Impact of a Non-Credit Summer Clinical Anatomy Course on Performance-Based Entry into Medical School
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Background
Despite rigorous medical school prerequisites, encountering medical school curriculum for the first time can be overwhelming, with anatomy often acknowledged as one of the most challenging courses. Touro College of Osteopathic Medicine in Harlem (TouroCOM) offers a one-year, 43 credit, Master of Science Program in Interdisciplinary Studies in Biological and Physical Sciences (MS) program, which features classes taught by medical college faculty alongside Doctor of Osteopathic Medicine (DO) candidates. While students who perform well in this program are offered direct admission into the DO program at TouroCOM, the program is also very competitive, with fewer than 50% of MS candidates successfully meeting the minimum 3.45 GPA requirement and transitioning into the DO program each year.

TouroCOM also offers a non-credit, four-week, intensive summer anatomy course, which aims to ease the transition into a medical school-level curriculum for both incoming MS and DO candidates. This course provides students with an opportunity to preview all coursework covered during the first semester of anatomy. This study aims to evaluate the effectiveness of TouroCOM’s four-week Summer anatomy course in preparing its MS candidates for their 43 credit curriculum and successful promotion into the DO program.

Objective
To assess the value for medical schools to offer a non-weighted introductory course to students entering their first year of medical school to ease the transition into a rigorous medical school curriculum and gauge the effectiveness of a pre-curriculum course towards success in a DO medical school curriculum.

Methods
138 subjects, MS candidates from the class of 2016 (71 students with 26 participating in the Summer anatomy program) and class of 2017 (67 students with 166 participating in the Summer anatomy program) at Touro College of Osteopathic Medicine in Harlem, were included in this study. Quantitative data was collected on (1) exam performance, (2) final course grades, (3) whether the candidate had participated in the four-week summer anatomy program prior to starting their 1 year MS program and (4) whether the candidate was ultimately promoted into the DO program after completion of the 1 year MS program.

Results
Of the MS candidates who also participated in the Summer anatomy program, 57.1% (n=24) received a final anatomy course grade of A- or above (equating to a >3.45 GPA contribution towards the minimum GPA required for promotion into the DO program) while only 25.0% (n=24) of those who did not participate in the Summer anatomy program received a final anatomy course grade of A- or above.

73.8% (n=31) of MS candidates who participated in the Summer anatomy program were ultimately offered admission into the DO program at the end of the year, while only 25.0% (n=24) of those who did not participate in the Summer anatomy program were ultimately offered admission. No significant differences were appreciated in these trends when comparing the data based on class year. Of the 2016 and 2017 MS candidates who were ultimately promoted into the following DO class, 69.0% (n=58) received a final course grade of A- or above in first semester anatomy.

Conclusion
Anatomy remains one of the major foundational components of the medical school biomedical science curriculum. As a TouroCOM MS candidate, performing well in the 1st semester anatomy course is especially important because it is the most heavily weighted class (7 credits) throughout the one-year MS curriculum and constitutes a third of the first semester GPA. Preliminary findings suggest a strong correlation between success in first semester anatomy course and successful promotion into the DO program. Summer anatomy participants were 32% more likely to receive a final grade of A- or above. Success in first semester anatomy course was also strongly correlated with successful promotion into the DO program. Ultimately, MS candidates who participated in the summer anatomy course were almost 50% more likely to enter the following DO class when compared to MS candidates who did not.

Factors not considered include: (1) experience in a prior anatomy course; (2) GPA and MCAT scores upon admission into MS program; and (3) time since candidates were last in a formal education environment. Struggling during the first year establishes a poor foundation for future practice as a physician. While this study targeted MS candidates specifically, it may be of value for medical schools to offer a similar, non-weighted introductory course to ease the transition into a rigorous medical school curriculum.

References