

Pediatric Emergency Ultrasound: Faculty Ultrasound Track

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Vision:

To create a pediatric emergency department perpetually staffed with highly trained faculty, credentialed in multiple pediatric-specific emergency ultrasound applications.

Goals:

Specific Aim:

The main purpose of this curriculum is to cultivate highly-trained pediatric emergency ultrasound specialists as clinical experts and scholars in the use of point-of-care ultrasound for improved clinical care of acutely ill and injured children.

Objective:

By the end of the curriculum each pediatric emergency ultrasound (PEUS) attending will demonstrate:

- 1) Knowledge of ultrasound and doppler physics.
- 2) Knowledge of ultrasound machine controls, probes, maintenance, and technology
- 3) Knowledge of ultrasound credentialing pathways, quality assurance, documentation and billing
- 4) Skill with image acquisition and knowledge of indications, contraindications, diagnostic or procedural guidance criteria and common pitfalls for the following POCUS applications:
 - a. eFAST
 - b. OB/GYN
 - c. Pediatric abdomen (intussusception, pyloric stenosis, appendicitis)
 - d. Soft tissue
 - e. Bedside procedures (Central line, peripheral IV access, LP, bladder, foreign body, nerve blocks, intubation confirmation)

Specific Expectations:

The following education plan is based on a 3-month educational ultrasound track that demands 8 hours per month of committed time to ultrasound faculty development:

- 1) Scanning –
 - a. 6 hours each month of protected time for supervised and individual scanning sessions with an Ultrasound faculty member
 - b. Goal of obtaining 20 scans/month
 - i. Focus on obtaining a majority of scans in the following applications to bring the faculty closer to credentialing (=25 scans each)

1. eFAST – 20 scans by end of mini-fellowship
 2. OB/GYN – 20 scans by end of mini-fellowship
 - c. Technically limited studies will not be counted towards this total. All scans should be saved and catalogued in pre-specified fashion and reviewed with ultrasound director or division faculty during quality assurance session. When available, gold standard testing should be recorded and stored with images for quality review. Effort should be made to obtain scans in diverse applications.
 - d. Scan shift dates should be emailed to Dr. Ng at least **1 month** in advance.
- 2) Education
- a. 1 hour each month to cover a didactic topic as lead by an ultrasound faculty member – topics subject to change to tailor to faculty member preference
 - b. Online modules/quizzes to supplement the live didactics and bedside scanning to be completed on a weekly basis
- 3) Quality Improvement
- a. 1 hour each month (to be coordinated between the faculty member and Ultrasound faculty) of protected time for one-on-one scan review and QI session with Ultrasound faculty member

Curriculum:

Prior to the beginning of the track and at the completion of the track, the faculty member will complete the following:

- 1) Online tests available at: <http://www.emsono.com/acep/exam.html> on the following topics:
 - a. FAST
 - b. Lung
 - c. OB/GYN
 - d. Soft tissue
 - e. Procedural
- 2) Emailed test on Pediatric Abdomen
- 3) A needs assessment (see attached addendum)

Sample Curriculum:

Week 1: eFAST (didactic)

Week 2: Cardiac

Week 3: Lung

Week 4: IVC

Week 5: OB/GYN (didactic)

Week 6: Appendicitis

Week 7: Intussusception

Week 8: Soft tissue

Week 9: RUSH protocol (didactic)

Week 10: Procedural – PIV and central lines

Week 11: Pyloric stenosis

Week 12: Procedural – LP, foreign body