

87 Development of an Introductory Ultrasound Curriculum for Medical Students

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Introduction: The role of bedside ultrasonography (BUS) in many fields has steadily grown, and BUS was listed in the Milestones as an essential competency for EM physicians. Despite this, it remains one of the least taught and assessed skills in EM clerkships for medical students, and many students do not begin residency at Milestone Level 1 in this area. We developed a brief curriculum to teach and assess core BUS skills for students, focusing on the extended Focused Assessment with Sonography in Trauma (e-FAST) exam as a basic and essential application of BUS.

Objectives:

- Demonstrate basic operation of the ultrasound machine
- Perform an e-FAST exam, obtaining adequate images
- Interpret e-FAST images

Design: Our curriculum is integrated into simulation sessions for our required EM clerkship, and includes 3 components:

- Introduction: high-fidelity trauma simulation in which students must request FAST and interpret images to “save the patient.” Debrief covers indications for FAST, fundamental ultrasound concepts, and image interpretation.
- Practicum: 30-min didactic on ultrasound theory and machine operation, followed by a 60-min precepted session in which students practice e-FAST exams on each other.
- Assessment: 30-min standardized patient scenario depicting an unstable trauma victim with abdominal pain, embedded in an objective structured clinical exam. Students are required to perform for FAST exam and interpret images, and are graded by faculty in real-time using a structured checklist.

Impact/Effectiveness: Prior studies have demonstrated the effectiveness of brief educational interventions in BUS. While we do not yet have outcome data for our curriculum, we are optimistic it will result in reasonable proficiency in basic ultrasound for our students. Objective assessment of practical skills will facilitate needed refinement of the curriculum to optimize outcomes, and allow us to document students’ achievement of this important Milestone.