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Perspective

Passing mark in medical colleges: Practical insights from resource-limited nations

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Abstract
Medical colleges must establish feasible, consistent, and justifiable passing requirements to ensure the competency and safe practice of medical graduates. However, the passing mark in low- and middle-income countries (LMICs) remains a subject of debate. The traditional 50% fixed passing mark no longer aligns with the requirements of modern medical education, and the application of the recommended standard-setting methods, which are equitable, defensible, and credible, is not feasible in countries with limited resources. Therefore, this paper analyses the shortcomings of a fixed 50% passing mark and the challenges associated with implementing standard setting in resource-constrained countries, and we argue that adopting a 60% threshold results in more competent medical graduates and proves to be more practical than standard setting in such contexts.

Introduction

All medical colleges need to guarantee that their graduates possess the requisite academic understanding and practical abilities that enable them to provide safe and efficient patient care. The establishment of a legitimate and justifiable passing mark in summative assessments serves as the fundamental requirement for this mandate.[1] The 50% arbitrary pass/fail threshold continues to dominate many educational institutions across the Middle East, Africa, and South Asia due to colonial educational heritage or standard university requirements. Many developed nations have transitioned from a fixed, predetermined, and arbitrary passing mark to the deployment of standard-setting techniques, which are fair, defensible, and credible methods of evaluation.[2,3]

Standard-setting approaches such as Modified Angoff and Borderline Regression have gained significant popularity in competency-based medical education (CBME) in high-income countries.[4] Nonetheless, the implementation of standard setting in resource-limited nations is not feasible and challenging, as such evaluation methods necessitate considerable resources from institutions and require expert consensus panels. However, the 50% arbitrary passing threshold applied in medical colleges in resource-constrained nations raises concerns over the quality of medical graduates. Therefore, this paper examines the shortcomings of a fixed 50% passing mark and the challenges in adapting a standard setting in resource-constrained countries, while offering viable and practical recommendations to enhance and assure the competency of graduates.

Pitfalls of the classical 50% passing mark

The 50% threshold, often seen as the "halfway point," carries no inherent psychometric validity. Medical education standards require a dependable benchmark, which this arbitrary 50% threshold does not offer. A 50% score on a summative assessment indicates that students lack comprehension of about half of the essential content, potentially leading to erroneous clinical judgments and hazardous medical practices.[5,6]

The ethical basis for this threshold becomes indefensible in medical education, as patient safety remains the highest priority. Medical assessments need to demonstrate essential competence instead of demonstrating average achievement.[7] The current 50% passing mark fails to satisfy what society and the medical profession require from a competent medical graduate.[1,4,7] Studies have found that the effectiveness of a 50% threshold to distinguish between competent and incompetent students remains poor.[8,9]

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Standard setting: Ideal but impractical

Contemporary educational assessment frameworks endorse criterion-referenced standard setting instead of using predetermined fixed cutoffs. Among these, the Modified Angoff method is the most widely used. The method requires a panel of experts to assess how a borderline minimally competent student would accurately answer particular items.[4] Techniques, such as Ebel, Contrasting Groups, and Borderline Regression (used for OSCEs) are designed to determine passing score based on expert consensus.

These methods follow recommended approaches, but they generate substantial operational difficulties for execution. Faculty members require extensive training, and panels must achieve consensus within a limited timeframe. The procedure demands both a significant time investment and considerable human effort.[4,10] The ability to maintain panel consistency across many years and campuses proves to be a major obstacle.[4] Furthermore, several institutions in low- and middle-income countries (LMICs) lack the necessary resources or expertise to implement these strategies reliably.[10-12] Even in high-resource settings, standard-setting panels remain vulnerable to subjectivity and bias, particularly when panel members are unfamiliar with the "borderline student" concept.[13,14] For these reasons, standard setting is widely underutilized, especially in the Middle East, Africa, and South Asia.

Pragmatic alternative to standard setting

The fixed 60% passing mark achieves a balance between the outdated 50% benchmark and optimal standard-setting techniques that are impractical in countries with limited resources. The application of a fixed 60% passing mark is uncomplicated, with easier interpretation for both faculty and students, and is feasible to be applied in resource-constrained institutes. This mark is higher than 50%, indicating stricter yet attainable standards. It aligns more with the competencies anticipated by licensing organizations.[4,10]

A passing mark of 60% falls within the "safe zone" identified by several standard-setting activities. In a review by Norcini and McKinley, most Angoff-based passing marks for medical written exams varied between 58% and 64%.[3] Although standard-setting systems such as the Modified Angoff are valuable for establishing passing marks, their application in many regions, including Iraq, encounters practical challenges.[10] Often, higher authorities possess an inadequate comprehension of the foundational aspects of these methods, making it challenging to explain variation in passing marks. Standard setting may lead to very high thresholds that impose unjust pressure on students, especially in institutions with constrained curricula and resources. Moreover, the shortage of trained experts and the logistical challenges of running standard-setting panels complicate implementation.

Conversely, implementing a fixed 60% passing threshold offers a pragmatic and rational option. It aligns with values reported through standard-setting studies, is simple to apply, and maintains public trust. Additionally, several medical colleges in the Middle East and South Asia, including those in Iraq, Saudi Arabia, and Pakistan, currently set 60% as their threshold.[15,16]

Increasing the passing mark offers a wide range of benefits and challenges and has significant implications for multiple stakeholders, including students, faculty, the curriculum committee, and accreditation bodies. An increased passing threshold can enhance students' professional competence, readiness, and ethics. However, it can increase academic pressure and anxiety, and a greater number of students may fail to achieve the intended results. This places an additional burden on faculty and the curriculum committee, who need to readjust the curriculum and refine assessment methods to align teaching materials with this higher passing mark, while also providing increased support to students. Additionally, accreditation bodies may observe a higher passing threshold as evidence of institutional commitment to deliver high educational standards, but they also expect documents and evidence supporting such changes, including validity, reliability, and monitoring mechanisms.[17]

Recommendations

To enhance the competency of medical graduates and guarantee safe clinical practice, the Medical Colleges in resource-limited nations should undertake several crucial measures. The colleges should aim to strengthen their assessment capacity by improving faculty members' understanding of how to write objective-based short-answer questions (SAQs) and multiple-choice questions (MCQs), as well as how to apply standard setting methods. This can be achieved through organized workshops and targeted training for faculty members. Such initiatives will lead to more standardized examinations and ultimately enhance the overall quality of medical education. Additionally, institutions can start to implement standard-setting methods periodically, approximately every three years, to recalibrate fixed passing cutoffs using methods like modified Angoff. Introducing pilot standard-setting processes in OSCEs can also serve as a practical starting step. These steps will support a gradual transition from arbitrary fixed passing marks toward criterion-referenced methods.

Nonetheless, failure to adopt standard setting as a national initiative or at the institutional level should, if tentatively, promote reform in the passing threshold, as the traditional 50% passing mark does not fulfill institutional and societal expectations. Implementing a 60% passing mark is necessitated in the absence of a standard-setting establishment. It offers several benefits for institutions and education. Students who pass will

exhibit proficiency of at least 60% of the curriculum. This lowers the likelihood of guessing on exams and enhances community confidence in the competencies of newly graduated doctors. This reform supports the global objective of producing safe and reliable medical doctors.

Conclusion

The 50% passing mark, albeit having historical roots, no longer aligns with the requirements of contemporary medical education. It fails to ensure patient care, lacks fundamental competencies, and weakens public trust. The standard setting is a preferable approach; nevertheless, this is not always feasible in areas with limited resources. The 60% fixed passing mark offers a practical alternative; it balances educational quality with operational needs. For institutions in the Middle East and beyond, adopting 60% as the minimum criterion is an essential measure to enhance graduate competencies and rebuild public trust in the medical profession.

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Authors' Contribution

Conceptualization: Nawfal R. Hussein.
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Competing Interests

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