Procedural Competence of Internal Medicine Residents: Time to Address the Gap

Tracking experience and certifying competence to perform procedures have been cornerstones of training in surgery residencies for decades. In contrast, emphasis on learning to perform procedures has varied widely among internal medicine residencies. Most internal medicine residencies have not employed mechanisms to formally teach procedural skills or required residents to track their procedure experience and gain certification of competence to perform procedures. In fact, the most common traditional teaching method for procedures has been, "See one, do one, teach one."

In recent years, as the practice of medicine has moved increasingly to ambulatory settings, internal medicine residents have spent more time learning in ambulatory settings. Concurrently, Residency Review Committee requirements have become more stringent regarding delineation of curricular content and assessment parameters while accreditation and certification bodies have identified procedures internal medicine residents must or should learn to perform.[1,2] Others have tried to define what procedures are essential for most internists to perform and, therefore, what procedures should be mastered as part of internal medicine residency training.[3] If we believe residents must be competent to perform certain procedures before becoming "certified" by the residency program, we must ensure opportunities for them to practice under supervision, and demonstrate competence. While residency programs have added requirements for procedure competence, we have not established consistent agreed-upon assessment methods or provided an adequate cadre of qualified teachers to teach these skills.

Two articles in this issue of *JGIM*[4,5] raise salient issues related to competence in performing procedures used in in-patient and ambulatory internal medicine practice settings. One article deals with graduating internal medicine residents' experience in performing certain procedures, their perception of the importance of being competent to perform the procedures, and their confidence to perform them.[4] The other explores academic general internists' and family physicians' views about the importance of generalist physicians' skill in performing certain procedures, how often they perform or teach the procedures, and how confident they feel in teaching them.[5]

Clearly, we need better delineation of what procedures all internal medicine residents should be required to master based on the profile of procedures most internists perform. Compilation of such a list is more complicated than it would seem. Some general internists practice in locations where a colleague in a procedure-oriented specialty can readily perform any procedure when needed. Others practice in locations where they must perform procedures themselves to avoid denying a patient a needed procedure or making the patient travel to a physician who can perform it. Increasing numbers of internists work for managed care organizations that may expect generalist physicians to perform a wide array of procedures without consultation. If 50% of internists actually perform a particular procedure in their practice, should all internal medicine residents be required to obtain proficiency in performing it? At this time, we do not know what percentage of practicing internists actually perform a defined set of procedures.

Once we determine what procedures all internal medicine residents should be competent to perform, we must ensure they have sufficient opportunity to learn these procedures. Despite a shift in residency education toward ambulatory settings, residents feel more confident in performing common in-patient procedures than ambulatory procedures.[4] Disturbingly, residents feel ambulatory procedures are more important for them to master than in-patient procedures, but they are less confident in their skills. Residents will have the opportunity to learn procedures only if they have access to adequate numbers of patients who need a procedure or simulations on which to practice, as well as practitioners who are qualified to teach the skills. These studies do not assess the adequacy of opportunities for learning procedures, but do indicate that many academic generalist physicians lack confidence to teach the procedure skills that the Internal Medicine Residency Review Committee and American Board of Internal Medicine have deemed essential.

Assessment is arguably the most important stimulus for learning. If faculty or accreditation boards assert that residents must be competent to perform a certain procedure, their skill must be assessed to reinforce the importance of acquiring the skill and to ensure competence in performing it. In this context, the residents' study[4] suggests that program directors consider in-patient procedures more important than ambulatory procedures because only the former must be tracked. Perhaps in part as a consequence of the perceived importance of the procedures, residents on average reported performing in-patient procedures more frequently than ambulatory procedures. While the disparity between perceived importance and experience may have been caused solely by the needs of patients, tracking of in-patient but not ambulatory procedures sends a message program directors may not wish to convey. As residents are now required to track their experience with ambulatory procedures in addition to in-patient procedures to earn eligibility to take the ABIM certifying examination, undoubtedly they will perform ambulatory procedures more often.

Yet ambulatory procedures are infrequently performed or taught by the generalist physicians who responded to the Wickstrom et al. survey.[5] Not surprisingly, there was a correlation between frequency of performing a procedure

and confidence to teach it. If this finding regarding the frequency with which general internists perform certain procedures is generalizable to the broader community of practicing internists, we need to obtain a consensus about the procedures in which expertise is necessary to practice internal medicine. While the family physicians in the survey reported performing more procedures and feeling more confident to perform them than the general internists, the internists consistently rated confidence lower than importance.

This raises the critical question of who should teach residents to perform procedures. The answer has important financial and educational implications. As more resident education occurs in general medicine, especially ambulatory settings, residents are likely to be exposed more frequently to academic general internists and less to subspecialists. Yet in the current situation, internal medicine sub-specialists or specialists in other fields are best qualified to teach procedure skills. Departments of medicine could hire additional general internists who have more procedure expertise or could train the existing faculty to do procedures, but both would be expensive in an era in which most departments are experiencing financial constraints. The diverse patient population in family medicine practices and the confidence of family medicine physicians in performing procedures suggests that family practice sites may be a valuable venue in which internal medicine residents could learn procedures.

Internal medicine residencies require competence of all residents in performing a defined set of procedures to meet current accreditation standards and ABIM examination eligibility requirements. However, these studies raise an important question regarding which procedures should be deemed essential for all internal medicine residents to master, a concern about faculty qualified to teach the procedures and a dilemma with fiscal implications about the feasibility of assessing competence.—**RUTH-MARIE E. FINCHER, MD,** *Medical College of Georgia School of Medicine, Augusta, Ga.*

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