

Evaluating Surgical Residents Quickly and Easily Against the Milestones Using Electronic Formative Feedback

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OBJECTIVE: This study was conducted to assess the effectiveness of a newly implemented electronic web-based review system created at our institution for evaluating resident performance relative to established milestones.

DESIGN: Retrospective review of data collected from a survey of general surgery faculty and residents.

SETTING: Tertiary care teaching hospital system and independent academic medical center.

PARTICIPANTS: A total of 12 general surgery faculty and 17 general surgery residents participated in this study. The survey queried the level of satisfaction before and after the adoption of QuickNotes using several statements scored on a 5-point scale, with 1 being the lowest rating as “not satisfied,” and 5 being the highest rating as “completely satisfied.”

RESULTS: The weighted average improvements from pre- to post-QuickNotes implementation for the faculty responding to the survey ranged from 10% to 40%; weighted average improvements for the residents responding to the survey ranged from 5% to 73%. For the survey of faculty, both sets of weighted averages tended to be higher than the weighted average for the resident’s survey responses. The highest rated topic was the faculty’s level of satisfaction with the “frequency to provide feedback” with a post-QuickNotes implementation weighted average of 4.25, closely followed by the residents’ level of satisfaction with the “evaluation includes positive feedback” with a post-QuickNotes implementation weighted average of 4.24. The most notable increases in weighted averages from preimplementation to postimplementation were noted for “overall satisfaction” (20% increase for faculty, 37% for residents), “reflects actual criteria that matter” (36%

increase for faculty, 73% for residents), faculty “opportunity for follow-up” (increase of 40%), resident “reflects overall trends” (increase of 37%), and resident “provides new information about my performance” (increase of 37%).

CONCLUSIONS: Our institutional adoption of QuickNotes into the resident evaluation process has been associated with an overall increased level of satisfaction in the evaluation process by both faculty and residents. The design of QuickNotes facilitates its integration into the resident training environment, as it is web based, easy to use, and has no additional cost over the standard New Innovations subscription. Although it is designed to capture snapshots of trainee behavior and performance, monthly reports through QuickNotes can be used effectively in conjunction with the more traditional end-of-rotation evaluations to show trends, identify areas of strength that should be reinforced, demonstrate areas needing improvement, allow for a more tailored individual education plan to be developed, and permit a more accurate determination of milestone progression. (J Surg Ed ■■■■■. © 2016 Association of Program Directors in Surgery. Published by Elsevier Inc. All rights reserved.)

KEY WORDS: graduate medical education, milestones, resident evaluation

COMPETENCIES: Professionalism

INTRODUCTION

The launch of the Next Accreditation System, including the Accreditation Council for Graduate Medical Education milestones, has provided programs with new challenges and opportunities for growth with regard to resident assessment and faculty development. Direct observation and formative feedback have increasingly become the

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cornerstones of resident assessment, as educators are asked to attest to the attainment of discrete behaviors, some of which would not be considered routinely. These challenges have also created the need for methods with which to capture and analyze the feedback provided in a meaningful way. Currently, there are no tools widely used to achieve this goal.

The milestones attempt to group and define a complex set of resident behaviors to provide a framework of progression to competency. Since 1999, the Accreditation Council for Graduate Medical Education has moved toward competency-based medical education.¹ By more clearly defining the performance and behaviors expected of physicians, the milestones can help identify deficiencies or opportunities for improvement, which in the past might have been unrecognized or been delayed in their recognition. In addition to benefits to the residents in their professional growth, the milestones give training programs a tool with which to review the aggregate progression of their residents. This can provide insight into the quality of training and help identify gaps in performance. Such information can be used by the Clinical Competency Committee (CCC) to identify residents requiring remediation and can help guide specific recommendations for the remediation process.¹

Incorporation of direct observation along with timely, specific, honest, and reviewable feedback is essential for effective milestone assessment.² Summative feedback that is recorded only at the end of a rotation or after a longer period, although helpful, has many deficiencies regarding timeliness and specificity. Furthermore, a resident interaction with either a strict or lenient rater that happens to be juxtaposed chronologically to a CCC meeting may drastically change the overall discussion, overshadowing resident performance and resulting in key points of growth or deficiency being missed. The goal of the CCC should be to develop a “shared mental model” through discussion of all available data.¹

Such limitations can be avoided with the provision of concise but formal short-interval formative feedback to the resident that can also be tracked by the program. This provides the ability to redirect incorrect behavior and reinforce those behaviors that are more beneficial “in the moment” while also providing standardized documentation of specific cases demonstrative of strengths or problems. When compiled, this permits more accurate CCC assessment of resident performance upon which to make important decisions regarding resident performance and progression.

Ingraining such a process into busy surgical practices and training programs is not without challenge. The amount and complexity of administration and “paperwork” required for basic patient care and resident training continues to increase in what often seems to be a logarithmic fashion. Additional forms or difficult-to-use interfaces can be frustrating to resident and faculty alike, with the danger of

compromising the quantity and quality of feedback. A system of assessment that is able to capture the complexity of behaviors defined by the subcompetencies, without being burdensome, could have a significant positive effect on the education of individual residents and the training program overall. In other words, it has to be accurate and thorough but also has to be simple and expeditious.

To achieve the challenges described, we created QuickNotes, an electronic formative feedback tool. Modeled after Field Notes,³ a paper-based system developed in Canada, QuickNotes allows faculty to record and provide formative feedback to residents quickly, and maps the results to the general surgery milestones and subcompetencies.

METHODS

Beginning in October 2014, our Department of Graduate Medical Education implemented QuickNotes, an electronic web-based program that allows general surgery faculty to evaluate residents’ performance quickly and easily. The QuickNotes process results from a repurposing of the “log books” function of the New Innovations residency management system (New Innovations, Uniontown, OH). The logger feature can be manipulated to log evaluations instead of procedures or encounters. Each resident is assigned a log that is further set up to require selection of the specific subcompetency being addressed in each point of feedback.

In contrast to the previous paper-based evaluation system, each QuickNote captures an individual piece of formative feedback in real time and assigns one of the 16 surgical subcompetencies that appear in a drop-down box (Fig. 1). Each subcompetency is accompanied by a brief descriptor that helps guide assessors in defining the behavior being assessed. Faculty are then asked to briefly describe the encounter and record the narrative feedback they provided the resident at the time of the encounter. The narrative provided can be as brief or as complicated as the faculty member chooses. Finally, the faculty member rates the observation on a 4-point scale from “Exemplary” to “Needs Immediate Attention” (Fig. 2). Over the course of time, residents are evaluated by multiple faculty on all the milestones via the subcompetencies. Recorded data can be sorted by subcompetency, rater, date, rating, and setting, allowing for different types of performance (Fig. 3).

For residency programs already using New Innovations, there is no additional cost to set up QuickNotes. It can be tailored easily to specific departmental needs but does require institutional development of the format and drop-down menus desired as this is not available as a built in feature from New Innovations. As New Innovations is compatible with computers, tablets, and smart phones, accessing QuickNotes is easy and efficient to use, requiring approximately 2 minutes to access, provide feedback, and save for each interaction. The program has excellent

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