

2024

Why Do Osteopathic Medical Students Take the USMLE Step 1?

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Recommended Citation

Lambroussis CG, Weston J, Terry RR, Spencer J. Why Do Osteopathic Medical Students Take the USMLE Step 1?. *Advances in Clinical Medical Research and Healthcare Delivery*. 2024; 4(2). doi: 10.53785/2769-2779.1203.

ISSN: 2769-2779

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Keywords

Osteopathic, COMLEX, USMLE, Equivalent, Residency

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Conflict of Interest Statement

The authors have no disclosures or conflicts of interest to report.

ARTICLE

Why Do Osteopathic Medical Students Take the USMLE Step 1?

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Abstract

In 2022, 4722 osteopathic medical students chose to take the United States Medical Licensing Examination Step 1 (USMLE Step 1) in addition to the Comprehensive Osteopathic Medical Licensing Examination Level 1 (COMLEX Level 1). Both of these examinations are currently pass/fail assessments to demonstrate clinical knowledge competency. Osteopathic medical students are only required to take the COMLEX series of examinations for graduation from an osteopathic medical school while allopathic medical students are only required to take the USMLE Step series of examinations instead. Correlation between these examinations exists, and information from multiple entities has been for the COMLEX and the USMLE to be classified as equivalent. Our study surveyed osteopathic medical students to understand the reason as to why they take the USMLE Step 1, even though the USMLE series of examinations are not a requirement for graduation from an osteopathic medical school.

Keywords: Osteopathic, COMLEX, USMLE, Equivalent, Residency

1. Introduction

The Comprehensive Osteopathic Medical Licensing Examination (COMLEX) is the licensing examination accepted for the licensure of Osteopathic Physicians in the United States.¹ To successfully graduate from an osteopathic medical school, successful completion of the COMLEX Level 1 and Level 2 are required.^{1,2} The United States Medical Licensing Examination (USMLE) is the comparable set of examinations for allopathic medical students.² Although correlation between the COMLEX and USMLE exists, a considerable number of osteopathic medical students opt to take the USMLE in addition to the COMLEX.² As of May 2022, the COMLEX Level 1 Examination has also progressed to a being a pass-fail assessment, much like the USMLE Step 1 Examination.²

The National Board of Osteopathic Medical Examiners (NBOME), the agency which administers the COMLEX, has previously published conversion calculators for comparison between the COMLEX and USMLE.¹ Osteopathic medical students opting

to take the USMLE, in addition to the COMLEX, are hypothesized to do so in order to optimize their chances for success in the National Resident Matching Program (NRMP).¹ With both COMLEX Level 1 and USMLE Step 1 now being pass-fail assessments, the decision for an osteopathic medical student to take both of these examinations may now be even further confusing.³ Some consider preparation for the USMLE Step 1 to be the same as COMLEX Level 1, with the exception of the topic of osteopathic manipulative medicine.³

Although urgings from multiple entities have been for COMLEX and USMLE to be classified as equivalent, some residency program directors have encouraged osteopathic applicants to have USMLE scores in addition to the COMLEX.⁴ Prior to the initial phase of these three phase examinations becoming pass-fail assessments, a method for conversion of a COMLEX Level 1 score into a USMLE Step 1 score was with the utilization of the following formula: $\text{USMLE Step 1 Score} = 0.15 (\text{COMLEX Level 1 Score}) + 138.7$.⁴ This equation was however limited in use as the equation was derived from a

Accepted 17 January 2024.
Available online 12 June 2024

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<https://doi.org/10.53785/2769-2779.1203>

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study performed on examination results from 2097 Lake Erie College of Osteopathic Medicine (LECOM) students from 2012 to 2016.⁴ The presence of different standardized examinations for the same purpose is not limited to medical education.⁵

In 2014 the American Osteopathic Association (AOA), American Association of Colleges of Osteopathic Medicine (AACOM), and the Accreditation Council for Graduate Medical Education (ACGME) transitioned towards a single accreditation system for medical residency programs that is currently in use.⁶ The progression into this single system has however resulted in more osteopathic medical students sitting for both licensure examinations.⁶ This unnecessary redundancy in medical licensure examinations persists since many residency programs do not consider COMLEX scores, but require USMLE scores.⁶ The National Board of Medical Examiners (NBME) publishes performance data annually regarding USMLE performance.⁷ Pass rates for the USMLE Step 1 examination by MD and DO takers has been similar annually.⁷ The tally of DO and MD takers of the USMLE Step 1 by year from 2012 through 2022 is summarized in [Table 1](#).⁷ Successful completion of COMLEX Level 1 and COMLEX Level 2 demonstrates that the osteopathic medical student has successfully met the national standard for osteopathic clinical skills competency as set by the Commission on Osteopathic College Accreditation (COCA) and is a requirement for graduation from an Osteopathic Medical School.⁸

Total number of DO & MD takers of the USMLE Step 1 by year from 2012 through 2022. The total number of DO takers of the examination has essentially doubled since 2012, with the comparative increase in total MD takers being up by approximately 25 % in the same time period.⁷

2. Methods/results

To understand why current third and fourth year osteopathic medical students continue to take

Table 1. USMLE step 1 exam takers by year.

Year	Total DO Takers	Total MD Takers
2012	2564	19856
2013	2726	20023
2014	2846	20394
2015	3222	21111
2016	3454	21122
2017	3835	21382
2018	4136	21611
2019	4837	22146
2020	5274	20343
2021	5365	23078
2022	4722	24317

an examination that is not a requirement for graduation from an osteopathic medical school, osteopathic medical students affiliated with LECOM were surveyed with a series of questions. All questions were administered electronically in an anonymous manner via a SurveyMonkey™ questionnaire. The survey was open for two weeks to permit participating students adequate time to respond without interfering significantly with their clinical rotation schedule. A total of fifty-three students opted to participate in the survey. The survey was available to be taken from 8/4/2023 through 8/19/2023. All students participating in the survey were pass/fail exam takers. Participation by students in the survey was completely optional. Results with zero personal student identifiers were obtained following completion of the survey. As this study is a survey of adult participants, the study was determined to be exempt from institutional review board (IRB) review and approval by the LECOM IRB per 45 CFR 46.104(d) (2).

The survey questions consisted of the following:

- 1) Did you take the USMLE Step 1?
 - a. Yes
 - b. No
- 2) Which one of the following was the most influential to you that advised taking the USMLE Step 1?
 - a. Attending Physician(s)
 - b. Resident Physicians(s)
 - c. Medical School Faculty
 - d. Upper-Level Medical Student(s)
 - e. Residency Program Official(s)
 - f. Internet/Online Forum Post(s)
 - g. Other Not Listed
- 3) Which one of the following factors was the most influential in taking the USMLE Step 1?
 - a. Advised to take USMLE Step 1 by faculty at your medical school.
 - b. Advised to take USMLE Step 1 by upper-level medical students.
 - c. USMLE Step 1 is considered the more credible examination.
 - d. Enhance residency options by taking the USMLE Step 1 examination.
 - e. Fear of COMLEX Level 1 not being accepted by residency programs.
 - f. Residency program literature/website mandating USMLE Step 1 score for applicant
 - g. Not planning on taking USMLE Step 1
- 4) Do you feel the fact that the USMLE Step 1 is pass/fail that taking both the USMLE Step 1 and

- COMLEX Level 1 will enhance competitiveness for residency?
- Yes
 - No
- 5) I have been informed that taking the USMLE Step 1 is necessary to take the USMLE Step 2.
- True
 - False
- 6) What one of the following information/assurances would you need to take ONLY the COMLEX Level 1 as your licensing examination?
- All residency programs accept COMLEX.
 - Information from my medical college showing acceptance rates of students into competitive residencies with only COMLEX.
 - No amount of information will change my mind, I consider the USMLE Step to be the superior examination.
 - I only plan on taking the COMLEX.
 - Other
- 7) If none of the responses above were your reason(s) for taking the USMLE Step 1, or you have additional comments, please let us know below. (Please do not include any identifying information such as names within your response).

- See Fig. 1.
- See Fig. 2.
- 60 % of survey participants indicated feeling that taking both USMLE Step 1 and COMLEX Level 1 will enhance competitiveness for residency. 40 % indicated that taking both would not enhance competitiveness.
- 92.5 % of participants indicated that it is false that taking USMLE Step 1 is necessary to take the USMLE Step 2. The remaining 7.5 % indicated true for this survey question.
- See Fig. 3.

The following are all the responses submitted by the participating osteopathic medical student to question #7 of our survey:

- “Just taking [USMLE] Step so options are not limited”.
- “Need [USMLE] for fellowship in the future”.
- “Don't want anything but surgery [for residency], so [USMLE] Step is required”.
- “Radiology is competitive, think [USMLE] Step will help”.
- “I am hoping to take [USMLE] Step mostly so I am not filtered out of the application process at university programs”.
- “If I had failed [USMLE] Step 1, then I would not take any more [USMLE] Step exams”.
- “Didn't take USMLE step 1 bc smart people here at LECOM said it unnecessary. I trusted them more than the internet & other students. (Please

Survey responses from the total of fifty-three participants were as follows:

- 55 % reported taking the USMLE Step 1, with 45 % reporting not taking the USMLE Step 1.

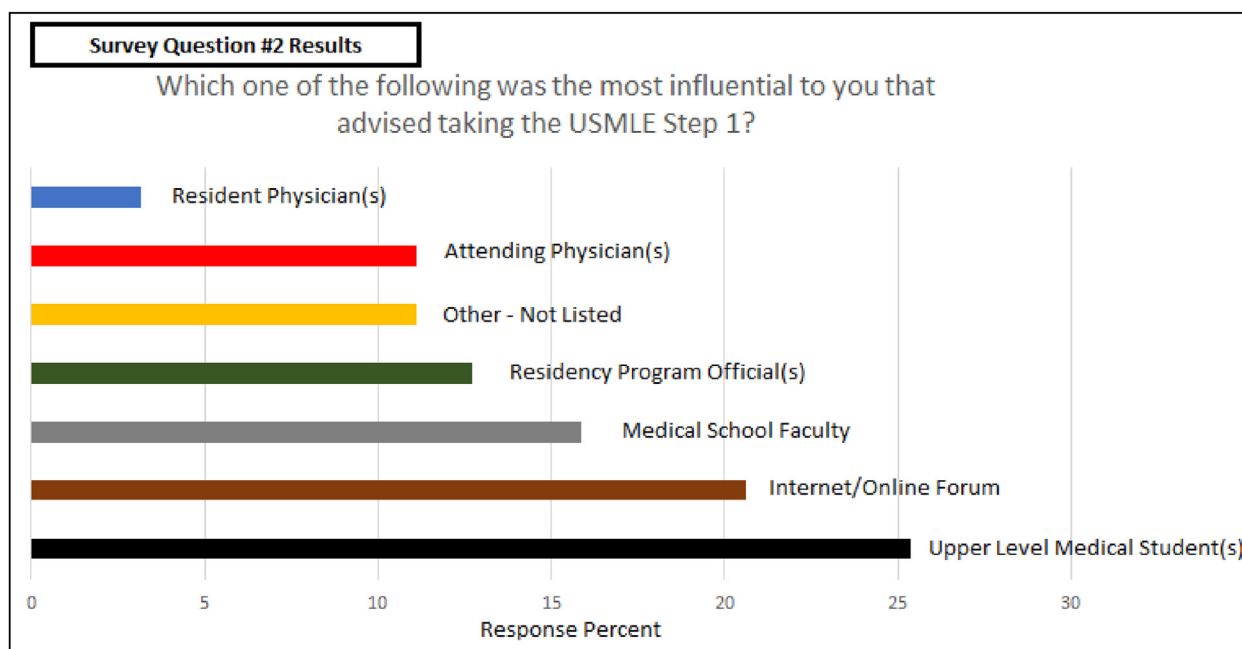


Fig. 1. Survey question #2 results.

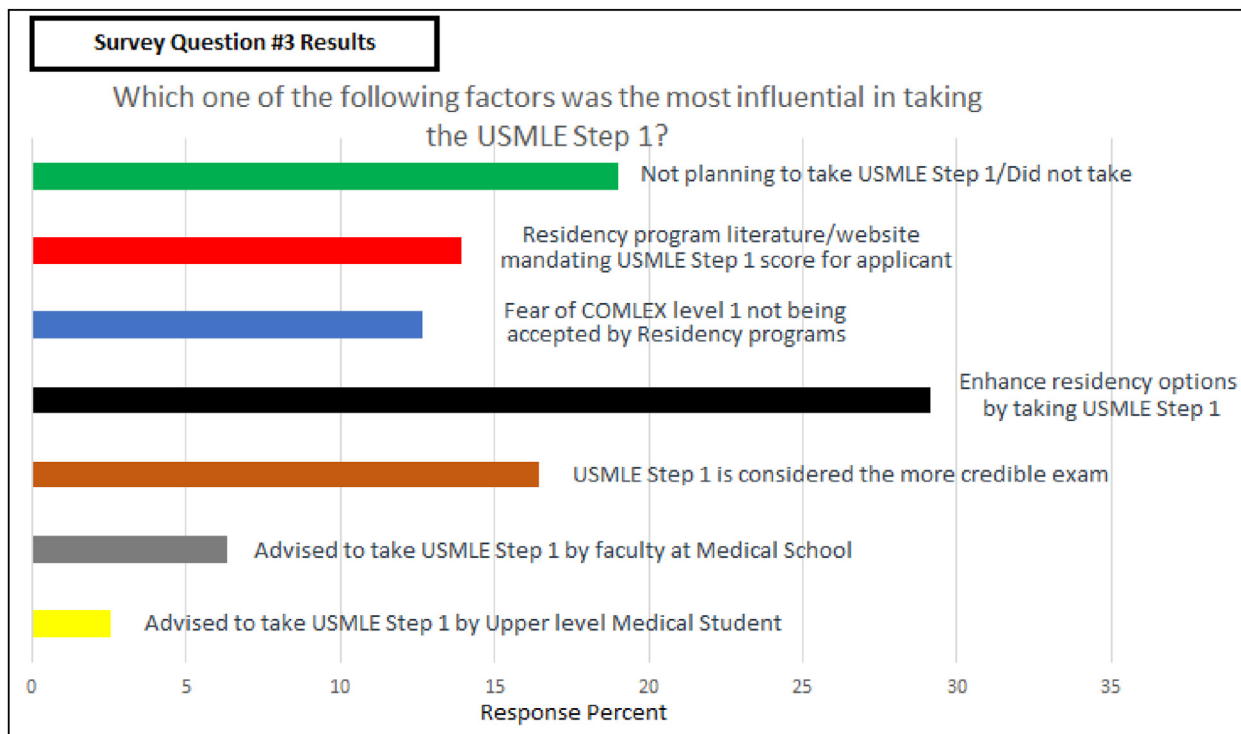


Fig. 2. Survey question #3 results.

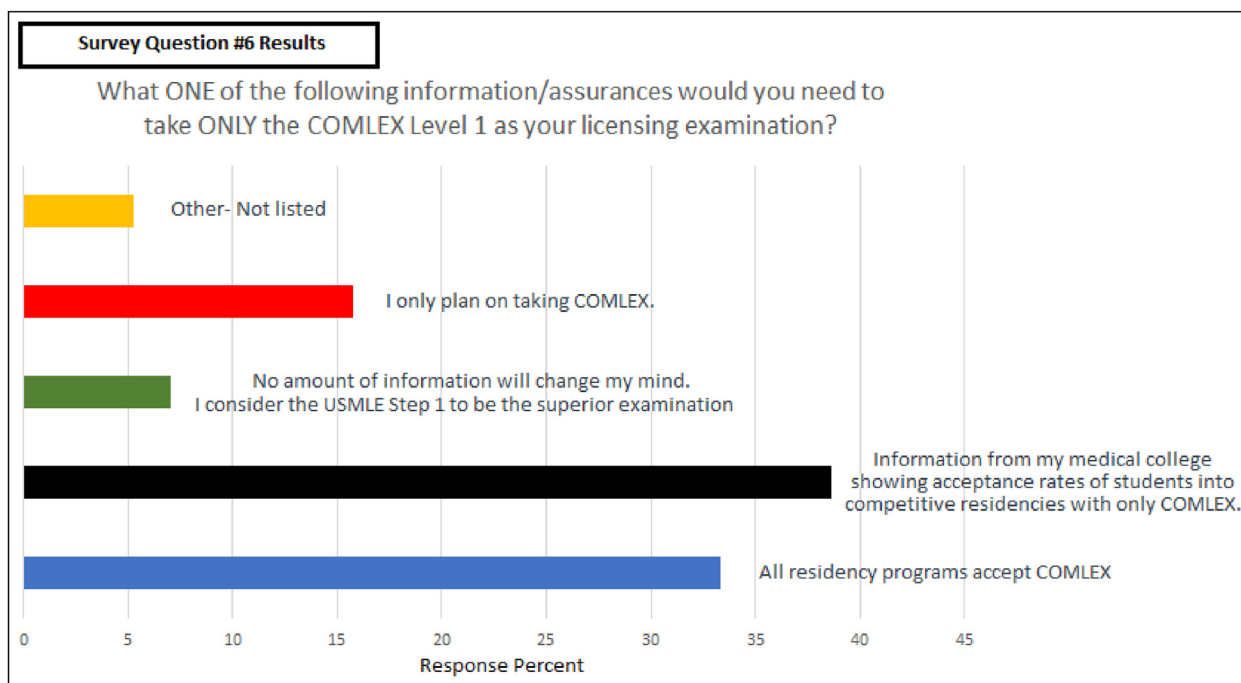


Fig. 3. Survey question #6 results.

- don't be wrong!) Also not looking for a competitive residency".
- "USMLE is widely accepted as Gold Standard in North America. All residencies are ACGME accredited".

- "USMLE is also a much better written test and felt like an accurate assessment of the first two years of medical school".
- "I need a few cycles of students with the pass/fail system to apply to residencies and see how the

P/F system changes things. Only once I see that data would I consider not taking [USMLE] Step (assuming taking Step made no difference)".

- "The board exams are so expensive; I could only afford to take COMLEX level 1. I wanted to take USMLE step 1 as well but did not have an extra \$700. I am worried about how this will affect my changes for residency".
- "My scores on practice exams were high enough so I figured it wouldn't hurt to take both".
- "I don't think we should take COMLEX exams anyway. [USMLE] STEP should be the standard since that's what ends up being compared between applicants anyway. I only opted to not take [USMLE] step 1 since it's pass/fail and I thought a good [USMLE] Step 2 score would show that I would've passed [USMLE] Step 1 anyway. I always planned on taking [USMLE] Step 2".
- "I have spoken to half a dozen residency directors that are family friends. USMLE STEP 1 and COMLEX 1 are completely worthless. All programs are going to look at [USMLE] STEP 2 and [COMLEX] Level 2 because of the score. The P/F system is a mistake and does not do anything but put all the pressure on one exam during 3rd year. There is no way to differentiate a pass from a student ranked 1 at the school versus dead last so programs have no way of sifting through people".

3. Discussion

Osteopathic medical students face the challenge of obtaining a residency position following completion of their medical school studies like their allopathic trained counterparts. Osteopathic medical students however perceive that there is a bias against them for residency unless they also take the USMLE. Our study strictly focused on the initial licensure exams (USMLE Step 1 and COMLEX Level 1) and demonstrated that 55 % sat for the USMLE Step 1, even though this assessment is a pass/fail and not required for graduation from osteopathic medical school or their medical licensure. This duplication of licensure examinations is an unnecessary financial, emotional, and time burden for osteopathic medical students.

Table 1 above shows that the overall number of osteopathic takers of the USMLE Step 1 has essentially doubled since 2012. The number of allopathic takers of the USMLE Step 1 has increased by approximately 25 % within the same time frame. This number may be partially skewed based on the

number of medical schools that have opened within this period. The data shows an increase of approximately 2500 DO Takers since 2012, while MD Takers have increased by approximately 4500 since 2012.

It is understandable why osteopathic students are motivated to take USMLE Step 1 given the results of the 2022 NRMP Program Director Survey which evaluated the use of standardized licensure examinations to select DO applicants to be interviewed for residency positions.⁹ The study showed that 56 % of ACGME accredited residency programs require USMLE Step 1 for DO applicants.⁹ The study additionally showed that 16 % of programs do not even consider COMLEX Level 1 scores for their DO applicants.⁹ At the time of the study, these examinations were numerically scored.⁹ The information from the NRMP clearly shows the perceived bias is an actual bias despite the fact that excellent correlation between COMLEX Level 1 and USMLE Step 1 exists.

With the perceived discrimination by osteopathic medical students from the NRMP program director survey as well as influence from upper-level medical students, we are concerned that osteopathic medical students will continue to be inclined to take both the COMLEX Level 1 and USMLE Step 1. Yet this is completely unjust to osteopathic medical students. Any residency program that insists osteopathic candidates sit for the USMLE is discriminatory. A plethora of educational material has been put out by the NBOME, AACOM, as well as ACGME about the equivalence of these minimum competency licensure examinations.

Limitations of our study include the following:

- Sample size of only fifty-three total participants.
- Our study assessed USMLE Step 1 and COMLEX Level 1 only and not USMLE Step 2 or COMLEX Level 2.
- Limited sample size from the NRMP program director survey.
- Lack of a conversion formula for use with the current pass/fail format of both examinations.

Further research is needed to determine if osteopathic candidates for residency programs have a change in residency match rates following the conversion of the USMLE Step 1 and COMLEX Level 1 into pass/fail assessments. Program director considerations towards osteopathic applicants should also be further evaluated. Are program directors classifying osteopathic applicants as less competitive if only the COMLEX Level 1 has been taken?

4. Conclusion

We believe there is a need for an immediate call to action for ACGME to implement a common standard where any residency program that requires osteopathic graduates to sit for the USMLE be held accountable, as this is clear discrimination by any interpretation.

Acknowledgements

We would like to thank the Lake Erie College of Osteopathic Medicine (LECOM), and especially all the study participants that provided their feedback.

Conflicts of interest

The authors have no disclosures or conflicts of interest to report.

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