

## **TIPS ON IMPROVING EQUALITY, DIVERSITY AND INCLUSION IN MEDICAL SCHOOL ASSESSMENTS**

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Dear Editor,

Promoting equality, diversity and inclusion (EDI) has been a hot topic in higher education. In recent years, considerable discussion has arisen around reducing bias in medical schools admissions. This has resulted in a shift away from academic achievement as the sole yardstick for admission in favour of aptitude-based assessments like the University Clinical Aptitude Test (UCAT) and holistic and character-based assessment methods like the Multiple-Mini Interviews (MMI). However, significantly less research has focused on the attainment of EDI in medical school assessments, which has been characterised by Lucey et al as a ‘wicked problem’ — one which is lacking clear solutions and is shrouded in conflict and uncertainty. This has been hypothesised to be due to factors such as its susceptibility to contextual influences, and rampant structural and interpersonal biases (Lucey, 2020). In this piece, the author highlights three key recommendations, grounded in current research, that will be applicable for all medical schools who want to make EDI a priority in all aspects of medical school assessments.

### **SHIFTING AWAY FROM HIGH-STAKES STANDARDISED EXAMS**

Studies have shown that high-stakes standardised testing disadvantages underrepresented students. For example, studies have consistently shown that female-identifying, Black, Hispanic and Asian medical students score lower on average compared to their white male counterparts on the United States Medical Licensing Examinations (USMLE) Step 1. These score differences persist even when accounting for students’ prior academic grades and their Medical College Admission Test (MCAT) results. This has been theorised to be due to the impact of structural ‘-isms’, including racism and sexism, on the medical school system. Moreover, medical students prefer consistent, lower-stakes testing over yearly standardised pen-and-paper exams (Cuddy, 2008).

It should be noted that Formative Assessments (FA) help students to feel more prepared for high-stakes Summative Assessments (SA). Students who

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tend to score below the median grade for SA, in particular, see the greatest improvement in their scores from taking consistent FA (Chang, 2017). These FA should be accompanied by detailed explanations of the answers from faculty delivered either verbally or in writing, in order for students to learn from their mistakes and understand the faculty's expectations better (Evans, 2013).

## **INCORPORATE TEAM-BASED LEARNING INTO THE CURRICULUM**

Research studies consistently concur that Team-based Learning (TBL) is a student-centred pedagogical tool that creates a positive learning experience for students. For example, TBL may be a less stressful alternative to major exams that may be supportive for students with diverse learning and exam-taking styles. Students also appreciate the greater engagement involved, and feel that the friendly competition between teams motivates them to prepare more thoroughly before the session (Burgess, 2017; Burgess, 2019). Furthermore, when compared to similar alternatives like Problem-Based Learning, TBL may be superior in delivering improving conceptual understanding and teamworking skills (Cuddy, 2008). Providing immediate feedback to students during or after the TBL session may help to enhance students' retention and understanding of the content. In addition, having in-person TBL sessions may be more effective, as some students may face barriers to contributing when sessions are online, for example, due to a lack of stable internet access, or may be less willing to contribute online, perhaps due to a decreased feeling of engagement and accountability to a team when the option of turning off their audio and video camera is available. Finally, having larger but consistently-sized teams of five to seven medical students per team may feel fairer and less stressful for students, as smaller groups may have an unfair disadvantage in a time-pressured environment (Imperial College London, n.d.).

## **COLLABORATE AND LEARN ABOUT INNOVATIVE ASSESSMENT METHODS FROM OTHER DISCIPLINES**

Other faculties employ innovative assessment practices and policies that could improve the diversity of assessment modalities when applied to the medical school context. For example, a language faculty in Pulilan, Philippines used the recording of a video log ('vlog') in the assessment of students' language skills. The content of the 'vlogs' was flexible and meant to encourage creativity. They could include, for example, personal experiences, opinions, or interviews. A similar assessment modality could be implemented within the medical school curriculum, for example, students could form small teams to record 'vlogs' about a clinical problem that catches their interest or as a reflective piece on their clinical experience. In another example, students from the

Imperial College London School of Business were given the opportunity to compose a reflective essay over the course of a term (Imperial College London, n.d.). Reflective assessments like these may encourage metacognition — the ability to critically analyse one’s own thought processes — in students, which is an especially important skill in a rapidly-evolving and fast-paced field of work like medicine (Hong, 2015). Importantly, these innovative assessment methods could provide an opportunity for students with divergent learning and test-taking styles to demonstrate their clinical understanding and critical thinking skills in an assessment format that suits them better. This reflects the value of transdisciplinary partnerships in enhancing the efficacy of medical school assessments and the potential of cross-disciplinary learning.

## **CONFLICT OF INTEREST**

The authors declare no competing interests.

## **ETHICS STATEMENT**

Ethical approval was not needed for this article.

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