

Point-of-care ultrasound (POCUS) is often called the 21st-century stethoscope and can be at the bedside to provide cost-effective, patient-centered care. ACGME Family Medicine Program Requirements now require residents to have experience with POCUS.<sup>1</sup> Critical components of a POCUS curriculum include **didactic education, image acquisition, and image review training.**<sup>2-3</sup> A faculty champion can leverage support to obtain resources, equipment, and administrative time to implement a POCUS curriculum.



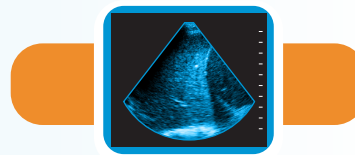
## Didactic Education

- A POCUS champion is needed to lead and coordinate didactics
- Didactic material should include resources related to:
  - Performing the ultrasound exam
  - Reviewing normal anatomy
  - Examining pathology
  - Discussing clinical cases
- Teaching should occur during resident conferences or noon teaching with frequency of at least once per month
- Instructors should cover didactic material prior to having a hands-on workshop
- If no POCUS champion is available at a program to provide educational content, free self-study modules are [available through STFM](#). Several other free educational resources are also available online, [POCUS101](#), [CoreUltrasound](#), [The POCUS Atlas](#)



## Image Acquisition

- A 2020 study found that 64% of residencies offer hands-on POCUS experience.<sup>3</sup> Brief, 3-hour workshops can increase resident confidence in performing POCUS<sup>4</sup>
- Image acquisition allows hands-on experience to help learners understand spatial anatomy
- Challenges of image acquisition include developing dexterity, troubleshooting, and patience
- Image acquisition education can occur in three main settings
  1. **Workshops**
    - Pros: teach in low-stakes environment, can teach all residents after a lecture
    - Limitations: require volunteer models and experienced proctors
  2. **Bedside scanning**
    - Pros: can occur in clinics, hospital wards, or emergency rooms. Allows learners to practice on patients with actual pathology
    - Limitation: requires faculty time
  3. **Self-scanning**
    - Pros: learners can scan independently after reviewing lectures or modules
    - Limitations: no faculty supervision to guide scanning



## Image Review

- Provides retrospective feedback after residents scan patients
- **Goals:**
  - Educate residents how their findings and supporting images can be interpreted by another clinician
  - Assess resident competency
- **Steps:**
  1. Residents seek consenting patients whose diagnoses are already determined, typically via another imaging modality
  2. Residents submit images and clips with corresponding documentation (ie, indication and image interpretation)
  3. Faculty provide feedback on correct probe choice and machine settings, acquisition adjustments, completeness of scans, and documentation revisions
- **Helpful tips:**
  - Handheld ultrasound companies may offer platforms that integrate image saving and documentation on their apps (eg, ButterflyTM, Vscan AirTM, Echonous, Vave)
  - In-person image review is most effective to facilitate dynamic discussions regarding improvements in image acquisition and the impact of POCUS on medical management. Remote feedback is also feasible on most handheld platforms listed above

**Conflict of Interest Statement:** Dr Patel consults with GE Healthcare's point-of-care ultrasound team, giving input and feedback on device development and functionality specific to family medicine. Dr Patel does not have any stock or equity interest in GE Healthcare. Dr Patel does not have any relevant conflicts of interest from this work in relation to this article.

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