

**Introduction to Surgery in Preclinical Years: An Impact Study.** Brian Carter MS, (MD, CUSOM)<sup>1</sup>, Sera Sempson BS<sup>1</sup>, Kathleen Tuthill<sup>2</sup>, Kshama Jaiswal MD, FACS<sup>2</sup>, Tammy Wang MD<sup>3</sup>

<sup>1</sup>University of Colorado School of Medicine, Aurora, CO

<sup>2</sup>Dept. of Surgery – Surgical Oncology, University of Colorado Anschutz Medical Center, Aurora, CO

<sup>3</sup>Dept. Of Otolaryngology - Head and Neck Surgery, Children's Hospital Colorado Anschutz Medical Campus, Aurora, CO

**Purpose:** Exposure to surgery in preclinical years of medical school is traditionally very limited. 59% of students make their career decision before their core clinical year of medical school<sup>1</sup>. Meanwhile, there is estimated to be a shortage of 14,300 – 23,400 surgical specialists by the year 2032<sup>2</sup>. Factors contributing to medical students selecting non-surgical residencies include marginalization during the surgical clerkship as well as lack of preparedness and exposure to surgical careers<sup>3</sup>. To provide timely and positive exposure to surgical fields, we designed a 12-week elective “Introduction to Surgery” course for preclinical medical students. This study describes the development and impact of this course.

**Methods:** A single institution prospective cohort study was performed. Forty preclinical medical students attended a total of 10 didactic sessions, a surgical skills lab, and surgery resident panel in the Fall of 2021. Pre- and post-course Likert format surveys were distributed to participants. Participants rated course content and lecturers after each course session. Paired t-tests were used for analysis of pre- and post-course survey responses.

**Results:** Students gave high ratings to course content (4.78/5) and lecturers (4.81/5). Students' confidence in their basic surgical skills, perceived readiness for the surgical clerkship, reported likelihood of entering a surgical career, and reported satisfaction with exposure to surgery in the pre-clinical timeframe all significantly improved after course participation ( $p < 0.005$ ).

**Conclusions:** The development and implementation of a preclinical course in surgery significantly increased students' interests in a surgical career, and students' perceived readiness for the surgical clerkship. Pre-clinical introduction of surgery is a promising avenue through which to improve student perceptions of surgery while simultaneously preparing them for further exploration of surgical fields through exposure to surgical mentors and role models.

## References

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