

ADVANCED ULTRASOUND TRACK

Audience: EM 3 and 4

Duration: 2 years

Objectives:

Through participation in the Ultrasound Track, participants will

- Learn advanced skills in emergency department applications of ultrasonography.
- Establish a track record of ultrasound knowledge, skills, and scholarly productivity to position the participant for assumption of a position requiring significant ultrasound expertise.

Format:

The Ultrasound track will require a commitment of three elective months from the EM 3 and EM 4 years.

Two of these elective months will be converted to a longitudinal time allocation for clinical ultrasound shifts. This will result in a two shift per month reduction in ED shifts during the third year and a three-shift reduction during the fourth year. The time decrease will allow for two scanning shifts per month to facilitate the development of ultrasound proficiency and technical skills, and for the completion of research and administrative activities. The participating resident will complete over the course of their residency the same number of ED clinical shifts as their non-track classmates with these shifts spread out over a greater number of months due to the longitudinal format of this elective experience.

The third elective month from the EM4 year will be dedicated to ultrasound administration and research related activities. This will be allocated into two weeks of longitudinal time allocation plus a single two-week block. The longitudinal time allocation will typically include twice monthly meetings with ultrasound faculty as well as ongoing research activity. Other distributions of this month of administrative time may be possible at the discretion and consensus of the program director and ultrasound core faculty.

Track requirements are drawn from the ACEP ultrasound fellowship curriculum, while no official fellowship certification can be provided as a result of this experience, this curriculum will be patterned after the ACEP/SAEM consensus curriculum for fellowship training.

Based on current faculty availability, this track can accommodate a maximum of 2 participants per year for a total of 4, however this may be expanded as additional capacity develops and exceptions may be made for outstanding candidates. Application for the track must be made no later than January 17th of the EM2 year. Priority will be decided by the Ultrasound Faculty in collaboration with the Program Director. It is required that participants be in good standing in all aspects of their residency activities (e.g., conference attendance, documentation, administrative responsibilities, clinical skills) in order to participate (ref. Resident in Good Standing

Policy). Should a track participant develop academic difficulty during their EM3 or EM4 years, participation in the Ultrasound Track may need to be terminated to allow the resident to focus on the essentials of medical training.

To facilitate and guide the participant's progression through the track, each resident will choose a mentor from the ultrasound core faculty. Faculty will each mentor no more than one track participant. Participants will meet regularly with their mentor.

Required Activities:

- Scanning shifts
 - Participants will complete 2 scanning shifts per month spent in any of the ED. A minimum of 36 scanning shifts will be required over course of the EM3 and EM4 years. These shifts will mirror the supervising physician's assigned shift and may range between 8 and 10 hours. As described above, these shifts will be available by the longitudinal application of an elective month from each of the resident's EM3 and EM 4 years.
 - These shifts will be under the direct supervision of the program's ultrasound director or under a qualified faculty member
 - Qualifying faculty must meet the requirements as set out in the ACEP sample ultrasound fellowship curriculum.
 - During a scanning shift, the participant will be solely involved in ultrasound education within the emergency department, primarily scanning patients and without scheduled direct patient care responsibilities. At least 8 hours per month of these shifts should also have direct involvement in the ultrasound education of junior learners on the residency ultrasound rotation.
 - During the EM3 and EM4 years, a minimum of 1000 confirmed scans should be performed with documentation of quality assurance including direct supervision of a qualified faculty member.
 - Scans performed in the ED must be documented with electronic or hardcopy images and, if possible, video. They must undergo quality assurance review if not performed under direct supervision of a qualified physician.
 - Logs documenting these scans are the sole responsibility of the participants.
 - A summary of the log must be submitted to the EM Ultrasound Director along with documentation of scanning shifts worked.
 - All hours on scanning shifts must be logged into MedHub to account toward duty hours. This is the responsibility of the track participant.

- Scanning shifts are expected to adhere to ACGME duty hour requirements.
- Emergency Ultrasound Administration Activities
 - One month of the resident's elective time shall be allocated to a half longitudinal and half block format for ultrasound administrative and research activity (as described above).
 - This time will be dedicated to various ultrasound administrative activities including but not limited to QA, program maintenance, billing, departmental meetings, etc...
 - Participants will learn how to set up an administrative and QA process including credentialing process for emergency department ultrasonography, participants will generate specific documents that would be used in daily operations of credentialing, medical record documentation, CQI, billing, clinical protocols, OSHA/Joint Commission compliance and other areas. Some of these activities may be consolidated within the 2-week ultrasound administrative block.
 - To fulfill these requirements participants will be expected to meet on average twice monthly with ultrasound core faculty to address administrative and QA related duties. Logging these meetings is the sole responsibility of the track resident.
 - A scholarly project should also be carried out during this time with requirements listed below
- Mentored scholarly projects of publishable quality
 - The ultrasound track resident should be involved with at least 1 research projects during his/her tenure.
 - The resident should design at least one research project from the "ground up".
 - An implementation plan should be defined and approved by a mentor no later than November 1 of EM3 year.
 - The Track Supervisor and Program Director must be formally notified of the project, mentor, and implementation plan/timeline.
 - Participants will be expected to submit at least one research project to their home site IRB and submit at least one abstract to a national meeting such as (but not limited to) ACEP or other national organization.
 - This project may take the form of a research activity that results in a submitted paper, oral presentation, or abstract presentation.
 - The emergency ultrasound track resident should be involved with at least one other ultrasound research project (does not have to be one he/she designed and implemented from the ground up) during their residency for which publication is planned with the track resident as an author.

- **Educational Activities**
 - The resident will be expected to attend departmental ultrasound didactics as a learner when these opportunities arise.
 - The resident is also expected to be involved at an instructional level as well.
 - He/she will give 4 lectures covering different core or novel emergency department applications of ultrasound to residents and program faculty.
 - At least 1 lecture should cover a novel application of emergency ultrasound.
 - Participant's lectures will be mentored by core ultrasound faculty as detailed above.
 - Participants are expected to instruct during residency & faculty ultrasound labs, and other activities that require ultrasound expertise such as the scanning shifts with junior learners.

- **Documentation:**
 - The resident will maintain a portfolio of emergency ultrasound related activities. This will include images and electronic documentation of quality assurance review of scans, resident/faculty evaluations of didactics and any abstracts/research papers submitted.
 - There will be a formal evaluation of participants' technical scanning skills as well as a written test evaluating the cognitive/knowledge-based aspects of emergency ultrasonography.
 - Ultrasound core faculty will fill out bi-annual progress reports for each track participant to be logged in Medhub. Additionally, twice yearly participants will meet with their faculty mentor and prepare a summary report for participants six-month evaluation.