

From a normative to criterion-based approach to applying the MCAT scores to applicants to a graduate level medical program

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Abstract

Background: The Chulalongkorn University International Medical Program (CU-MEDi) is a new graduate level program in Thailand. For our inaugural class in 2021, we started with a norm-based approach to the MCAT, a standardized exam widely used by US medical schools, for admissions. The shortcoming of that approach was that we could not predict how the students would perform in the rigorous academic setting. Busche K, et al. reported correlations of MCAT scores with summative performance in the preclinical phase but there was no analysis of subsection scores.

Summary of Work: To adopt a more objective, criterion-based approach, we analyze our students' academic performance in the preclinical phase and correlate it with their overall MCAT as well as the 4 subsection scores (Biological and Biochemical Foundations, Chemical and Physical Foundations, Psychological, Social, and Biological Foundations, and Critical Analysis and Reasoning Skills). CU-MEDi summative knowledge performance is assessed by MCQ in integrated medical sciences (IMS) I, II and III at the end of each 6-month-long semester in the preclinical phase.

Results: Our study revealed positive correlations between IMS-I summative performance and both the overall MCAT score and the Biological and Biochemical Foundations section score. However, no significant correlations were observed between summative performance and the remaining three MCAT sections in IMS-II and IMS-III.

Discussion:Based on our findings, we have transitioned to a criterion-based approach for MCAT score evaluation, incorporating the Biological and Biochemical Foundations section score as an independent admission criterion. Future investigations will assess the performance of students admitted under this new approach compared to the inaugural class.

Conclusions:Overall MCAT and Biological and Biochemical Foundations section scores could be used for medical school entry selection.

Implications:Implementing a criterion-based approach to MCAT scores has the potential to mitigate academic risks and enhance the admissions process, ultimately fostering the success of medical students.

References (maximum three)

Busche K, Elks ML, Hanson JT, Jackson-Williams L, Manuel RS, Parsons WL, Wofsy D, Yuan K. The Validity of Scores From the New MCAT Exam in Predicting Student Performance: Results From a Multisite Study. *Acad Med.* 2020 Mar;95(3):387-395. doi: 10.1097/ACM.0000000000002942. PMID: 31425189.