testing
- Cord Blood Acid Base Testing
- Biophysical profile
- Fetal Acoustic Stimulation

PROFESSIONAL ISSUES

- Legal
- Ethics
- Patient safety
- Quality Improvement
The NICHD Language and Definitions are utilized in the exam as noted in the 2008, 2010 updates and 2019 reaffirmation. All EFM tracings used in the exam are set at a speed of 3 cm/min for purposes of interpretation.

The following references are used by content team members and outside item writers to generate test questions for the EFM examination. This list is not intended as an all-inclusive list of references, nor does it imply that items on the current examinations were necessarily referenced from any of these publications.