

Anesthesia: How to Organize and Train Our Teachers

Editor's Note: This is the fourth in a series of four Editorial Views describing the challenges and new approaches in education in our specialty.

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OVER 70 yr ago, Emery A. Rovenstine gave an address titled “Anesthesia: Organization for Teaching.” He stated, “Anesthetic requirements of the future, if present day trends in surgery are a criterion, will demand methods, skill and imagination beyond our present capacity. To meet this pertinent challenge, organization for teaching is essential.”¹ Rovenstine advocated for supervised clinical instruction, frequent didactic sessions, anatomy laboratory teaching for regional anesthesia, case conferences to review complications, and discussions of the current anesthesia literature. His foresight was remarkable, as we still accept these as essential components of anesthesia residency training. Last year, during the Forty-seventh Rovenstine Lecture at the American Society of Anesthesiologists Annual Meeting, Ronald D. Miller, M.D., challenged all anesthesiologists to pursue excellence, especially for our training programs and specialty overall. He stated, “We need to be dedicated to creativity and the pursuit of excellence, which are crucial to both our professional autonomy and the development of long-term vision by the specialty.”² This editorial will address two aspects of “teaching organization” that did not exist in Rovenstine’s time: how our teachers should be trained, and how to organize our teachers to pursue excellence in education.

Training Our Teachers—Faculty Development for Education

For generations of physicians, the primary method of teaching preparation has been embodied by the phrase “see one, do one, teach one.” That is, the clinical knowledge and experience acquired during training is enough to teach effectively. Is that what the best teachers do? One qualitative study examined the practice of six distinguished medicine professors during teaching rounds, using structured interviews, written transcripts, and a structured teaching task.³ No professor had any formal training as a teacher. All acquired their knowledge of teaching from the experience of being a learner and reflecting on their performance as a teacher. Only one had participated extensively in formal faculty development efforts. The study raises an interesting question, “Should we spend time developing and participat-

ing in faculty development programs if they are not needed to become an effective teacher?” There are multiple reasons why faculty development is crucial to contemporary anesthesia education. First, learning to teach by experience can be slow. Several of the teachers in the study took 6–7 yr to develop a comfortable teaching style. Second, the pressures of healthcare delivery have placed competing demands on teaching time. Third, many medical schools have undergone significant curricular reform, incorporating new approaches to teaching, learning, and assessment such as problem-based tutorials, computer-based instruction, standardized patients, and simulation training.⁴ The next generation of anesthesia residents will come to us with that background. Finally, there is evidence that faculty development programs are effective.

The Best Evidence Medical Education Collaboration, an international group whose work includes systematic review of medical education, examined the impact of programs designed to improve faculty teaching abilities.⁵ The review was based on 53 articles on faculty development that met defined criteria. The educational outcomes were based on Kirkpatrick’s⁶ evaluation model, which describes four levels of impact: learner reaction, learning (change in attitude, knowledge, or skill), behavior change, and results (at the learner level or the organization itself). The program types included workshops, seminar series, and longitudinal programs up to 1 yr in duration. Instructional methods included lectures, small group discussions, interactive exercises, role plays, simulations, and video reviews of performance. The review supports these benefits: improvements in teaching behavior, gains in teaching knowledge and skill, and a positive change in attitudes toward teaching and faculty development itself.⁵ According to Kirkpatrick,⁶ four conditions are needed for an individual’s behavior to change: desire for change, knowledge of what to do, a supportive work environment, and rewards for changing. Faculty development can only address the first two conditions. Nevertheless, our training programs will benefit from more faculty who eagerly participate in faculty development for education.

Organizing Our Teachers—the Academy Movement

A recent trend in medical education is the emergence of “Academies,” formal organizations of distinguished educators whose goal is to advance the educational mission of the

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institution.^{7,8} Notable examples include the Academies at Medical College of Wisconsin, Harvard Medical School, and University of California, San Francisco. The rationale for Academies became stronger as threats to the educational mission of medical schools became evident in the late twentieth century. A focus on research and the sophisticated requirements of modern-day patient care can result in education as a second-tier priority. Irby *et al.*⁷ suggest that this structural problem requires a structural remedy, and that Academies could play a role. They highlight the following characteristics of Academies to distinguish them from faculty development programs:

1. A mission to advance and support educators, provide faculty development, promote curriculum development, advance educational scholarship, and offer protected faculty time for educational purposes;
2. Membership is composed of distinguished educators selected through rigorous peer review that evaluates contributions to teaching, mentoring, curriculum development and leadership, and educational scholarship;
3. Formal schoolwide organizational structure with designated leadership; and
4. Dedicated resources that fund mission-related initiatives.

Because Academies are a recent development, their impact on the educational mission is difficult to determine. Dewey *et al.*⁸ surveyed 20 Academies at U.S. medical schools to create a framework for collaboration and to better understand their role in academic medicine. Academy goals shared by the majority of respondents included promoting communication and collaboration among faculty, stimulating educational innovation, providing mentoring for junior faculty, enhancing promotion of faculty, and developing faculty educational skills. Benefits of Academy membership included networking and collaboration, schoolwide recognition, mentoring for educational skills development, and weight in promotion or advancement. If faculty development can positively impact the desire to be a better teacher and improve teaching skills, then Academies may address the environment for teaching and provide rewards for change.

Recommendations

If we are to pursue excellence in anesthesia education, we must embrace the need for faculty development and for novel approaches to reinvigorate the teaching mission. At the individual department level, we should have our teachers participate in local or national programs designed to improve their abilities as educators. To enable this, we will need to finan-

cially support their time away from patient care activities. The promotion process should recognize and reward our teachers using the criteria developed by Academies. At the national level, we have several anesthesia organizations that include teaching and education in their mission, including the Foundation for Anesthesia Education and Research, Society for Education in Anesthesia, Association of Anesthesiology Core Program Directors, and Association of University Anesthesiologists. Currently, these organizations do have areas of overlap. For example, the Society for Education in Anesthesia has a standing Committee on Residency Curriculum and regularly sponsors a program director forum at its annual meeting. As its name suggests, the Association of Anesthesiology Core Program Directors was designed to represent the Accreditation Council for Graduate Medical Education core program directors. The Association of University Anesthesiologists Educational Advisory Board commonly sponsors sessions on residency-related topics at its annual meetings. By strategically working together, these groups could minimize the duplication of effort and resources. Finally, the American Society of Anesthesiologists should involve our leading educators in its task forces on future paradigms of anesthesia practice. We must heed Rovenstine's advice that "organization for teaching" is essential to meet the challenges our specialty will face in the years ahead.

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