**Ultrasound Obstetrics and Gynecology Rotations**

Residents will perform obstetrical ultrasounds throughout the four years of residency. There are three rotations through which formal teaching is achieved:

- PGY-I during the Reproductive Endocrinology/Infertility, Genetics, and Breast Disease rotation
- PGY III during the Antepartum rotation
- PGY IV during the Genetics rotation

**PGY-I**

**COMPETENCY 1. Patient Care,**

Provide patient centered care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

Residents must be able to:

- communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families.
- gather essential and accurate information about their patients;
- make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment;
- develop and carry out patient management plans;
- counsel and educate patients and their families;
- use information technology to support patient care decisions and patient educations’
- competently perform all medical and invasive procedures considered essential for the area of practice;
- provide health care services aimed at preventing health problems or maintaining health;
- work with health care professionals, including those from other disciplines, to provide patient-focused care.

A first year resident should be able to:

- Understand the basic operation of an ultrasound machine and the principles of ultrasonography
- Understand the indications for an ultrasound examination
- Perform a Level 1 obstetrical examination
- Determine fetal number
- Determine fetal presentation
- Determine amniotic fluid volume
- Determine four chambers of the heart
- Determine placental location and grade
• Measure BPD, OFD, AC, FL and determine gestational age based on these measurements
• Prepare a standardized report for the examination
• Understand the indications for a vaginal ultrasound
• Perform a basic vaginal ultrasound

COMPETENCY 2. Medical Knowledge.
Understand the scope of established and evolving biomedical, clinical and cognate sciences, as well as the application of this knowledge to patient care.

Residents expected to:

• demonstrate an investigatory and analytic thinking approach to clinical situations;
• know and apply the basic and clinically supportive sciences which are appropriate to their discipline.

• The resident will know the basic physics of sound wave propagation through tissue.
• The resident will use this knowledge to select proper transducer frequencies to enhance visualization with ultrasound
• The resident will be able to “set up” the ultrasound machine and select different settings to enhance visualization
• The resident will describe the Doppler effect and how it is used in obstetric ultrasound

COMPETENCY 3. Practice-based Learning and Improvement.
Demonstrate knowledge, skills and attitudes needed for continuous self-assessment that includes the investigation and evaluation of care for patients, the appraisal and assimilation of scientific evidence, and improvements in one’s patient care practice.

Residents are expected to:

• analyze practice experience and perform practice-based improvement activities using a systematic methodology;
• locate, appraise, and assimilate evidence from scientific studies related to their patients’ health problems;
• obtain and use information about their own population of patients and the larger population from which their patients are drawn;
• apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness;
• use information technology to manage information, access on-line medical information and support their own education;
• facilitate the learning of students and other health care professionals.
• attend the didactic lectures
• attend and participate in the antepartum and cesarean section conferences
• participate in the Residents Study Groups

COMPETENCY 4. Interpersonal and Communication Skills.
Demonstrate interpersonal and communication skills that result in information exchange and partnering with patients, their families and professional associates.

Residents are expected to:

• create and sustain a therapeutic and ethically round relationship with patients;
• use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills;
• work effectively with others as a member or leader of a health care team or other professional group.

COMPETENCY 5. Professionalism.
Demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to diversity.

Residents are expected to:

• demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and on-going professional development;
• demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices;
• demonstrate sensitivity and responsiveness to patients’ culture, age, gender, and disabilities

COMPETENCY 6. System-Based Practice.
Understand how to practice quality health care and advocate for patients as manifested by actions that demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.

Residents are expected to:
understand how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice;

know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources;

practice cost-effective health care and resource allocation that does not compromise quality of care;

advocate for quality patient care and assist patients in dealing with system complexities

know how to partner with health care managers and health care providers to assess, coordinate, and improve health care and know how these activities can affect system performance

PGY-II and PGY-III
Ultrasound Obstetrics and Gynecology Rotations

COMPETENCY 1. Patient Care.
Provide patient centered care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

Residents must be able to:

- communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families;
- gather essential and accurate information about their patients;
- make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment;
- develop and carry out patient management plans;
- counsel and educate patients and their families
- use information technology to support patient care decisions and patient education;
- perform competently all medical and invasive procedures considered essential for the area of practice;
- provide health care services aimed at preventing health problems or maintaining health;
- work with health care professionals, including those from other disciplines, to provide patient-focused care.
A second and third year resident should be able to:

- Meet all the learning objectives for a first year resident
- Understand and know the indications for a targeted (Level II) ultrasound examination
- Understand the indications for a Doppler examination
- Know and understand indications for amniocentesis, CVS, cordocentesis and PUBS
- Delineate the anatomy of the fetal brain, vertebral column, heart, abdominal wall, skeletal system, GI and GU systems
- Identify major congenital anomalies (ie, anencephaly)
- Prepare a standardized report of a Level II ultrasound
- Diagnose placental abnormalities (previa)
- Be able to diagnose pelvic pathology by vaginal ultrasound

COMPETENCY 2. Medical Knowledge.
Understand the scope of established and evolving biomedical, clinical and cognate sciences, as well as the application of this knowledge to patient care.

Residents are expected to:

- demonstrate an investigatory and analytic thinking approach to clinical situations;
- know and apply the basic and clinically supportive sciences which are appropriate to their discipline.
- The resident will know the basic physics of sound wave propagation through tissue
- The resident will use this knowledge to select proper transducer frequencies to enhance visualization with ultrasound
- The resident will be able to “set up” the ultrasound machine and select different settings to enhance visualization
- The resident will describe the Doppler effect and how it is used in obstetric ultrasound

COMPETENCY 3. Practice-based Learning and Improvement.
Demonstrate knowledge, skills and attitudes needed for continuous self-assessment that includes the investigation and evaluation of care of patients, the appraisal and assimilation of scientific evidence, and improvements in one’s patient care practice.

Residents are expected to:

- analyze practice experience and perform practice-based improvement activities using a systematic methodology;
- locate, appraise, and assimilate evidence from scientific studies related to their patients’ health problems;
- obtain and use information about their own population of patients and the larger population from which their patients are drawn;
- apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness;
- use information technology to manage information, access on-line medical information and support their own education;
- facilitate the learning of students and other health care professionals
- attend the didactic lectures
- attend and participate in the antepartum and cesarean section conferences
- attend journal clubs/clinical expert series
- participate in the Residents Study Groups

**COMPETENCY 4. Interpersonal and Communication Skills.**
Demonstrate interpersonal and communication skills that result in information exchange and partnering with patients, their families and professional associates.

Residents are expected to:

- create and sustain a therapeutic and ethically sound relationship with patients;
- use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills;
- work effectively with others as a member or leader of a health care team or other professional group.

**COMPETENCY 5. Professionalism.**
Demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to diversity.

Residents are expected to:

- demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and on-going professional development;
- demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices;
- demonstrate sensitivity and responsiveness to patients’ culture, age, gender, and disabilities
Residents are expected to:

- understand how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice;
- know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources;
- practice cost-effective health care and resource allocation that does not compromise quality of care;
- advocate for quality patient care and assist patients in dealing with system complexities;
- know how to partner with health care manager and health care providers to assess, coordinate, and improve health care and know how these activities can affect system performance.

PGY-IV

Ultrasound Obstetrics and Gynecology Rotations

COMPETENCY 1. Patient Care.
Provide patient centered care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

Residents must be able to:

- communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families;
- gather essential and accurate information about their patients;
- make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment;
- develop and carry out patient management plans;
- counsel and educate patients and their families;
- use information technology to support patient care decisions and patient education;
- perform competently all medical and invasive procedures considered essential for the area of practice;
- provide health care services aimed at preventing health problems or maintaining health;
- work with health care professionals, including those from other disciplines, to provide patient-focused care.
A PGY-IV resident should be able to:

- Meet all the learning objectives for a first and third year resident
- Understand the principles of genetic counseling
- Assist with CVS, PUBS, and cordocentesis

COMPETENCY 2. Medical Knowledge.
Understand the scope of established and evolving biomedical, clinical and cognate sciences, as well as the application of this knowledge to patient care.

Resident are expected to:

- demonstrate an investigatory and analytic thinking approach to clinical situations; know and apply the basic and clinically supportive sciences which are appropriate to their discipline
- The resident will know the basic physics of sound wave propagation through tissue
- The resident will use this knowledge to select proper transducer frequencies to enhance visualization with ultrasound
- The resident will be able to “set up” the ultrasound machine and select different settings to enhance visualization
- The resident will describe the Doppler effect and how it is used in obstetric ultrasound

COMPETENCY 3. Practice-based Learning and Improvement.
Demonstrate knowledge, skills and attitudes needed for continuous self-assessment that includes the investigation and evaluation of care of patients, the appraisal and assimilation of scientific evidence, and improvements in one’s patient care practice.

Residents are expected to:

- analyze practice experience and perform practice-based improvement activities using a systematic methodology;
- locate, appraise, and assimilate evidence from scientific studies related to their patients’ health problems;
- obtain and use information about their own population of patients and the larger population from which their patients are drawn;
- apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness;
- use information technology to manage information, access on-line medical information and support their own education;
facilitate the learning of students and other health care professionals
attend the didactic lectures
attend and participate in the antepartum and cesarean section conferences
attend journal clubs/clinical expert series
participate in the Residents Study Groups

COMPETENCY 4. Interpersonal and Communication Skills.
Demonstrate interpersonal and communication skills that result in information exchange and partnering with patients, their families and professional associates.

Residents are expected to:

- create and sustain a therapeutic and ethically sound relationship with patients;
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- work effectively with others as a member or leader of a health care team or other professional group.

COMPETENCY 5. Professionalism.
Demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to diversity.

Residents are expected to:

- demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and on-going professional development;
- demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices;
- demonstrate sensitivity and responsiveness to patients’ culture, age, gender, and disabilities
Residents are expected to:

- understand how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice;
- know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources;
- practice cost-effective health care and resource allocation that does not compromise quality of care;
- advocate for quality patient care and assist patients in dealing with system complexities
- know how to partner with health care manager and health care providers to assess, coordinate, and improve health care and know how these activities can affect system performance.

**COMPETENCY 6. System-Based Practice.**
Understand how to practice quality health care and advocate for patients as manifested by actions that demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.