Medical Student CXR Knowledge: A Survey

Angela Vuong, Leigh Patterson, MD, MAEd

Angela Vuong
East Carolina University
Greenville, North Carolina 27858
704-254-9665
vuonga15@students.ecu.edu

RATIONALE/NEED

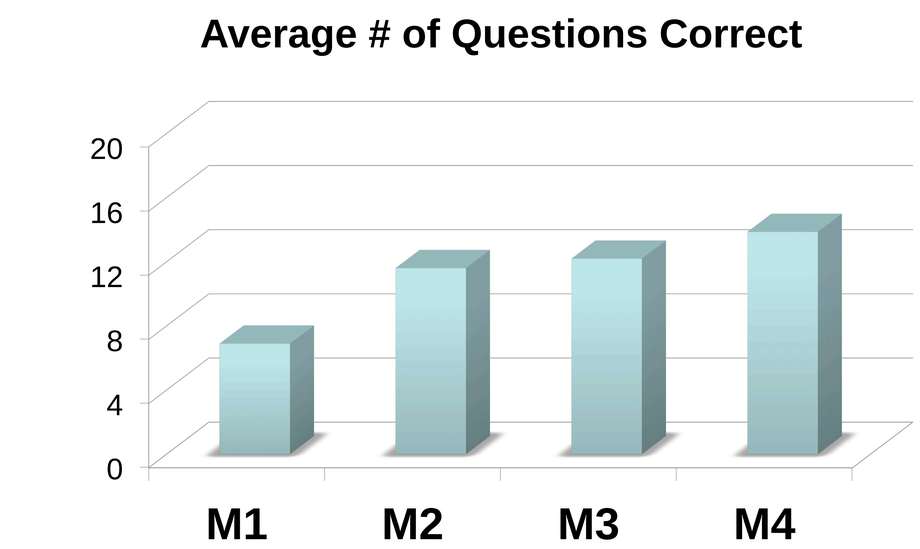
Chest X-ray interpretation is considered a required basic skill in many areas of medicine. Before physicians are able to interpret an x-ray, they must first be able to understand the basics of x-rays and to identify the structures on a normal image. Often, medical students believe their classroom-based radiology education to be inadequate, forcing them to learn while on rotations or elsewhere instead. This study assessed the perceived effectiveness of the current Brody School Of Medicine M1 radiology curriculum by evaluating the retention of knowledge of chest x-rays through increasing levels of undergraduate medical education.

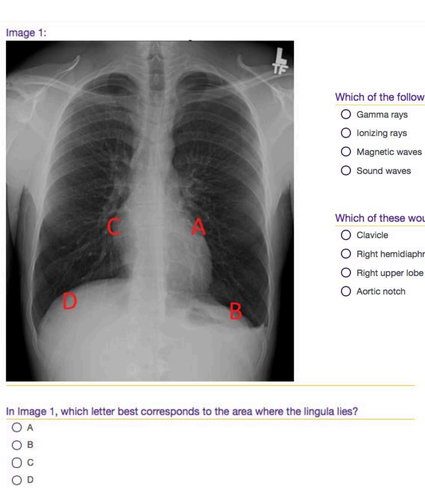
METHODS

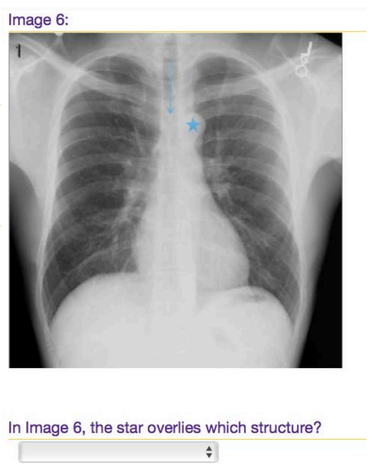
An online survey was composed on Qualtrics and distributed via email to M1, M2, M3 and M4 students at the Brody School of Medicine at the beginning of the school year, prior to the start of the M1 radiology course. The survey consisted of 23 questions, 3 of which were general demographic questions for a better understanding of level of education and potential outside experiences with x-rays. The remainder of the quiz tested students' knowledge of visible normal structures on chest x-ray images using de-identified, non-pathological chest x-ray images and a drop down menu word bank.

RESULTS

Of 102 responses, 96 contained answers to the knowledge portion of the survey. Of the 96, 3 did not identify their class status and thus were disregarded in the data analysis. Additionally, of the 96 responses, 30 entries did not complete the entire survey and thus were also disregarded in the data analysis. This left 16 M1s, 17 M2s, 17 M3s, and 13 M4s who completed the entire survey. The number of correct answers were tallied and averaged per class. Of the 20 knowledge-based questions, the M1s averaged 6.88 correct, the M2s averaged 11.59 correct, the M3s averaged 12.18 correct, and the M4s averaged 13.85 correct.







IMPACT/LESSONS LEARNED

Despite any potential beliefs that the classroom-based radiology course may be inadequate, the results of this survey show an obvious increase in knowledge gained between M1 and M2 year. This leads to the assumption that the M1 radiology course has been effective at exposing students to at least some basic chest x-ray structure identification. The results also show retention of this information and even some increase in knowledge in the M3 and M4 years, though not as steep of an increase as seen between M1 and M2 years. This is reassuring to know that this understanding of chest x-rays is not lost as we move away from the M1 radiology course. The study seems to now highlight some possible room for improvement in radiology education at BSOM, as correct answers only ranged from 58% to 69% in the completed surveys.

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