4. "Face validity" refers to what Mosier in his classic article on the subject calls "validity by assumption, by definition or by appearance." It is a form of content validity that involves the appearance of validity to an individual with no special training relevant to the item being "validated." See Mosier CI. A Critical Examination of the Concept of Face Validity. Educ Psychol Meas 1947;7:191–205

5. The "eyeball test" is defined as an "informal assessment of data simply by inspection and mental calculation allied with experience of the particular area from which the data arise." Everitt BS. The Cambridge Dictionary of Statistics in the Medical Sciences: Cambridge University Press, 1995:92

In Response:

Dr. Balestrieri[1] raises an important point relating to one use of resident-generated evaluations of their faculty. He deplores their use in the relatively high-stakes assessment of faculty performance by institutional leadership. This sentiment is informally shared by many faculty and teachers. More formal validation is needed such as was provided recently for quality of faculty supervision by de Oliveira Filho et al.[2] It would be extremely helpful if groups in the United States emulate and complement these authors in this endeavor. The authors evaluated attending quality along the supervisory dimensions of anesthesia care planning, availability, feedback, professionalism, interpersonal skills, safety concern, resident autonomy, and patient based learning. There is certainly ample opportunity to study the validity of additional characteristics of successful resident-attending interactions, such as critical thinking, prioritization, decision making, evidence-based teaching/learning, and other dimensions being evaluated by thousands of residents each year. Another aspect to be assessed is whether a deliberate intervention in behavior or teaching style is actually capable of meaningfully changing resident evaluation scores. Furthermore, beyond addressing internal consistency and reliability, investigators should strive for external validation of teaching effectiveness assessments, perhaps through faculty observation of operating room trainee-faculty interaction by a qualified third party or by surveillance of trainee behavior in response to faculty teaching. As more becomes known about the validity of resident assessments of their faculty, use of these data should improve, with greater benefits for trainees, educators, and patients.

Armin Schubert, MD, MBA
Department of General Anesthesiology
Cleveland Clinic
Cleveland, Ohio
schubea@ccf.org

REFERENCES

1. Balestrieri PJ. Validity and reliability of faculty observations. Anesth Analg 2009; 108:1991–2
2. de Oliveira Filho GR, Dal Mago AJ, Soares Garcia JH, Goldschmidt R. An instrument designed for faculty supervision evaluation by residents and its psychometric properties. Anesth Analg 2008;1316–22

Teaching Lifesaving Procedures: The Impact of Model Fidelity on Acquisition and Transfer of Cricothyrotomy Skills to Performance on Cadavers

To the Editor:

Using high- and low-fidelity simulators, Friedman et al.[1] describe teaching cricothyrotomy using the Seldinger technique of the Melker set (Cook, Bloomington, IN). The authors demonstrate, as do others,[2] that this method is slow (pretest 240 s and 260 s in the low- and high-fidelity training groups, respectively, posttest 140 s and 120 s).[1] The new Melker kit, with preloaded dilator, may improve performance, but we believe that trainees should also be taught surgical cricothyrotomy, which with instruction can be achievable in as little as 30 s.[3]

The authors acknowledge the lack of a control group, without which it is difficult to ascribe improvement to practice on manikins. Improvements may have resulted from exposure to an instructional video, equipment familiarity, or advance preparation for a posttest.

Having used the SimMan (Laerdal, Kent, UK) to teach cricothyrotomy, we would argue with the assigned "high fidelity" characteristics. Perhaps, the distinction between the two manikins in Friedman's study is not so much one of fidelity but more one of expense. Arguably, a better high-fidelity comparison would have been with cadavers.

Charlotte R. Soulsby
Gareth Kessell, MBChB, MRCP, FRCA
Department of Anaesthesia
James Cook University Hospital
Middlesbrough, UK
c.r.soulsby@dundee.ac.uk

REFERENCES

1. Friedman Z, You-Ten KE, Bould MD, Naik V. Teaching lifesaving procedures: the impact of model fidelity on acquisition and transfer of cricothyrotomy skills to performance on cadavers. Anesth Analg 2008;107:1663–9
2. Dimitriadis JC, Paoloni R. Emergency cricothyroidotomy: a randomised crossover study of four methods. Anaesthesia 2008;63:1204–8
3. Holmes JF, Panacek EA, Sakles JC, Brofeldt BT. Comparison of 2 cricothyrotomy techniques: standard method versus rapid 4-step technique. Ann Emerg Med 1998;32:442–6

In Response:

We are grateful for the insights offered by Drs. Soulsby and Kessel.[1] The tested Melker kit is widely available in North America and currently is the one most residents will encounter. Its obvious advantage is that anesthesiologists are familiar with the Seldinger technique and therefore may be more comfortable with this procedure that they will rarely perform. Although we agree that residents should be taught surgical cricothyrotomy, studies have shown anesthesiologists would prefer a Seldinger technique to an open surgical technique.[2] Residents should be familiarized with both options.

We agree that our study is limited by the absence of a control group as