

Kaweah Health: GME Ultrasound G & O: EM PGY-1

Overview

The goal of the point of care ultrasound (POCUS) curriculum is to enable first-year emergency medicine residents to develop competency in core emergency ultrasound applications. This will assist in bedside diagnosis, resuscitation, procedural guidance, and ongoing reassessment. Residents will develop competency in ultrasound physics, image generation, acquisition, interpretation, documentation and clinical integration. This curriculum is designed in alignment with ACGME Emergency Medicine Milestones and ACEP emergency ultrasound guidelines, which recognize POCUS as integral to the training and practice of emergency medicine. Review www.kaweahem.com/ultrasound for complete details.

By completion of the required POCUS experience, first-year emergency medicine residents will be able to:

- Patient Care (PC): Select and perform focused ultrasound examinations, obtain interpretable images, and integrate findings into diagnosis, resuscitation, procedural guidance, and reassessment.
- Medical Knowledge (MK): Describe ultrasound physics, probe selection, machine controls, artifacts, and normal versus common pathologic findings for core emergency ultrasound applications.
- Interpersonal and Communication Skills (ICS): Communicate POCUS findings to supervising physicians and document examinations appropriately.
- Professionalism (PROF): Use POCUS within the scope of training, recognize limitations, seek additional workup when needed, and follow documentation and quality assurance processes.
- Practice-Based Learning and Improvement (PBLI): Incorporate direct observation, image review, simulation, and QA feedback to improve image acquisition, interpretation, and clinical application.
- Systems-Based Practice (SBP): Use POCUS to improve diagnostic efficiency, treatment decisions, procedural safety, study review, documentation, and image archiving.

Residents should, upon completion of this rotation, be able to apply their ultrasound skills in other clinical areas using the same ultrasound platform and workflow.

Scheduling

- Scanning shifts will be scheduled every weekday except for Thursday conference days followed by required JC/image review is in the afternoon.
- The goal will be more solo shifts, e.g. afternoons, the last three weeks of the rotation.

Core Emergency Ultrasound Applications

Residents will develop competency in core emergency ultrasound applications, including the following:

- Trauma.
- Aorta.
- Cardia.
- Thoracic and chest.
- Biliary.
- Renal and urinary tract.
- Lower extremity venous system
- Soft tissue and musculoskeletal applications.
- Bowel.
- OB
- Procedural guidance and vascular access.

Scanning Responsibilities

- Demonstrate competency in core ultrasound applications by performing a minimum of ten of each.
- Perform an average of one exam per hour x 8 hours during the first week.
- Perform an average of two exams per hour x 8 hours for the second through fourth week.
- The total number of exams required is decreased by any GME excused days off, e.g. wellness days.
- The first and last exam should be respectively within 30 minutes of the start and end of the shift.
- Know how to assign oneself, perform, interpret, document, and assign studies to the ED attending.
- Scan with the ultrasound faculty and/or fellow when they are present and with the ED patient's attending physician when they are not present. These studies will subsequently undergo QA.
- Be listed as the primary performer for at least 75% of the exams.
- For each exam, there can be multiple observers, but only the primary performer and one additional performer get credit toward their total number required for successful completion of the rotation.
- After completing a scan, use Connect Messenger to notify the attending that the exam is complete and place a brief note stating "POCUS complete" in the ED progress note.

- Make up missed shifts at the discretion of both the ultrasound and EM program directors.
- Demonstrate familiarity with the ultrasound machine and Sonosite Synchronicity workflow sufficient to perform, document and submit studies for review.

For each core application area, the resident will be able to:

- Identify relevant anatomy and sono-anatomy.
- Select the appropriate probe, preset, and machine settings for the examination being performed.
- Acquire standard views and optimize image quality.
- Distinguish normal from common pathologic findings.
- Recognize indeterminate or concerning findings that further attention.

Passing Requirements for Rotation Include

- Complete all required modules in the 4-week POCUS 101 Course.
- Perform a minimum of 225 scans as outlined above.
- Attend all JC/image review sessions.
- Set up an account in Sim Lab BodyWorks Eve and perform 5 or more exams in each topic.
- Maintain equipment using “CLEAR” (Clean, Locate, Energize, Augment, Remove).
- Demonstrate commitment to research by enrolling patients in any ongoing ultrasound research.
- Obtain interpretable images and provide appropriate focused interpretations.
- Demonstrate sufficient familiarity with the ultrasound machine and Sonosite Synchronicity workflow to continue applying ultrasound skills in all departments, e.g. ED and ICU.
- Successful completion of this rotation will contribute evidence toward achievement of relevant ACGME Emergency Medicine Milestones in patient care, medical knowledge, communication, professionalism, practice-based learning, and systems-based practice.

