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Surgeons have an opportunity to improve teaching quality through feedback provision



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ABSTRACT

Background: Medical student evaluations of faculty are increasingly incorporated into promotion and tenure decisions, making it imperative to understand learner perceptions of quality teaching. Prior work has shown that students value faculty responsiveness in the form of feedback, but faculty and students differ in their perceptions of what constitutes sufficient feedback. The innovative minute feedback system (MFS) can quantify responsiveness to students' feedback requests. This study assessed how feedback provision via MFS impacts teaching quality scores.

Materials and methods: This retrospective observational study compared average faculty teaching quality scores with faculty's percentage response to student feedback requests via the MFS. The data were generated from the core surgical clerkship for third-year medical students at the University of Michigan Medical School. The relationship between average teaching quality scores and response percentage was assessed by weighted regression analysis.

Results: Two hundred thirty-seven medical students requested feedback via MFS, and 104 faculty were evaluated on teaching quality. The mean faculty feedback response percentage was 55.78%. The mean teaching quality score was 4.27 on a scale of 1 to 5. Teaching quality score was significantly correlated with response percentage ($P < 0.001$); for every 10% increase in response percentage, average teaching quality score improved by 0.075. Average teaching quality score was not significantly associated with response time ($P = 0.158$), gender ($P = 0.407$), or surgical service ($P = 0.498$).

Conclusions: Medical students consider responsiveness to feedback requests an important component of quality teaching. Furthermore, faculty development focused on efficient and practical feedback strategies may have the added benefit of improving their teaching quality.

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Introduction

The Association of American Medical Colleges has called for innovation in medical education.¹⁻³ One such initiative has been the incorporation of interactive, student-centered strategies such as the use of formative feedback, which is defined as “information communicated to the learner that is intended to modify his or her thinking or behavior to improve learning.”⁴ Medical trainees perceive feedback from faculty to be vital for their education,⁵⁻⁷ and it can drastically decrease the amount of time needed to acquire proficiency in a skill.⁸ The effectiveness of feedback depends on both an educator’s ability to provide it easily and clearly and a trainee’s ability to receive it.

Unfortunately, students voice dissatisfaction about the quantity and quality of feedback they receive from attending and resident physicians.⁹ Likely, this is at least partially attributable to challenges inherent in medical education, including time constraints, the duality of the responsibilities for patient care and teaching, and the varying teaching abilities of physicians. However, an additional factor may play a role: a mismatch in student and faculty perceptions of what constitutes sufficient feedback.^{10,11} Prior research indicates that faculty consider feedback to be more frequent than the students perceived, whereas others assumed that medical students were smart enough to realize how well they were doing.¹² This mismatch in perception could negatively affect how feedback is provided and received, ultimately hurting not only student learning experiences but also faculty teaching evaluations.

Medical students’ perceptions of faculty teaching quality are reflected in teaching evaluations.¹³ Student feedback through teaching evaluations is an effective method to assist in faculty development and gives clinician educators the student perspective that is needed to improve their teaching skills.^{14,15} These evaluations are additionally significant in that they are increasingly factored into promotion and tenure decisions.¹⁶⁻¹⁹ Medical students base their evaluations of faculty on some combination of teaching skills, clinical skills, personalized attention, professionalism, and personality.^{20,21} Furthermore, as medical education increasingly incorporates formative feedback, it is critical to understand how feedback affects students’ perceptions of faculty teaching. The minute feedback system (MFS), an electronic feedback tool developed at the University of Michigan Medical School (UMMS),²² provides a unique means to explore this relationship between feedback provision and teaching quality. Using MFS, medical students on their core surgical clerkship can electronically request feedback about their clinical performance from faculty, after which faculty can quickly and easily respond to these requests. These data are securely stored in a UMMS database (Fig. 1), making it available for future quantification and analysis. The purpose of this study was to assess the relationship between faculty responsiveness to student requests for feedback (via MFS) and teaching evaluation scores collected from medical students during their core surgical clerkship at the University of Michigan. We hypothesized that increased faculty response to student requests for feedback would correlate with higher faculty teaching quality scores.

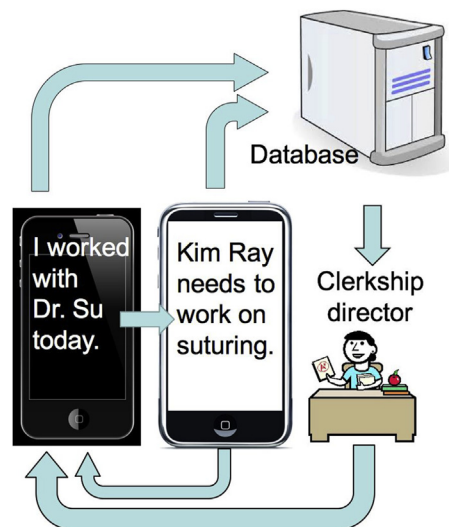


Fig. 1 – Schematic representation of the minute feedback system (MFS). Medical students can electronically request feedback about their clinical performance from faculty using MFS on their phones. Faculty can quickly and easily respond to these requests using MFS on their phones. These data are securely stored in a University of Michigan Medical School (UMMS) database. (Color version of figure is available online.)

Methods

Study design

This retrospective observational study was provided an exemption by the Institutional Review Board. This project compared faculty’s feedback provision to students via the MFS with student evaluation of faculty’s clinical instruction, as assessed by the M3 Student Assessment of Clinical Instruction survey. The data were generated from the required core surgical clerkship for third-year medical students (M3s) at UMMS from May 2016 through June 2017. Both data sets were extracted directly from secure databases. Students and faculty data were deidentified to maintain confidentiality.

Faculty feedback responsiveness assessment

Data extracted from MFS records included a number of feedback requests per faculty member, faculty gender, surgical service, time elapsed between feedback request and response, and response percentage for each faculty. Feedback response percentage (%) was defined as the percentage of feedback requests from students that faculty responded to. Only faculty assessors were included in this study; residents and fellows were excluded from analysis. The surgical clerkship coordinators requested that M3s use the MFS but did not require them to do so. Surgical service was divided into binary classification of general surgery versus surgical subspecialty; general surgery services included general, acute care, colorectal, endocrine, hepato-pancreato-biliary, minimally invasive, surgical oncology, and urology, while surgical subspecialties

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