Emergency Department, Urgent Care, and Point-of-Care Ultrasound (POCUS) Training Rotation

ACGME Competency Based Goals and Objectives

INTERNAL MEDICINE RESIDENCY PROGRAM

San Antonio Regional Hospital | OPTI West GME Consortium

ACGME Program ID: 2445140C0

Emergency Department, Urgent Care, and Point-of-Care Ultrasound (POCUS) Training Rotation

Rotation Curriculum Goals & Objectives (Internal Medicine Residents)

Rotation Information

Organization / Site	San Antonio Regional Hospital — Emergency Department; Care 4U Urgent Care (rotation pending)
Rotation Directors	Jennifer Heppner, MD; Tyler Mitchell, MD (POCUS); Thomas Cho, MD; Kevin Parkes, MD
Effective Date	July 2026
Rotation Length	2 weeks, PGY-2/PGY-3, mandatory (general schedule)
Lines of Responsibility	The team is led by the attending, who bears final responsibility for patient management and recommendations. The IM resident works closely with the attending and gradually assumes more autonomous decision-making responsibility in a graded fashion. The senior resident is also expected to teach junior residents and medical students who are providing care for the patient and to help guide delivery of care.

Purpose

Internists provide care for patients with a myriad of medical problems; correct and timely diagnosis is paramount to successfully addressing these illnesses. Residents are exposed to a wide range of Emergency Medicine patients and learn the fundamentals of managing trauma, acutely sick, and ambulatory adult patients in the Emergency Room. Residents develop competence in caring for undifferentiated patients in the Emergency Department or Urgent Care Center by the end of the rotation and recognize when subspecialty assistance is required — a pursuit aided by the advent of new imaging technologies, specifically bedside ultrasound, also known as point-of-care ultrasound (POCUS).

Today's residents must gain experience both performing procedures aided by imaging and interpreting the images. POCUS can revolutionize the primary care setting by creating a host of benefits, including eliminating referrals to hospitals or urgent cares. Point-of-Care Imaging training provides the resident with opportunities to learn ultrasound

findings of normal and abnormal anatomy and of common diseases, understand the indications for POCUS, and learn its appropriate use to guide interventional procedures. The goal of the rotation is to help the resident become competent in the cost-effective use of ultrasound imaging in the evaluation and treatment of disease, as well as gain competence in performing procedures in the Emergency Room setting.

Faculty will facilitate learning in the six ACGME core competencies as follows.

I. Patient Care and Procedural Skills

1. All residents must be able to provide compassionate, culturally-sensitive, and appropriate care for simulated patients in the course of evaluating and treating disease.
2. Residents will develop a fundamental knowledge of how proper procedure simulation training assists in practicing technique, prior to application in the presence of faculty, on real patients.
3. Residents should become familiar with the indications, contraindications, complications, limitations, alternatives, and interpretation of the following ultrasound studies:
    - Abdomen, renal/bladder, lower extremity veins
    - Cardiac echocardiogram
    - Bladder scan
4. All residents should understand the role of imaging guidance in facilitating common radiological procedures and become familiar with the following ultrasound-guided procedures (participating as appropriate to level of training and experience):
    - Endotracheal intubation
    - Thoracentesis
    - Paracentesis
    - Lumbar puncture
    - IV-line placement
    - Central line placement / arterial line placement
    - Arthrocentesis
    - NG tube placement
    - Foley catheter placement
    - Incision & drainage (I&D)
    - Suturing / staples / tissue adhesives / wound closure tapes
    - Wound care and debris removal from skin
    - Biopsies — shave and punch
    - Ingrown toenail removal
    - Trigger point injections
    - Bruised or damaged nail removal or pressure relief with hole
5. All residents will also develop skill in the use of POCUS, during half-day continuity clinic week, ambulatory clinic week, and sim lab, in the following areas:
    - **Abdomen —** identify ascites, common locations for ascites collection, largest fluid pocket, and safest locations for paracentesis
    - **Right upper quadrant abdomen —** identify the liver and gallbladder; diagnose or exclude cholelithiasis; assess sonographic Murphy's sign
    - **Chest —** identify pleural effusion, location of lung, and safest location for thoracentesis; identify pneumothorax
    - **Cardiac —** obtain standard views including parasternal long/short, apical four-chamber, and subxiphoid; identify pericardial effusion; assess for mitral regurgitation and aortic stenosis; estimate ejection fraction; examine IVC

- **Vascular —** identify jugular vein/carotid artery, common femoral vein/artery; differentiate vein from artery; check patency
- **Renal —** evaluate for presence/absence of hydronephrosis
- **Bladder —** estimate bladder urine volume

II. Medical Knowledge

PGY-2 and PGY-3 residents will develop an understanding of medical emergency diagnosis and management, and the appropriate use of medical interventions, procedures, and/or ultrasound imaging for patients with the following presenting conditions in the Emergency Department and Urgent Care settings:

- **Cardiovascular —** acute chest pain, acute coronary syndromes, acute heart failure, shock, syncope, valvular emergencies, cardiomyopathies, venous thromboembolism including pulmonary embolism, hypertensive crisis, aortic dissection, limb ischemia/arterial occlusion
- **Pulmonary disorders —** respiratory distress, hemoptysis, acute bronchitis, pneumonia (community-acquired, aspiration, noninfectious pulmonary infiltrates), pleural effusion, lung empyema & abscess, tuberculosis, pneumothorax, pulmonary embolism, acute asthma & status asthmaticus, COPD exacerbation, acute anaphylaxis to urticaria, and upper respiratory infections
- **Gastrointestinal disorders —** acute abdominal pain, mesenteric ischemia, nausea/vomiting/diarrhea, upper and lower GI bleed, esophageal emergencies, gastritis to peptic ulcer disease, acute cholecystitis, acute pancreatitis, acute hepatitis, acute appendicitis, acute diverticulitis, bowel obstruction, incarcerated/strangulated hernia, ascites
- **Renal and genitourinary disorders —** acute rhabdomyolysis, acute urinary retention, acute nephrolithiasis, acute kidney injury, ESRD, complications of urologic procedures & devices, hernias, male genital problems (testicular torsion, priapism, Fournier's gangrene)
- **Obstetrics-Gynecology —** abnormal uterine bleeding, abdominal-pelvic pain in non-pregnant and pregnant females, pregnancy-related complications (vomiting/hyperemesis/ectopic pregnancy), pelvic inflammatory disease, breast disorders (acute breast pain to infection, breast mass, nipple discharge to infection)
- **Infections —** sepsis, skin and soft tissue infections (cellulitis, wound infections, abscess), disorders of teeth and gingiva, disorders of the eye, sexually transmitted infections, urinary tract infections including catheter-induced UTI (CAUTI), serious viral infections including COVID-19 and influenza, HIV, endocarditis, food & waterborne illnesses, acute respiratory infections and pneumonias, acute gastroenteritis to sepsis, fever of unknown etiology, CNS & spinal infections (meningitis), occupational exposures including needlesticks
- **Neurology —** stroke syndromes, acute altered mental status to loss of consciousness/coma, severe headaches (intracranial hemorrhage, aneurysms, tumors, acute migraine), acute status epilepticus and acute seizures, CNS and spinal infections, vertigo, gait disturbance to ataxia
- **Endocrine disorders —** diabetic ketoacidosis, hyperosmolar hyperglycemic state, myxedema crisis and hypothyroidism, thyroid storm and hyperthyroidism, adrenal insufficiency
- **Hematologic and oncologic disorders —** bleeding disorders, clotting disorders with DVT and PE, anemias, emergency complications of malignancies
- **Toxicities —** substance use disorders (alcohol intoxication/withdrawal, cocaine, methamphetamine use disorder, opioid use disorder, benzodiazepine overdose & withdrawal), poisoning
- **Trauma/Orthopedic/Musculoskeletal disorders —** fractures, motor vehicle accident injuries, head or neck injuries, lacerations to contusions, wound management, MSK strains/sprains, rheumatic conditions (e.g., acute gout)
- **Psychosocial disorders —** acute depression, acute anxiety, abuse and assault

PGY-3 residents will be able to interpret results within the context of simulated patient comorbidities, pretest probability of disease, and the sensitivity and specificity of the study.

III. Practice-Based Learning and Improvement

All residents should:

- Be able to access current national guidelines to apply evidence-based strategies to the appropriate use of diagnostic tests and studies (including ultrasound) and procedures, and to help manage patients.
- Develop progressive independence in understanding patient conditions, and independent study of ultrasound techniques and procedures.

IV. Interpersonal and Communication Skills

All residents must demonstrate organized and articulate electronic and verbal communication skills that convey information to other health care professionals, colleagues, and other team members.

V. Professionalism

6. All residents must demonstrate strong commitment to carrying out professional responsibilities as reflected in their conduct, receiving constructive criticism, ethical behavior, attire, interactions with colleagues and community, and devotion to patient care.
7. PGY-2 residents should be able to counsel patients and families on decisions involving patient management, tests/studies (labs & radiology), and procedures.
8. PGY-3 residents should be able to provide constructive criticism and feedback to more junior members of the team.

VI. Systems-Based Practice

9. PGY-2 residents must be able to identify current quality issues in the use of labs and radiology, including ultrasound, for diagnosis.
10. PGY-3 residents must also demonstrate an awareness of alternatives when discussing interventional procedures and their costs, risks, and benefits.

VII. Teaching Methods

Supervised Clinical Practice

Supervised management of patients in the ED and Urgent Care, supervised reading of studies (lab and radiological, including ultrasound), and supervised performance of interventional procedures.

- Initial emphasis will be on identifying key diagnosis and management and basic procedures for patients seen in ED and Urgent Care.
- When residents have mastered these skills, focus will shift to medical decision-making and procedural skill.

Conferences

- Specialty-specific didactics during noon conference.

Independent Study

Core textbooks:

- Tintinalli's Emergency Medicine: A Comprehensive Study Guide
- Rosen's Emergency Medicine: Concepts and Clinical Practice, 10th edition
- Pfenninger and Fowler's Procedures for Primary Care, 4th edition
- Point of Care Ultrasound (Elsevier) — Nilam J. Soni, Robert Arntfield, Pierre Kory
- Goldberger's Clinical Electrocardiography: A Simplified Approach, 9th edition
- UpToDate

Free open access medical (FOAM) and online resources:

- ACEP ultrasound guidelines
- Ultrasound Podcast
- Emergency ultrasound teaching
- Performing a Basic US Examination (RSNA)
- Atlas of Radiological Images (Loyola Meddean)
    - ACC POCUS Workbook
    - Cardiac Limited Ultrasound Examination (CLUE) webinar
    - Basic Abdomen for the Internist — Irene Ma
    - PEARLS Physical Exam with Pocket-Size US — Boughton & Wagner
    - IMpocus: A Weekend on the Wards
    - The Curbsiders — POCUS for the Internist
    - Additional POCUS teaching video
- Radiopaedia (optional radiology images)

VIII. Evaluation

11. Verbal feedback via observation, chart review, and individual feedback in the Emergency Department and Urgent Care rotations.
12. The attending will evaluate the resident via completion of a procedure evaluation form and rotation evaluation form on the list of competency-based sessions (procedural training — 20 POCUS images to discuss with ED attending) in the Emergency Department and Urgent Care.

IX. Rotation Structure

Residents should:

- In general, complete a 2-week rotation in the PGY-2/PGY-3 year, mandatory.
- To help residents gain skills in point-of-care ultrasound (20 images), residents will complete a checklist of skills for both diagnostic and interventional procedures. When residents complete the checklist, they should return it to their Program Coordinator.
- Use the bedside ultrasound in the ED — goal: 20 POCUS images to be discussed with the ED attending.

Residents may be working with several attendings during the rotation, as well as with sonographers and nursing, to develop POCUS, echocardiogram, and procedural skills as case mix permits:

- Rotations are expected to be a "hands-on" experience. Residents will be involved in discussion of study appropriateness, image interpretation, and creation of a differential diagnosis, in addition to participating in radiological procedures as appropriate.
- Case-based learning is most effective. Residents will have read-out sessions with the radiologist along with teaching sessions. Nightly reading/study should be based on cases reviewed during the day.
- Residents may be asked to conduct focused literature searches or presentations during the course of the rotation.
- Residents may be asked to communicate with patients, family members, primary care providers, and consulting providers as appropriate. Discretion and decorum are always paramount.

Call and weekend responsibilities are to be determined by the attending physician. Hours worked must be consistent with ACGME requirements and are subject to approval by the Program Director.