

# Pass/Fail Boards and Other Challenges for Pharmacology Educators at Medical Schools

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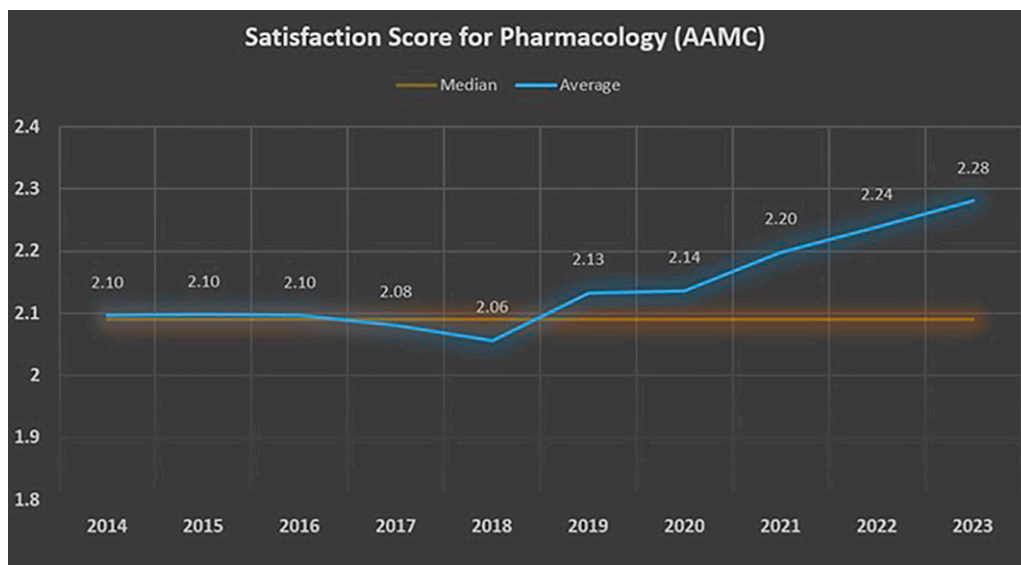
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**Introduction:** In January of 2022, the United States Medical Licensing Exam USMLE Step 1 score reporting transitioned from a numerical score to a pass/fail outcome. Similarly, in May of 2022, the Level 1 of the COMLEX board series (completed by Osteopathic medical students) also transitioned from a three-digit score to a simple Pass/Fail assessment. In this study our goal is to identify early predictors from the outcomes of the first two years following this change to pass/fail of the boards and the impact on teaching and learning strategies for pharmacology.

**Methods:** The aggregate data between the years of 2013 to 2023 published by USMLE Step-1 and COMLEX-Level 1 performance reports was analyzed. National satisfaction instruments including: 1) Academic Year Graduating Seniors Survey Report published by the AACOM and 2) All-Schools Summary Report Medical School Graduation Questionnaire, Matriculation Questionnaire, Year-Two Questionnaire, and the Post-MCAT Questionnaire Reports published by AAMC between 2013 and 2023 were also analyzed to develop constructs of satisfaction scores in pharmacology and relate those results to the methods of study and class attendance.

**Results:** Satisfaction scores indicative of preparation for clinical clerkships continued to rise for pharmacology during the past decade (2014-2023). First time takers (MD degree) pass rate dropped during the past decade to 93% in 2022 (down from 96% in 2021). First time takers (DO degree) dropped to 89% (down from 94% in 2021). First time COMLEX Level 1 takers dropped to 90.6% in 2022 (down from 92.2% in 2021). In 2014, only 11.4% of medical students planned to take the USMLE sometime between January to March. This number grew to 36.7% in 2022. Students who chose to take the USMLE during the second year after March was 87.4% in 2014 compared to 60.5% in 2022. Post-MCAT and matriculation reports suggest a change in strategies used for medical admission test preparation.

**Conclusions:** Integration efforts of basic and clinical sciences have been fruitful during the past decade with continued progress in pharmacology satisfaction scores at time of graduation. A growing number of medical schools now offer a three-year curriculum with an emphasis on taking the boards much sooner. These changes come with implications for teaching the appropriate pharmacology content much sooner. The drop in First-time board passing scores in 2022 underscore the importance of students not rushing into the board exams, but it is unclear of the reasons for this effect during the past decade. The Post-MCAT and matriculation reports suggests a shift in strategies used for preparation of standardized testing with habits which focus more on active recall testing and spaced repetition and less on understanding the material which are likely to continue into pre-clerkship period. Today fewer students are coming to class and educators of pharmacology must adapt to newer challenges in an evidence-based and competency-based medical education environment. Pharmacology educators bring the critical thinking part and must continue to create thoughtful learning experiences to engage the student learner in light of new emergent disruptors to learning.



Construct of average satisfaction as reported by the students for the period from 2010–2020.