practices for instruction that do not include lectures as a teaching and learning strategy, especially because other fields such as business and science, technology, engineering, and mathematics (STEM) have adopted more effective approaches. We are convinced that classroom-based, learner-centered collaborative learning strategies in medical education will lead to better academic and communication skills outcomes than those achieved using lecture-based pedagogy.

Since 2017, our medical school has had a lecture-free curriculum, with no more than 3 hours/day in the classroom, allowing ample time for self-directed learning. The first cohort, the Class of 2021, has done well on all the traditional metrics, including performance on Steps 1 and 2 Clinical Knowledge of the United States Medical Licensing Examination. We fully embrace the power of in-class, peer–peer learning with faculty content experts facilitating every session, and we vigorously encourage reading, as opposed to watching video lectures, as preparation for class. We do not mandate attendance because each learning activity revolves around a daily assessment that is very low stakes, accounting for less than 1% of a student’s grade, which assures attendance rates of 95% or more, as our experience has been that medical students are highly motivated by grades, no matter how little they count in a final course grade. Additionally, students are learning through the sessions—so they simply do not want to miss them! Such daily assessments provide students and faculty with robust, continuous feedback on learning.

Just before the launch of our new curriculum in 2017, our school was emboldened by the Freeman et al publication on the active learning classroom for STEM fields and the comments by Nobel Laureate Carl Wieman, who considered persistence of lectures as “the pedagogical equivalent of bloodletting.” It is not an easy transformation for faculty, students, or medical school leadership—but it is so worthwhile, as the majority of our faculty and students do not want lectures because the richness of learning is so evident with the other learning modules. Prober and Norden's prodding of medical educators, based on their experience at Stanford and the evidence, is so appreciated.

In Reply to Roman et al: We appreciate Roman and colleagues’ letter in response to our commentary. We congratulate them on the successful implementation of their school's new curriculum that minimizes lectures and classroom time; emphasizes peer-to-peer engagement, facilitated by faculty; and incorporates frequent assessments and feedback. We note their preference for assigned readings rather than videos as preparatory work for interactive sessions. In addition, we believe that the learners might benefit from choosing their own favored ways for foundational knowledge acquisition, approaches that support their individual learning styles.

We believe that teaching sessions that do not support interaction with faculty and peers should not require attendance. However, if sessions are organized to foster discussion with experts, encourage debate among peers, and incorporate a diversity of opinions, students should have an obligation to participate. Otherwise, the richness of the experience is compromised and open exchange of different points of view and team development are not fostered. The development of critical thinking, problem solving, and communications skills depend upon struggling with the content through thoughtful discussions and debates, respectful consideration of multiple perspectives, and clear communication. These are not skills that can be developed by reading, watching videos, listening to lectures, and working in isolation.

We also agree with Roman and colleagues that the pathway to curricular reform is not easy. There are many stakeholders, some of whom have long-standing and deeply engrained biases about what we should be teaching and how we should be teaching it. In general, faculty priorities around particular topics usually determine what receives the most attention in a specific medical school’s curriculum—thus, each school’s priorities are different. In contrast, the highest priorities for most students are to excel in their studies, perform well on national assessments, and graduate with a medical degree and the opportunity to pursue their postgraduate training of choice. We have seen that many students convert this tension between priorities into stress, contributing to the unacceptable rates of burnout and depression experienced by medical students across the country. Medical school reform must prioritize the mental health of the learners and focus on engaging every student. Bringing students back to the classroom should emphasize fostering critical thinking, communication, and interpersonal dynamics while building a more tight-knit and supportive community that will benefit learners throughout their entire careers.

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