Maternal-Fetal Medicine Qualifying Exam Blueprint and Topics

The content for the Qualifying Examination will be based on the blueprint for Maternal-Fetal Medicine. The major categories and subcategories are shown below, including the percentages of the categories. The questions will be in a multiple-choice, one best answer format.

Medical Complications of Pregnancy (30%)

- Medical Disorders
  - Evaluate, diagnose, and manage medical disorders
  - Provide preconception, post-delivery counseling (including contraception) for patients with medical disorders
  - Counsel patients about maternal physiology, fetal and neonatal implications of their medical condition(s)
  - Counsel patients on impact of medical disorders on delivery timing
  - Counsel patients with medical disorders regarding drugs and biologics
  - Manage antenatal care for patients with medical disorders
  - Manage intrapartum and postpartum care for patients with medical disorders

- Critical Care
  - Evaluate and diagnose critical care conditions
  - Manage critical care conditions and interpret hemodynamic monitoring
  - Identify critically ill patients and facilitate transfer to higher level of care
  - Manage antenatal care and delivery timing for critically ill patients
  - Manage intrapartum and postpartum care for critically ill patients
  - Counsel critically ill patients regarding drugs and biologics
  - Manage massive obstetric hemorrhage
  - Manage obstetric coagulopathy

Obstetric Complications (30%)

- Preterm Labor and Preterm Premature Rupture of Membranes (PPROM)
  - Identify risk factors for preterm birth
  - Counsel patients on risk-reduction strategies for preterm birth
  - Counsel patients on limits of viability, prognosis, and management
  - Manage PPROM
  - Manage preterm labor and delivery
  - Manage cervical insufficiency

- Hypertensive Disorders
  - Manage hypertensive disease in pregnancy
  - Manage preeclampsia
  - Manage eclampsia

- Multiple Gestation
  - Counsel and manage patients on associated complications and pregnancy outcomes based on chorionicity for twin gestations
  - Counsel and manage high-order multiple gestations
• Counsel patients on indications and risks associated with fetal reduction

• Fetal Demise
  • Provide preconception counseling for recurrent pregnancy loss
  • Evaluate and manage patients with a fetal demise and/or recurrent pregnancy loss
  • Evaluate and manage patient for bereavement and/or postpartum depression

• Procedures Relating to Obstetrical Complications
  • Amniocentesis and amnioreduction for fetal lung maturation
  • External cephalic version
  • Peripartum hysterectomy
  • Cervical cerclage
  • Chorionic villus sampling
  • Cordocentesis and fetal transfusion

• Obstetric Anesthesia
  • Counsel medically complicated patients regarding the different anesthetic options including benefits, risks, and contraindications (e.g. systematic analgesia and sedation, general anesthesia, regional anesthesia); for example, cardia arrest, respiratory arrest, aspiration pneumonitis, hypotension, high spinal or total spinal, convulsions, neuropathy, headaches, hypothermia
  • Identify, diagnose, and co-manage anesthetic complications (e.g. cardia arrest, respiratory arrest, aspiration pneumonitis, hypotension, high spinal or total spinal, convulsions, neuropathy, headaches, hypothermia)

• Management of Obstetrical Complications
  • Amniotic fluid embolism (AFE)
  • Acute fatty liver of pregnancy (AFLP)
  • Placental abruption
  • Abnormal placentation (e.g. accreta, increta, percreta, vasa previa, and placenta previa)
  • Gestational trophoblastic disease
  • Ruptured uterus
  • Cholestasis of pregnancy
  • Uterine anomalies
  • Ovarian masses
  • Dermatologic conditions (e.g. PUPPS, herpes gestationis)
  • Fetomaternal hemorrhage
  • Trauma
  • Abnormally implanted pregnancies (abdominal, cervical, and c-section scar)

Fetal Complications and Prenatal Diagnosis (25%)

• Ultrasound
  • Perform and interpret 1st trimester ultrasound for singleton and multiple gestations
  • Perform and interpret 2nd and 3rd trimester ultrasound
  • Recognize normal and abnormal maternal, fetal, and placental anatomy
  • Apply knowledge of the limitations of ultrasound to determine need for additional imaging modalities
- Determine indication for and perform Doppler studies (umbilical artery and MCA, color, m-mode)
- Determine indication for and perform 3D and 4D ultrasound
- Perform and interpret cervical length assessment
- Manage disorders of amniotic fluid volume
- Perform and interpret fetal echocardiography
- Perform ultrasound assessment of chorionicity

• Evaluation, Management, and Diagnosis of Fetal Complications
  - Fetal structural abnormalities
  - Fetal growth restriction
  - Genetic disorders (e.g. chromosomal abnormalities, DiGeorge’s, skeletal dysplasia, syndromes)
  - Fetal hydrops
  - Isoimmunization
  - Alloimmune thrombocytopenia
  - Fetal infections

Genetics and Genomics (10%)

• Obtain a genetic history and perform a three-generation pedigree, perform preconception genetic counseling, and counsel patients on Mendelian patterns of inheritance (e.g. autosomal dominant, autosomal recessive, co-dominant, X-linked recessive, X-linked dominant) and non-Mendelian patterns of inheritance (e.g. trinucleotide, germline mosaicism, multifactorial and polygenic inheritance)
• Counsel patients on benefits and limitations of PGS/PGD (preimplantation genetic diagnosis)
• Counsel patients on and perform expanded and ethnicity-based carrier screening
• Counsel patients on different methods of aneuploidy screening and interpret results
• Counsel patients on prenatal testing (e.g. fetal karyotype, chromosomal microarray, biochemical and molecular tests, whole exome sequencing)

Core Competencies and Cross Content (5%)

• Ethics and Professionalism
  - Systematically engage in practice review to identify health disparities
  - When engaged in shared clinical decision making, incorporate patient, family, and cultural considerations in making treatment recommendations
  - When providing care for patients, consider psychological, sexual, and social implications of various treatment options

• Patient Safety
  - Systematically analyze the practice for safety improvements (e.g. root cause analysis)
  - Systematically engage in practice reviews for safety improvements (e.g. root cause analysis)
  - Incorporate the standard use of procedural briefings, “time outs”, and debriefings in clinical practice
  - Participate in the review of sentinel events, reportable events, and near misses
  - Implement universal protocols (e.g. bundles, checklists) to help ensure patient safety
• Interpersonal and Communication Skills
  o Communicate to patient and family regarding adverse outcomes and medical errors
  o Demonstrate sensitivity and responsiveness when communicating with a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation
  o Provide comprehensive information when referring patients to other professionals

• Systems-Based Practice
  o Incorporate considerations of cost awareness and risk-benefit analysis in patient care
  o Provide care with multidisciplinary teams to promote patient safety and optimize patient outcomes

• Practice-Based Learning and Improvement
  o Design or participate in practice or hospital quality improvement activities

• Evidence-Based Medicine
  o Incorporate evidence-based practices and national guidelines to improve practice patterns and outcomes
  o Implement evidence-based protocols to enhance recovery after surgery (ERAS)