Developing a Comprehensive Resident Education Evaluation System in the Era of Milestone Assessment

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OBJECTIVES: In an effort to move training programs toward competency-based education, the Accreditation Council for Graduate Medical Education (ACGME) introduced the Next Accreditation System (NAS), which organizes specific milestones regarding resident skills, knowledge, and abilities along a continuum. In order to foster innovation and creativity, the ACGME has provided programs with minimal guidelines regarding the optimal way to approach these milestones.

METHODS: The education team at UT Southwestern embraced the milestones and developed a process in which performance assessment methods were critically evaluated, mapped onto an extrapolated performance list corresponding to the areas required by the ACGME milestones, and filled gaps in the previous system by modifying evaluation tools and creating new program components.

RESULTS: Although the authors are early in the evolution of applying the new milestones system, this approach has thus far allowed them to comprehensively evaluate the residents and the program in an efficient and effective fashion, with notable improvements compared to the prior approach.

CONCLUSIONS: The authors hope that these experiences can inform others embarking upon similar journeys with the milestones. (J Surg 72:618-624. © 2015 Association of Program Directors in Surgery. Published by Elsevier Inc. All rights reserved.)

KEY WORDS: milestones, education, evaluation, competency, surgery residency

COMPETENCIES: Interpersonal and Communication Skills, Practice-Based Learning and Improvement, Systems-Based Practice, Medical Knowledge, Professionalism, Patient Care

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INTRODUCTION

Feedback and assessment play a critical role in training and fostering the acquisition of expertise.[1,2] Increasingly, medical educators are focusing on alternative methods to catalyze the path to proficiency and expertise,[3-6] as well as concentrating on competency rather than outcome-based results.[7] In an effort to move training programs toward competency-based education, the Accreditation Council for Graduate Medical Education (ACGME) introduced the Next Accreditation System (NAS), which organizes specific milestones regarding resident skills, knowledge, and abilities along a continuum. To foster innovation and creativity, the ACGME has provided programs with ample freedom regarding the optimal way to approach these milestones.[8] However, many programs are struggling as they try to understand how to integrate the milestones into training in a meaningful way.[9,10] This has resulted in a diversity of methods, some of which have resulted in unanticipated applications that do not necessarily align with the goals of the ACGME.[11] Thus, optimal and appropriate ways to document and evaluate resident progression along the milestones are needed.

This article describes our current approach at UT Southwestern Medical Center for evaluation, analysis, and documentation of the milestones for our general surgery residents. We anticipate that the lessons we have learned thus far will be of benefit to both surgical and nonsurgical specialties, as we all begin to develop and refine our milestone process. We hope that our experiences can inform others striving to understand and meet new requirements from the NAS.

METHODS

Review of Milestones

The general surgery milestones consist of 16 subcompetencies, each with a set of detailed descriptors for each of the 4 levels of performance. However, even within a single level of a subcompetency, multiple behaviors or skills may exist. For

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example, to achieve Professionalism Level 2, a resident must demonstrate the ability to maintain composure under stress, exhibit compassion and empathy toward patients, and ask for help when needed (Fig. 1). To accommodate these multifaceted components throughout the milestones, we began by breaking down each subcompetency into discrete items. This process resulted in an extrapolated list of 119 resident performance points to document and evaluate. We used this list as a framework from which to assess our current evaluation processes and design a new system.

Review of Current Data Sources and Processes

Using the extrapolated performance list mentioned earlier, we then critically assessed our current evaluation system and processes. Our system had traditionally collected information from a variety of sources, including faculty/nurse/student evaluations, Clinical Assessment and Management Examination—Outpatient and Operative Performance Rating System forms, case logs, simulation laboratory completion, conference attendance, duty-hour compliance, and American Board of Surgery In-Training Exam (ABSITE) scores. Despite the multitude of sources from which we collected data, substantial gaps became apparent when we mapped our current practices to the desired list. In fact, our current system only accounted for a little more than half of the information needed to appropriately determine performance according to the milestone grid. Milestones that had the most considerable gaps included Systems-based Practice 2, Interprofessional and Communication Skills 3, and Practice-based Learning and Improvement 3.

Creation of New Evaluation Forms and Processes

Identification of gaps within our current performance appraisal system provided us with a solid starting point to revise our forms, procedures, and policies. For each area in which we were lacking, our education team identified the best source to measure and document the behavior (i.e., faculty evaluation, simulation, and clinical data), the frequency of retrieving the data, and the metrics for achieving competence. Some of the processes we agreed upon required only small modifications to the current evaluation systems. For example, we shifted from procedure-specific operative assessment forms to the Objective Structured Assessment of Technical Skills[12] form so that we would have a standardized tool that could track the development of residents' intraoperative surgical skills throughout the program.

Some processes needed substantially more modifications to meet our needs. Our monthly faculty evaluation of residents, for instance, was extensively revised. Our previous evaluation tool used by faculty consisted of a 27-item tool that asked if faculty expectations were met (on a 1-5 Likert scale) on a plethora of physician competencies. This tool had traditionally met resident performance appraisal needs but did not specifically place residents on the ACGME milestone continuum. Importantly, we avoided using the milestone evaluation tool itself on a monthly basis, as the Residency Review Committee explicitly discourages this approach.[11] Thus, we were left with a lengthy list of behaviors and skills that we agreed would best be assessed by the clinical faculty working with the residents each month. To meet this need but not overly burden clinical faculty each month, we created 3 isomorphic versions of the evaluation tool. A set of 14 items that we felt were important enough to capture every month appeared on each version, and an additional unique 10 items were added to each of the 3 forms (Table 1). We then decided which rotations would receive each version based on the levels of residents rotating through that service, frequency of being on the service, and applicability of the items to the specific features of the rotation. Additionally, we revised the way in

Practice Domain	Competency	Critical Deficiencies	Level 1	Level 2	Level 3	Level 4
Care for Diseases and Conditions	PROF1	This resident displays undesirable behaviors, including not being polite or respectful, not respecting patient confidentiality and privacy, demonstrating lack of integrity, or failing to take responsibility for patient care activities.	This resident is *polite and respectful* toward patients, their families, and other health care professionals. This resident demonstrates a *commitment to continuity of care* by taking personal responsibility for patient care outcomes. This resident *responds to pages and consultation requests promptly.* This resident is *honest and trustworthy.* This resident consistently *respects patient confidentiality and privacy.*	This resident *maintains composure in accordance with ethical principles even in stressful situations* . This resident *exhibits compassion and empathy toward patients and their families.* This resident *recognizes the limits of his or her knowledge and asks for help when needed.*	This resident *ensures patient care responsibilities are performed and continuity of care is maintained.* This resident *accepts responsibility for errors in patient care and can initiate corrective action.* This resident *consistently demonstrates integrity* in all aspects of care and professional relationships.	This resident *serves as a role model for ethical behavior.* This resident *positively influences others by assertively modeling professionalism.* The resident *consistently places the interests of patients ahead of self interests* when appropriate.
		Comments:				

FIGURE 1. Surgery milestone. (*Note*: Italicized phrases included as discrete evaluation elements.) (Adapted with permission from ACGME.[13])