Anesthesiology 2010; 113:516–7

Resident/Fellow Evaluation of Clinical Teaching

An Essential Ingredient of Effective Teacher Development and Educational Planning

TEACHING anesthesiology residents and fellows in graduate medical education programs should be as awesome a responsibility for faculty members as anesthetizing patients is for clinical anesthesiologists in the operating room! Knowing the needs of our students (analogous to "preanesthetic assessment"), providing the instruction (analogous to "administering the anesthetic"), and assessing that learning has occurred (analogous to the "postanesthetic recovery scoring") tells programs and faculty whether effective education is taking place and can guide indicated improvements (analogous to a "new prescription"). Because education is defined as change in behavior based on experience, the quality of the experience is fundamental to the success of the teaching/learning activity.

Is the quality of the clinical teaching experience assured in anesthesiology education? Why is the answer to this question often "no"? The reason, in part, centers upon the "second class" status that teaching occupies as a valuable activity for faculty. Although it would be unthinkable to entrust patient care to an anesthesiologist who did not successfully complete an accredited residency, we often entrust education of residents and fellows to clinical teachers who did not successfully complete or even begin learning how to teach. Clinical teachers say that the ways they learned how to teach that have strongly contributed to their teaching effectiveness include, among others, (1) their own intuition and judgment (62% of respondents) and (2) the way they were taught (43% of respondents).[1] Ninety percent of clinical teachers do not read the medical education literature to learn the evidenced-based science about teaching, more than 60% have never attended a workshop or other didactic session on teaching, and clinical faculty seek assistance from educational specialists concerning instructional issues less than 30% of the time.[1]

Faced with the dilemma of having an awesome responsibility to teach residents and fellows and having many teachers who are educational novices at best, what can we identify to stimulate and improve clinical teaching by anesthesiology faculty? Baker,[2] in this issue of ANESTHESIOLOGY, provides an important answer to this question. Recognizing that "Residency programs aspire to improve clinical teaching provided by clinician educators,"[2] Baker offers resident evaluation of teachers as part of the solution. His study of resident assessment of educators in anesthesiology provides data about the positive impact student evaluation can have to motivate clinicians to become better teachers. Using the resident evaluation system in his institution, he collected and analyzed more than 19,000 evaluations of more than 190 faculty members by more than 190 residents over a period of more than 5 yr.

Table 1. Attributes of Teaching

Time spent
Clinical supervision
Quality of teaching
Quantity of teaching
Role model
Encourages thinking about the science of anesthesia
Overall

Baker's data collection and analysis assessed the effect of (1) seven teaching attributes (table 1), rated on a Likert scale (2) a composite teaching score summing these ratings, and (3) narrative comments focused on teacher's strengths and areas where they could improve, all of this material being provided to faculty members every 6 months. Baker's teaching attributes are strikingly similar to the classic characteristics of effective clinical educators, defined for teachers of internal medicine by Mattern *et al.*[3] (table 2). The evaluating residents in Baker's study were asked in addition to list "best" and "worst" teachers. These yearly best/worst rankings, although not shared with the faculty, were used to validate the teaching scores (attributes).

The results of Baker's investigation of the influence of resident evaluation on clinical teaching are intuitively obvious; teaching scores improved over time and teaching effectiveness of the faculty as a whole became more homogenous at a higher average score. Clinical teaching improved as faculty consistently received thoughtful evaluation feedback

◆ This Editorial View accompanies the following article: Baker K: Clinical teaching improves with resident evaluation and feedback. ANESTHESIOLOGY 2010; 113:693–703.

Accepted for publication April 19, 2010. The author is not supported by, nor maintains any financial interest in, any commercial activity that may be associated with the topic of the article.

Table 2. Characteristics of an Effective Clinical Teacher

Allocates dedicated time for teaching
Creates a trusting learning environment
Demonstrates clinical credibility
Provides an initial orientation and final evaluation for the teaching event
Engages learners by expecting them to present cases, the pertinent details and educational benefit of which are managed by the teacher
Enhances clinical case material with complementary didactic sessions
Role models physician-patient relationships through bedside teaching
Encourages student consideration of and interactive discussions about the psychosocial aspects of medical care
Transfers the teaching responsibility to the students who are the future medical educators

from their students. The clinicians were able to use the resident feedback as a "yardstick" to compare themselves with the "average faculty member" who was characterized by the composite teaching evaluation data of all faculty in the program. With these data, faculty no longer had the need to use their own intuition and judgment and reflect on the way they were taught as guides to teaching; instead, they had feedback on specific teaching attributes that, when viewed positively, defined the "best teachers." Baker's study[2] highlighted the positive impact of the resident's narrative comments; the rating of teaching attributes defined faculty needs for improvement and the narrative comments provided constructive formative suggestions on how the teachers could improve. Consistent feedback to the clinical teachers resulted in better teaching, the process taking approximately 1 yr for improvements to be documented and almost 3 yr to reach peak effect.

Using resident evaluation feedback to improve clinical teaching meets three essential educational goals for anesthesiology graduate medical education: (1) the Accreditation Council for Graduate Medical Education requirement for annual confidential evaluation of residency faculty, including a review of the clinical faculty member's teaching abilities, commitment to the educational program, clinical knowledge, professionalism, and scholarly activities is accomplished;* (2) department chairs can use the teaching evaluation data about a faculty member's educational skill, teaching commitment, clinical knowledge, and scholarship as ammunition for constructive suggestions for change of teaching techniques and institutional appointment and promotion committees can base faculty academic recognition on this data;[4] and (3) the educational outcome analysis loop will be completed when student educational needs are identified, teaching objectives are developed to meet the needs, an instructional activity is accomplished to enable the objectives to be met, and the outcome of the entire process is assessed by applying an appropriate evaluation design, which must include evaluation of clinical teaching. The final step in the analysis is to apply the results to the program objectives and instructional activities to enhance future desired learner outcomes and revise future teaching activities.†

Alan Jay Schwartz, M.D., M.S.Ed., Department of Anesthesiology and Critical Care Medicine, Children's Hospital of Philadelphia, University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania. schwartza@email.chop.edu.

References

1. Jason H, Westberg J: Teachers and teaching in US medical schools. Norwalk, CT, Appleton-Century-Crofts, 1982, pp 71–83
2. Baker K: Clinical teaching improves with resident evaluation and feedback. ANESTHESIOLOGY 2010; 113:693–703
3. Mattern WD, Weinholtz D, Friedman CP: The attending physician as teacher. N Engl J Med 1983; 308:1129–32
4. Schwartz AJ: Cardiac anesthesia—training, qualifications, teaching, and learning, Cardiac Anesthesia, 6th edition. Edited by Kaplan JA. Amsterdam, Elsevier, 2010, in press

* Accreditation Council for Graduate Medical Education. Anesthesiology program requirements. http://www.acgme.org/acWebsite/downloads/RRC_progReq/040pr703_u804.pdf. Accessed April 14, 2010.

† Hutchins EB: Unpublished lecture notes: Evaluation Methods in Professional Education. Course ED668, Graduate School of Education. University of Pennsylvania, 1981.