Title: Quick Response (QR) Codes to Facilitate Formative Feedback

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MEDICAL EDUCATION RESEARCH

Background: Quality feedback is imperative to promote lifelong learning. Clinical Skills (CS) is a preclinical course at our institution with small-group instruction on interview, exam, and presentation skills. Students previously received verbal feedback during each class session. We proposed the addition of written documentation via Quick Response (QR) codes and compilation of feedback over time would increase student self-reflection and longitudinal improvement.

Objectives: The educational objective was to determine if documented feedback facilitated by QR codes leads to a perceived increase in the amount of, quality of, and learner reflection on verbal feedback provided to students in the CS course.

Methods/Design: 312 students and 38 faculty members participated in the CS course (26, 3.5 hour class sessions) from July 2020 to April 2021. Individual QR codes were distributed to students along with an instructional session on use. Each QR code corresponds to a form with multiple choice and free response sections. Aggregate data for each student is stored in RedCap and accessible to faculty for use at summative meetings. A survey was distributed to all students and faculty after course completion. In addition, faculty with the highest rates of usage were contacted for additional insight.

Results: The survey response rate was 18% (57/312) for students and 39% (15/38) for faculty. Quantity of feedback was "rare," with 47% of faculty using the QR codes 1-3 times per semester. Of faculty with QR code use, 53% used the summary reports for meetings with their students. Students found the ability to quickly receive documented feedback and ease of use of the QR code to be valuable. Faculty most appreciated the ability to review past feedback and the aggregate data reports. Majority of users reported that the QR codes did not change the quality of their feedback compared to the solely verbal feedback.

Conclusions: Primary challenges in QR code implementation include workflow feasibility and faculty perception on efficacy. Potential solutions include streamlining the feedback form and expanding education on QR code use. A limitation was the low survey response rate, potentially due to timing of the survey or limited respondent interest in the topic.