Annals of Internal Medicine

Raising the Bar for Procedural Competency Among Hospitalists

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Hospitalists hold a central role in the delivery of high-quality medical care as providers, advocates, and leaders of safety and quality improvement initiatives. These facets of the hospitalist's professional identity intersect in bedside procedures. The core competencies of hospitalists include 5 such procedures: arthrocentesis, central venous catheter placement, lumbar puncture, abdominal paracentesis, and thoracentesis (1), all of which are associated with real risks to patients (for example, 4% risk for thoracentesis-associated pneumothorax [2] and 3% risk for paracentesis-associated hemorrhage [3]). However, there is neither uniformity in nor guidance about the assessment of these skills. Moreover, generalists are doing fewer procedures (4) and concomitantly reporting deterioration of their procedural skills (5), while internal medicine residents are now required only "to be competent with regard to their knowledge" of procedures (6). The result is a vicious cycle of insufficient exposure among internists perpetuated by a pipeline of residency graduates who have met only minimal requirements for procedural proficiency.

Exacerbating the experience gap is the lack of national standards for procedural competence: The burden falls on hospitals to ensure that practitioners demonstrate the required skills. Neither the Joint Commission nor the Centers for Medicare & Medicaid Services identifies how hospitalists should be trained or how procedural competence should be demonstrated. It is no wonder that the process of establishing a standard for procedural competency—and consequently that of granting privileges—remains elusive.

Delegating the responsibility for establishing procedural competence to individual institutions has resulted in divergent practices (7). Some hospitals, such as our own, require billing audits or medical record documentation showing that hospitalists have done a threshold number of procedures per credentialing cycle (typically 2 years). Other hospitals may rely on physicians' self-reported number of procedures or may have no measure on which to base the granting of procedural privileges. Furthermore, the minimum number chosen may be arbitrary and far fewer than that needed to reduce procedural complications. The non–evidence-based principles through which institutions grant these privileges to physicians underscore the limits of this mechanism as a badge of procedural competency.

Our own continuous efforts toward quality improvement have powerfully illuminated the magnitude of the problem from the perspectives of both assessment and training. In a simulation-based education program with mastery learning (8, 9), hospitalists at our institution reported only moderate levels of comfort performing certain core procedures and poor comfort teaching them (Crocker JT, Hale CP, Vanka A, Ricotta DN, McSparron JI, Huang GC. Unpublished data.). In addition, when validated checklists were used to assess competence on simulators, only half of participants achieved passing scores at baseline and skills decayed back to baseline levels in the months after training. Most sobering, though, was that all participants had already been granted privileges to do these procedures on actual patients through our institution's processes.

We encountered practical obstacles in conducting this work, including schedule coordination for a large hospitalist group, scarce availability of simulation facilities, and limited financial support. We also made an executive decision not to insist on competence in ultrasonography, which is considered standard of care for bedside procedures (10). We suspect that hospital medicine groups across the country face similar if not greater challenges of cost, resources, and expertise. Taken together, the baseline poor performance of representative hospitalists, the complexities of evidence-based training, and the natural history of technical skill decay constitute a serious threat to hospitalized patients, as well as to the trainees under supervision of these hospitalists.

What can be done? Internists can individually seek training toward procedural competency, such as simulation-based practice. In our experience, however, few choose to do so, and practice without expert guidance and validated assessments is unlikely to ensure maintenance of competency.

As active clinicians and leaders with expertise in medical education, procedural training, competency assessment, and credentialing, we recommend the following: For smaller services where procedural specialists (such as interventional radiologists) are not routinely available and for hospitalist groups that expect all members to maintain privileges to perform bedside procedures, formalize a mandatory simulation-based curriculum with mastery learning. Such a curriculum should be coupled with repeated training and assessment at frequent intervals to combat skill decay. Programs lacking the infrastructure or budget to institute such measures should consider participating in regional continuing medical education or academic society precourses. Low-cost procedural trainers can also be used to enhance training, and advances in simulation technology are likely to lead to more affordable, higher-fidelity equipment. In addition, hospital medicine groups can establish a core subgroup of "proceduralists" (4), whose collective responsibility is to perform or supervise procedures for the group and to maintain a procedural volume that mitigates risk for skill decay. For academic groups, proceduralists should be employed for resident oversight and training to avoid propagating the problem of procedural incom-

This article was published at Annals.org on 23 April 2019.

petence. Such groups should arrange any procedural coverage gaps (such as overnight procedures) through a multispecialty collaborative model (for example, anesthesia, critical care, and surgery services) where available. As to the fundamental issue of assessing competency to ensure skill maintenance, we believe that the optimal assessment should be multifaceted and tailored to the individual. Such assessment will involve periodic simulation-based evaluation, documentation of procedural volume, and tracking of procedural metrics in the clinical setting (number of needle passes, time to completion, and complication rates)—all while recognizing that collating these metrics will require a robust infrastructure to support the privileging process and a larger research base to define proficiency thresholds.

Our experience raises questions about whether institutions are granting procedural privileges to hospitalists without proof of competence and indicates that more granular national guidelines for procedural assessment are needed. Such standards should incorporate rigorous curricula, valid measures of competence within each credentialing cycle, and evidence-based time intervals for reassessment. As stewards of inpatient safety, hospitalists must raise the bar for procedural excellence while it remains part of our practice scope.

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Disclosures: Disclosures can be viewed at www.acponline.org/authors/icmje/ConflictOfInterestForms.do?msNum=M18-3007.

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Ann Intern Med. 2019;170:654-655. doi:10.7326/M18-3007

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