IN TRAINING: PART II

Advances in Procedural Education

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The American Board of Internal Medicine (ABIM) states that internists who perform procedures must obtain the appropriate training to safely and competently perform those procedures. While procedural training has classically been described as "see one, do one, teach one," this method has come under increased scrutiny due to concerns over patient safety. In an era of duty-hour restrictions, learners might have less opportunity to "see one" or "do one." In addition, they have fewer faculty able to "teach one," as evidenced by recent studies showing a significant decrease in the number and variety of procedures performed by practicing internists.[1] How then can internal medicine residency programs promote trainee procedural skills while also ensuring there are sufficient faculty members able to teach the skills?

Inpatient Procedure Teams

Physicians in training have commonly learned most procedures during inpatient rotations. One option for a residency program to optimize procedural teaching is to create a curriculum around standardized training and supervision of these procedures, targeted to trainees in their first year of residency. During a month-long dedicated rotation, trainees progress from didactic teaching (e.g. videos showing proper procedure performance and lectures on indications, contraindications, risks, and benefits of all procedures) to simulation on procedural mannequins and finally to supervised performance on patients. The trainees are also taught to use bedside ultrasound, which has been shown to improve procedural success and decrease complication rates.[2] An ultrasound-trained faculty member supervises the entire month, enhancing consistency in training. This format allows physicians-in-training to learn bedside procedures in a safe manner that results in less variability in patient care without conflicting with duty-hour restrictions.

Simulation Centers

One of the challenges in teaching invasive procedures is balancing the need for trainees to learn procedures in a real-time environment and the additional risks posed to patients undergoing procedures performed by inexperienced physicians. This is part of the reasoning behind the ABIM's recommendation that internists learning invasive procedures should have initial simulation-based training. Simulation allows trainees to learn procedures in an organized step-by-step fashion and in a low-stress low-pressure environment. Such training has been shown to increase trainees' procedural skills and enhance confidence.[3] Simulation can also be a means to assess procedural proficiency, which allows for identification of an individual's strengths and weaknesses and customization of future teaching.[4] Simulation mannequins are available for all of the procedures that internists perform, and newer models are also ultrasound compatible.

Outpatient Procedure Clinics

Another option is to shift some procedural training from the inpatient to the outpatient setting. Many common internal medicine procedures (e.g. joint injection and incision and drainage of small abscesses) are rarely encountered in the inpatient setting where residents spend the majority of training. Even some procedures more commonly performed in inpatients, such as paracentesis, are now often performed in outpatients due to increasing evidence of safety and a desire to prevent unnecessary hospitalization.[5] Since it is often difficult to fit procedures into a busy half day of resident continuity clinic (a clinic that itself is often sandwiched between seeing patients on an inpatient ward service), it can be helpful to have a separate "Procedures Clinic" that residents can rotate through as part of an ambulatory rotation.

Workshops

Focused workshops particularly benefit established physicians in need of re-learning a procedure or incorporating bedside ultrasound in their practice. Medical societies (including SGIM) frequently feature workshops or precourses dedicated to procedural training and bedside ultrasound. The makers of portable ultrasound machines and private companies also offer training, which can last from a few hours to several days depending on the intensity of training and the number of procedures covered.

At our institution, we began an inpatient procedure service this year with every intern scheduled for a month rotation in procedural training/quality improvement. An internal medicine chief resident trained in bedside ultrasound staffs

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the rotation, and trainees receive specialized instruction at a simulation center located on campus. We have been able to train additional faculty in the use of ultrasound and have recently started an outpatient paracentesis clinic as well. So far, the inpatient rotation has been well received by trainees, faculty, and patients, and we hope to see the further impact of this training as these interns move on to supervisory roles.

References

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