

Obstetrics and Gynecology: Ultrasound Rotation Objectives (Foundations of Discipline)

CanMEDS Framework: Medical Expert, Communicator, Collaborator, Leader, Health Advocate, Scholar, Professional.

Ultrasound Learning Objectives

This rotation is intended to provide the resident with a clinical opportunity to develop a working level of knowledge of a prenatal assessment of fetal wellbeing. It is recognized that the resident may not be exposed to all elements of these objectives; however, at the end of the rotation, the resident should demonstrate knowledge or ability in the following:

Medical Expert

1. Demonstrates technical competence in the following ultrasound procedures:
 - 1.1 Calculation of the fetal heart rate (M Mode)
 - 1.2 Biophysical Profile
 - 1.3 Fetal Biometry
 - 1.4 Amniotic Fluid volume estimation
 - 1.5 Determination of fetal position
 - 1.6 Determination of Placental position
 - 1.7 Determination of Gestational age in the first trimester
 - 1.8 Identification of intrauterine pregnancy in the first trimester
2. Clearly understands the limitations of Ob ultrasound in prenatal screening and diagnosis.
3. Demonstrates understanding of ultrasound physics and instrumentation, including:
 - 3.1 Transducer choice and frequency: 2D, greyscale/Doppler.
 - 3.2 Display: greyscale, M mode, colour, and pulsed wave Doppler.
 - 3.3 Image orientation, image optimization, TGC, gain, and focus.
 - 3.4 Artifacts: identification and compensation, 2D, colour, and spectral display.
4. Obtains a history from the patient that is relevant to the specific type of ultrasound to be planned.

Procedural Skills:

- FHR assessment, BPP
- Fetal Number and Position
- Fetal Presentation
- Placental Location
- Biophysical Profile for Fetal well Being

Communicator

1. Under supervision of the MFM, the resident communicates findings of the ultrasound to the patient.
2. Documents ultrasound findings as part of the patients' medical record.

Collaborator

1. Demonstrates respect when working with residents, consultant Obstetricians, family doctors, and specialists in other fields.
2. Consults effectively with other physicians, health care providers, and contributes to a multidisciplinary health care team.
3. Works with ultrasound technologists to learn best practices in image optimization and image acquisitions.
4. Collaborates with other specialists as it relates to applying results of ultrasound findings for managing the patients' care plan.

Leader

1. Recognizes and applies quality assurance checks with regards to ultrasound imaging.
2. Demonstrates an understanding of the requirements necessary to have an ultrasound unit.
3. Manages time effectively in the performance of ultrasound exams.

Rotation Information

Rotation Contact:

Dr. Venu Jain

Reading material:

See resident Google drive.

Rotation duration:

One Block

Vacation and time off:

See PARA guidelines and resident vacation policy.

Review of rotation objectives:

Rotation objectives should be reviewed with the resident soon after their rotation begins.

Assessment:

There is a point of care ultrasound exam at the end of this rotation.

EPAs

During this rotation, the following EPAs Should be achieved:

Foundations of Discipline:

FD 2 Antenatal assessment of fetal wellbeing (FHR assessment, BPP).

There are no Surgical foundations EPAs mapped to this block but should be considered when on call. See relevant objectives for R1 obgyn

Health Advocate

1. Understands and applies the ALARA (as low as reasonably achievable) principle when performing an ObGyn ultrasound.
2. Demonstrates an understanding of ultrasound safety as it relates to the Bioeffects of Mechanical and thermal energy.
 - 2.1 Defines thermal index and Mechanical indexes
 - 2.2 Optimizes ultrasound settings to maintain appropriate Thermal and Mechanical Index when scanning Obstetrical Patients.
3. Practices wise choices to minimize unnecessary ultrasounds for ObGyn patients.
4. Understands that ultrasound is a medical test and will not be for entertainment or gender determination (unless clinically indicated).

Scholar

1. Understands the physics of ultrasound
2. Completes the following modules on the ultrasound simulator:
 - 2.1 Environment (Amniotic fluid volume, fetal position, placental position, cervical length)
 - 2.2 First trimester (dating) scan
 - 2.3 Fetal Biometry
3. Basic Gyne imaging
4. Critically appraises the literature to understand best practices in ObGyn Ultrasound.
5. Contributes to teaching other learners, including nurses and medical students, junior residents around principles and practice of ultrasound, focusing on the Point of Care Ultrasound.
6. Develops a personal learning strategy to build and maintain technical skills as it relates to ultrasound.

Professional:

1. Endeavor to monitor learning by regularly attempting EPAs.
2. Understands ethical principles as it relates to Gender determination on Obstetrical Ultrasound (Autonomy).
3. Maintains Patient confidentiality as it relates to:
 - 3.1 Discusses ultrasound image findings as part of the patient's care plan.
 - 3.2 Using patient imaging as part of educational presentations (removing identifiers).
4. Maintains patient autonomy as it relates to the performance of ultrasound exams.

CanMEDS Framework: Medical Expert, Communicator, Collaborator, Leader, Health Advocate, Scholar, Professional.

Revisions	Approved at RPC Meeting
CanMEDS Roles Updated	December 16, 2019
Reviewed, new coordinator	June 6, 2021