evolves in terms of technology and treatment practices, Milestones will need to transform in parallel, to ensure that trainees learn up-to-date procedures and skillsets.

For all of these reasons, the Milestones Project will continue to be an iterative process, and feedback from practitioners and educators is vital to its improvement. As highlighted by Mitzman and colleagues, there are a number of tasks that must be undertaken by individual programs after implementation of the new Milestones: review of the assessment tools in place, meeting of the clinical competency committee, faculty assessment, and resident self-assessment.³ However, beyond these expectations, it will be incredibly important for faculty and residents to provide ongoing feedback on the Milestones, to ensure both their relevance and efficacy in assessing trainees in our specialty. In the interim, as we reflect on what makes a “good surgeon,” we look forward to the reveal of the Milestones 2.0, and we must recognize and accept the need for this to be an iterative process to achieve continued growth.

References

1. The Thoracic Surgery Milestone Project. *J Grad Med Educ.* 2014;6(1 suppl 1):332-54.
2. Yang SC, Merrill W. Educational milestone development in phase II specialties: thoracic surgery. *J Grad Med Educ.* 2014;6(1 suppl 1):329-31.
3. Mitzman B, Beller J, Edgar L. Thoracic Surgery Milestones 2.0: Rationale and Revision. *J Thorac Cardiovasc Surg.* 2020;160:1399-404.
4. Edgar L, Roberts S, Yaghmour NA, Leep Hunderfund A, Hamstra SJ, Conforti L, et al. Competency crosswalk: a multispecialty review of the Accreditation Council for Graduate Medical Education Milestones across four competency domains. *Acad Med.* 2018;93:1035-41.
5. Sullivan PG, Wallach JD, Ioannidis JP. Meta-analysis comparing established risk prediction models (EuroSCORE II, STS score, and ACEF score) for perioperative mortality during cardiac surgery. *Am J Cardiol.* 2016;118:1574-82.
6. Safi S, Benner A, Walloschek J, Renner M, op den Winkel J, Muley T, et al. Development and validation of a risk score for predicting death after pneumonectomy. *PLoS One.* 2015;10:e0121295.
7. Bellomo R, Kellum JA, Ronco C. Defining and classifying acute renal failure: from advocacy to consensus and validation of the RIFLE criteria. *Intensive Care Med.* 2007;33:409-13.
8. Antonoff MB, Nguyen S, Nguyen TC, Odell DD. Conducting high-quality research in cardiothoracic surgical education: recommendations from the Thoracic Education Cooperative Group. *J Thorac Cardiovasc Surg.* 2019;157:820-7.e821.
9. Corsini EM, Antonoff MB. Surgical education research: How to move beyond the survey. *Surgery.* 2020;167:269-72.

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Commentary: Bigger...badder...better?

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It is the rare human who enjoys being scrutinized, and surgeons even less so. Many of us believe we are entirely capable of accurate self-reflection and that we can independently use that self-reflection to improve ourselves. Impossible as it may seem, there is one thing more irksome for surgeons than evaluating themselves, and that is evaluating others. Trainees and faculty collectively bemoan the pesky forms lurking in our inboxes, and the thought of filling them out incites excruciating pain. In fairness, the evaluations can seem onerous, with countless online modules, finicky phone

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CENTRAL MESSAGE

The revision to the ACGME Milestones is needed and a work-in-progress. This is essential to ensure resident and faculty engagement, as well as to provide beneficial feedback to trainees and programs.

“apps,” and committees to participate in fulfilling criteria laid out by the Accreditation Council for Graduate Medical Education (ACGME) guidelines.¹⁻³ At many institutions, faculty use burdensome Web sites to fill out evaluations and score residents on the basis of the competencies. In

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some programs, this has been supplanted by underused “apps” that generate a different, but equivalent, hatred. Needless to say, many residents and the faculty despise the evaluation tools, the evaluation process, and as a result, the ACGME competencies at the core of all these metrics.

In this issue of the *Journal*, Mitzman and colleagues⁴ review the history behind those ACGME Milestone guidelines, with a focus on the field of thoracic surgery.⁴ While the guidelines themselves were set, the individual programs had the final say in what assessment tools were used. Revisions based on data obtained from the initial milestones are now in the works and to be unveiled in the near future. The goal of the revisions is presumably to simplify the guidelines, improve participation from faculty and residents, and streamline the process of tracking a resident's or fellow's progress.⁵ Although the history discussed in the article is certainly educational, more focus is needed on the future. Which milestones were the most effective and should be the foundation of every thoracic surgeon's education? Which, if any, were distractingly bad and should be discarded? Which better correlated with board pass rates? There may not be literature available now to answer these specific questions, but the data are there.

At The Ohio State University Cardiothoracic Residency, we enjoy an effective and interactive evaluation tool. We use the eMTRCS application for real-time formative feedback.⁶ It loads quickly, has a simple interface, and requires participation from both trainee and evaluator to complete, so neither party can be passive. Answers based on the current ACGME Milestones are provided, free text is inclusive, and confidential communication to the Program Director can be delivered. Metrics and the ACGME guidelines are

here to stay; they are now entrenched deeper than ever in our training. We should make peace with them and integrate them into our curricula. Although they are malleable and ever-evolving, programs have the opportunity to take advantage of this flexibility and decide upon an assessment tool(s) that best fits their institution. Surgeons pride themselves on evidence-based practices. Our education should require evidence-based training milestones. Painful as it may be, the information gained from these initial evaluation tools can forge our training futures.

Naturally, at the heart of the matter is the “buy-in” from the trainees and programs themselves that the competencies and accompanying assessment tools are not only necessary but also beneficial. Only time will tell if the ACGME guideline revisions for thoracic surgery will provide this, but it is certainly a much needed step toward a more regimented training future for residents and programs alike.

References

1. Borman KR, Augustine R, Leibrandt T, Pezzi CM, Kukora JS. Initial performance of a modified milestones global evaluation tool for semiannual evaluation of residents by faculty. *J Surg Educ*. 2013;70:739-49.
2. Meier AH, Gruessner A, Cooney RN. Using the ACGME milestones for resident self-evaluation and faculty engagement. *J Surg Educ*. 2016;73:e150-7.
3. Watson RS, Borgert AJ, O Heron CT, Kallies KJ, Sidwell RA, Mellinger JD, et al. A multicenter prospective comparison of the accreditation council for graduate medical education milestones: clinical competency committee vs. resident self-assessment. *J Surg Educ*. 2017;74:e8-14.
4. Mitzman B, Beller JP, Edgar L. Thoracic surgery milestones 2.0: rationale and revision. *J Thorac Cardiovasc Surg*. 2020;160:1399-404.
5. Morgan R, Kauffman DF, Doherty G, Sachs T. Resident and attending assessments of operative involvement: do we agree? *Am J Surg*. 2017;213:1178-85.e1.
6. Gundle KR, Mickelson DT, Cheronas A, Black J, Hanel DP. Rapid web-based platform for assessment of orthopedic surgery patient care milestones: a 2-year validation. *J Surg Educ*. 2017;74:1116-23.