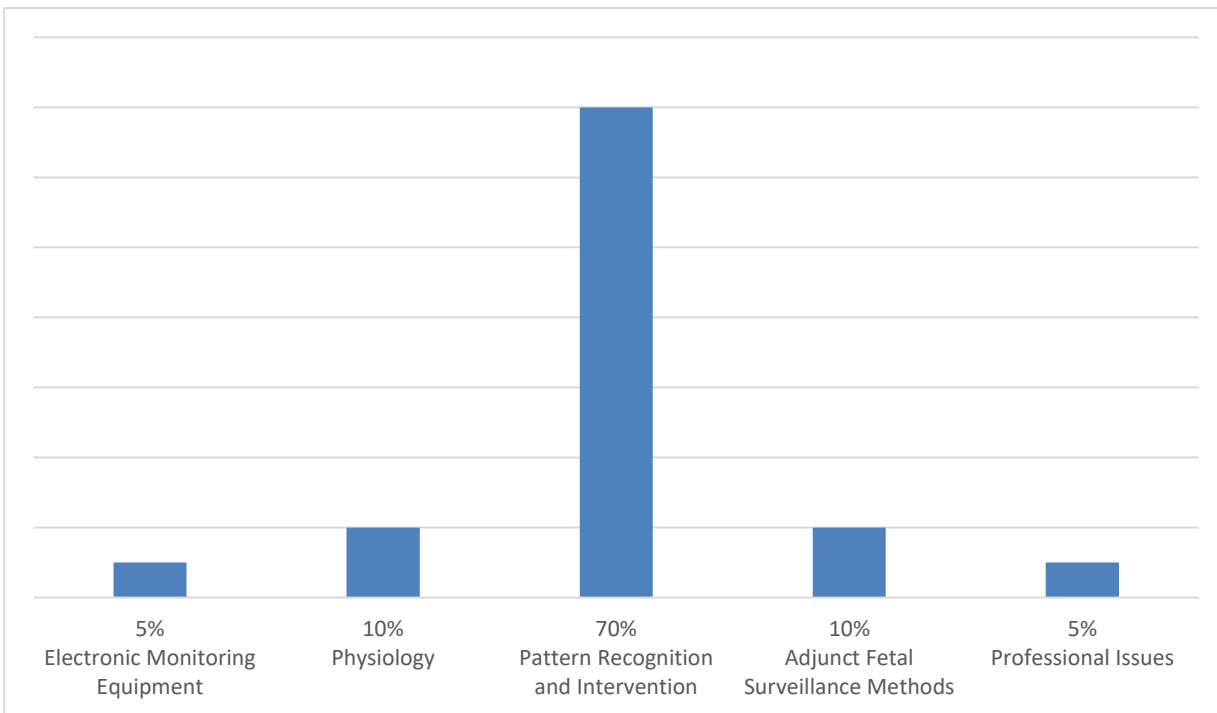


EXAMINATION CONTENT  
FOR TESTS TAKEN **BEFORE** APRIL 1, 2020



**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. EFM Monitoring Equipment and Professional Issues have the least emphasis.

# EXAMINATION CONTENT

## FOR TESTS TAKEN **BEFORE** APRIL 1, 2020

### 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%)

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- Fetal heart rate monitoring
- Uterine monitoring
- Equipment failure and troubleshooting
- Artifact Detection

#### 11.00 Physiology (10%)

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- Uteroplacental
- Uterine activity
- Factors affecting fetal oxygenation
- Effects of maternal drugs on the fetus

#### 12.00 Pattern Recognition and Intervention (70%)

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- Baseline heart rate
- Fetal heart rate patterns
- Response to tachysystole
- Dysrhythmias and other variant patterns
- Common Complications

#### 13.00 Adjunct Fetal Surveillance Methods 10%

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- Auscultation
- Fetal movement counting
- Nonstress testing
- Fetal acid base interpretation
- Biophysical profile
- Fetal Acoustic Stimulation

#### 14.00 Professional Issues (5%)

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*including: Evidence Based Practice, Legal/Ethical/ Communication Issues, Research, Patient Safety*

# EXAMINATION CONTENT FOR TESTS TAKEN **BEFORE** APRIL 1, 2020

## 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 woman 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

## FOR TESTS TAKEN **BEFORE** APRIL 1, 2020

### ELECTRONIC MONITORING EQUIPMENT

- Fetal heart rate monitoring
  - Internal
  - External
- Uterine monitoring
  - External
  - IUPC
- Equipment failure and troubleshooting
- Artifact Detection

### PHYSIOLOGY

- Uteroplacental
  - Uteroplacental circulation
  - Fetal circulation
  - Fetal heart regulation
- Uterine activity
  - Resting tone
  - Contractions
    - Frequency
    - Duration
    - Intensity
- Factors affecting fetal oxygenation
  - Uterine activity
  - Maternal factors
  - Anesthesia
  - Drugs (Therapeutic & Recreational)
  - Placental factors
  - Umbilical blood flow
  - Acid base and cord blood gases
- Effects of maternal drugs on the fetus

### PATTERN RECOGNITION AND INTERVENTION

- Fetal baseline heart rate
  - Bradycardia
  - Tachycardia
  - Variability
  - Sinusoidal
- Fetal heart rate patterns
  - Accelerations
  - Decelerations
    - Early
    - Variable
    - Late
    - Prolonged

- Response to tachysystole
- Dysrhythmias and other variant patterns
  - Supraventricular tachycardia
  - Congenital heart block
  - Ectopic beats
- Common Complications
  - Preterm Labor
  - Hypertension
    - Gestational hypertension
    - Preeclampsia-eclampsia
    - HELLP syndrome
    - Chronic (essential)
  - Postdates Pregnancy
  - Diabetes
    - (Gestational, Type 1, Type 2)
  - Placental disorders
    - (previa, abruption)
  - Uterine rupture/scar dehiscence
  - Infections
  - Multiple gestations
  - Maternal Obesity

### ADJUNCT FETAL SURVEILLANCE METHODS

- Auscultation
- Fetal movement counting
- Nonstress testing
- Fetal acid base interpretation
- Biophysical profile
- Fetal Acoustic Stimulation

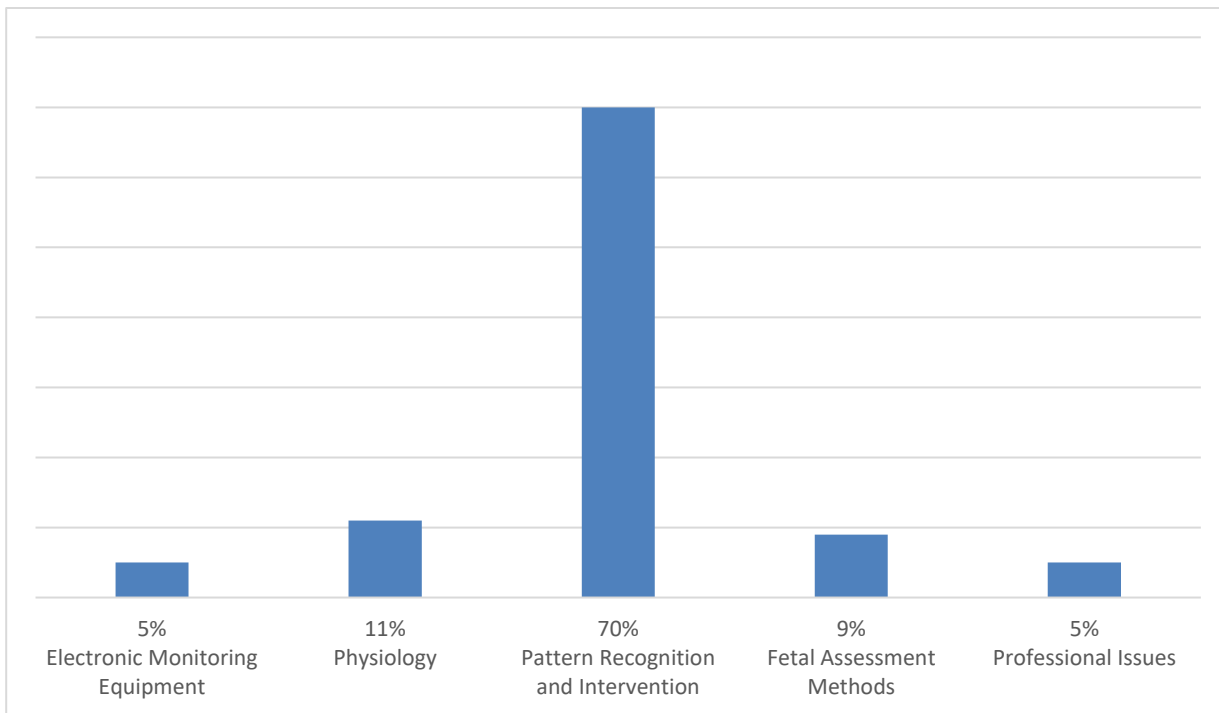
### PROFESSIONAL ISSUES

- Evidence Based Practice
- Legal
- Ethical
- Communication Issues
- Research
- Patient safety

EXAMINATION CONTENT  
FOR TESTS TAKEN **ON/AFTER** APRIL 1, 2020



**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. EFM Monitoring Equipment and Professional Issues have the least emphasis.

# EXAMINATION CONTENT

## FOR TESTS TAKEN **ON/AFTER** APRIL 1, 2020

### 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%)

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(External and Internal, Artifact, Signal Ambiguity, Failure and Troubleshooting)

#### 11.00 Physiology (11%)

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Uteroplacental

Factors affecting Fetal Oxygenation

#### 12.00 Pattern Recognition and Intervention (70%)

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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%)

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(Auscultation, Fetal Movement and Stimulation, Nonstress Testing, Biophysical Profile, Cord Blood and Acid Base Balance)

#### 14.00 Professional Issues (5%)

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(Legal, Ethics, Patient Safety and Quality Improvement)

# EXAMINATION CONTENT FOR TESTS TAKEN **ON/AFTER** APRIL 1, 2020

## 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 woman 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

## FOR TESTS TAKEN **ON/AFTER** APRIL 1, 2020

### **ELECTRONIC MONITORING EQUIPMENT**

- Fetal heart rate monitoring
  - Internal
  - External
- Uterine monitoring
  - External
  - IUPC
- 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



# STUDY GUIDE

## FOR TESTS TAKEN ON/AFTER APRIL 1, 2020

### 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

## STUDY RESOURCES

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**THE NICHD LANGUAGE AND DEFINITIONS ARE UTILIZED IN THE EXAM AS NOTED IN THE 2008, 2010 UPDATES AND 2015 REAFFIRMATION. ALL EFM TRACINGS USED IN THE EXAM ARE SET AT A SPEED OF 3CM/MIN FOR PURPOSES OF INTERPRETATION**

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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.

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