

The Use of QR Codes to Promote Timely Feedback

TO THE EDITOR:

As PGY-3 family medicine residents who both receive faculty feedback and are responsible for evaluating medical student performance, we read your recent article, "Testing Quick Response (QR) Codes as an Innovation to Improve Feedback Among Geographically-Separated Clerkship Sites" with great interest.¹ We commend the authors on highlighting a technology that could significantly improve the timeliness of student feedback while reducing the administrative burden required to do so. We believe that if properly implemented, such a system could be used to share feedback to learners in near real time. While this article highlighted summative feedback, this could be implemented to provide real time formative feedback.

The importance of specific, actionable, and timely feedback on learner performance has been widely established.² As Snyder et al have demonstrated, QR technology could be implemented to improve the timeliness and usability of clinical feedback. In our family medicine program, we frequently work with students in our office for half of the day before attending didactic sessions and returning to our clinical rotation, which is nearly always at a different location from our office. In between, we are responsible for reviewing lab results, imaging, refilling medications, calling patients, and coordinating patient care with our office staff. This leaves little time for providing meaningful feedback to our students. We relish the ability to quickly scan a QR code for a student to then return to the feedback form later in the day to complete our evaluation. We are encouraged by the findings of the above study, particularly with regards to the majority of respondents being able to complete their feedback in under 5 minutes and being able to do so remotely using a smartphone.

In addition, as residents, we are consistently receiving evaluations of our own performance. All too frequently, this feedback arrives only at the end of a rotation or several weeks afterward. With the majority of our rotations at

outlying clinics during our second and third years of residency, receiving timely feedback has been difficult and challenging for many of the same reasons during medical student clinical years. Delayed feedback precludes the ability to improve our performance during a rotation. If using QR technology results in more timely submission of objective feedback, as the authors have demonstrated, this feedback could then be forwarded to learners in near real time when it is most applicable, and perhaps more importantly, when actionable.

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Reply to "The Use of QR Codes to Promote Timely Feedback"

TO THE EDITOR:

We would like to thank Drs Barnes and Nowakowski for their comments on our recently published paper on the use of QR codes to promote timely feedback.¹ As they noted, timely, specific, and actionable feedback is critical in education, especially during short or highly demanding medical rotations.

We believe QR technology provides a viable bridge to improve the communication between preceptor and learner. Providing the feedback in this manner allows the learner to make specific changes, resulting in more effective summative and formative feedback. A recent literature search revealed several benefits for graduate medical education programs utilizing QR technology in providing formative feedback to residents and medical students.² Compared to paper-based feedback, respondent faculty perceived improved faculty-to-learner interaction (57% vs 31%, $P=.0005$), comfort

approaching the learner with feedback (86% vs 35%, $P=.0019$), and overall ability to provide feedback (52% vs 17%, $P=.0071$). Importantly, more faculty provided the feedback within 24 hours of the interaction using the QR-based feedback (71% vs 17%, $P=.0005$). Similar findings emerged when QR-based feedback was utilized for medical student clerkship rotations.³

In order to provide timely, actionable, formative QR-based feedback to the learner, both technical and cultural barriers may need to be addressed. The QR code should be directly linked to the program's online evaluation system to allow the learner to quickly view the feedback and ensure appropriate program documentation. Coordination with the program developer/technical support will likely be needed. We strongly agree that QR-based feedback delivers the timely and effective feedback that residents desire.

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