

A Virtual Orthopaedic Surgery Summit Enhances Medical Student Preparedness for Orthopaedic Surgery Sub-Internships

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INTRODUCTION: With the transition of board examinations to pass/fail, performance on sub-internships has become more crucial to orthopaedic residency match success. There is limited exposure to orthopaedic surgery in medical school curricula, and there have been few national initiatives aimed at preparing medical students for sub-internships. The purpose of this study was to evaluate the efficacy of a single-day virtual summit in 1) increasing medical student preparedness for their sub-internship rotations, and 2) offsetting any potential disparities based on student demographics.

METHODS: A single-day, national, virtual summit was held in March 2024, featuring panels on soft skills, on-call duties, operating room conduct, and clinic excellence. Panelists included senior medical students, residents, and attendings across the country. Surveys via Qualtrics were sent to participants to fill out before and after the summit. They measured comfort with and preparedness for sub-internships in six domains (overall preparedness, on-call responsibilities, role in the operating room, role in clinic, resource awareness, and soft skills) using Likert-scale items, along with demographic questions. Analysis involved descriptive statistics, paired *t*-tests, and multivariable linear regression. Significance was set at $P < 0.05$.

RESULTS: In total, 787 medical students registered for the Sub-Internship Summit and 426 attended. Of these, 180 (42.3%) completed both the pre- and post-summit surveys. Students reported low baseline preparedness in all domains, with five of six domains assessed having less than moderate (3/5) averages. Post-summit, all six domains statistically significantly increased in preparedness, with 3.96/5 being the lowest average ($P < 0.001$ for all) (**Table 1**). On multivariable analysis, there were no differences in baseline preparedness based on whether respondents attended a school with a home orthopaedic program.

DISCUSSION AND CONCLUSION:

This virtual summit effectively and equally increased medical students' knowledge, comfort, and preparedness for orthopaedic surgery sub-internships. This initiative not only prepared students for their clinical rotations but also enhanced their confidence and performance, which may potentially influence future success in residency applications. This summit may also serve as a model for future medical education efforts targeted at areas in which students feel insufficiently prepared.

Table 1. Univariate differences in responses to the pre- and post-summit surveys (In all cases 1 = lowest, 5 = highest)

Question	Pre-Summit Mean (SD)	Post-Summit Mean (SD)	P-Value
How prepared do you feel for orthopaedic surgery sub-internships?	2.44 ± 1.04	3.97 ± 0.80	<0.001
How would you rate your understanding of on-call responsibilities in orthopaedic surgery?	2.48 ± 0.95	3.98 ± 0.70	<0.001
How knowledgeable do you feel about the medical student role in the operating room setting?	3.10 ± 0.93	4.04 ± 0.72	<0.001
How knowledgeable do you feel about the medical student role in the outpatient clinic setting?	2.91 ± 0.98	3.96 ± 0.75	<0.001
How would you rate your understanding of the resources available for preparing for sub-I's?	2.40 ± 0.88	4.18 ± 0.71	<0.001
How would you rate your understanding of the soft skills required to excel on sub-I rotations?	2.93 ± 1.09	4.47 ± 0.66	<0.001