The Impact of the COVID-19 Pandemic on Surgical Fellowship Applications

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BACKGROUND

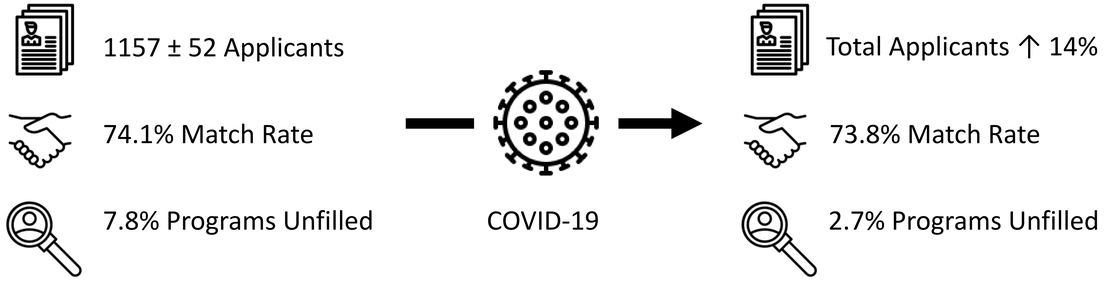
Fellowship training after successful completion of a general surgery residency has become more common among graduating US and Canadian surgery residents. Nearly a decade ago, roughly 70% of trainees pursued fellowship. However, that number now exceeds 85%.[1] The COVID-19 pandemic has had a wide-range of effects on the US healthcare system; surgery training is no exception. We aim to analyze the impact of the COVID-19 pandemic on the number of surgery fellowship applicants and match rates. We further hypothesize that during an uncertain job market, there is increased resident desire to pursue additional training.

[1] Klingensmith ME. The Future of General Surgery Residency Education. JAMA Surg. 2016;151(3):207–208. doi:10.1001/jamasurg.2015.4598

METHODS

Publicly available match statistics from the National Resident Matching Program (www.NRMP.org), Residency and Fellowship of Matching Services (SF Match, www.sfmatch.org), and the Fellowship Council (www.fellowshipcouncil.org) between 2015 to 2021 for the surgical specialties of Advanced Minimally Invasive Surgery (MIS), non-ACGME Colorectal and Thoracic (CRS_CTS), Pediatric (PEDS), Transplant (TX), Vascular (VASC), Colorectal (CRS), Critical Care (CC), Thoracic (THOR), and Oncology (ONC) were compiled and analyzed.

CONCLUSION



Despite an increase in total applicants for fellowship, the overall match rate remained similar post-COVID-19. This is likely due to an increase in the number of fellowship programs and a decrease in unfilled programs after the match. This was primarily driven by an increase in applications and successful matches in graduates pursuing critical care. Whether this is due to an unfavorable post-pandemic job market for graduating chief residents or a continuation of the trend to subspecialize remains unknown.

RESULTS

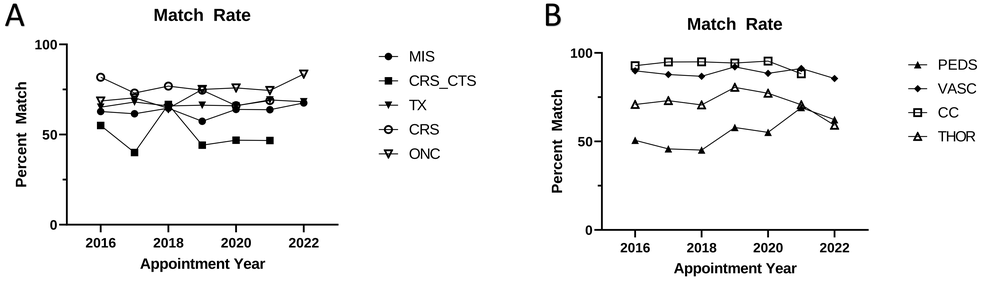


Figure 1: Trend in applicant match rates across general surgery fellowships. The last data point for each plot signifies the appointment year for the interview cycle after the start of the COVID-19 pandemic. (A) MIS (67.5%), CRS_CTS (46.7%), TX (68.2), CRS (68.9%), ONC (83.5%) saw similar or improved match rates. (B) PEDS (62.3%), VASC (85.5%), CC (88.2%), THOR (59.1%) saw decreased match rates.

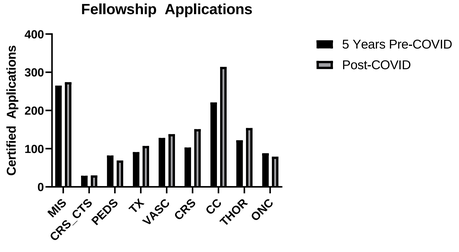


Figure 2: The average number of applications to each fellowship for 5 years prior to the COVID-19 pandemic compared to the first cycle during the pandemic.

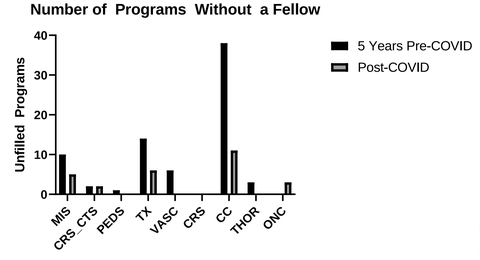


Figure 3: Number of unfilled programs pre- and post-COVID-19. All fellowships saw a decrease in unfilled programs except ONC (n=3 vs n=0 , 8.3% vs 0% unfilled). CC saw the greatest decrease (7.9% vs 24.0% unfilled).

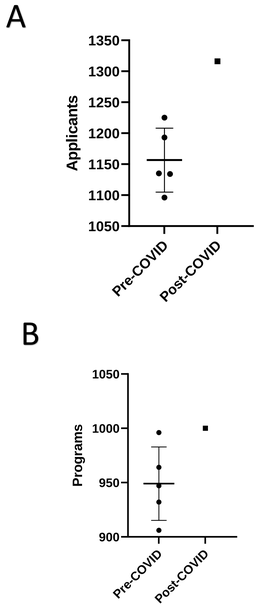


Figure 4. Scatter plot with data 5 years prior to COVID-19. (A) The total number of applications increased by 14% to 1316 from 1157 ± 52, p<0.05. The largest increase was CC (42%, 221 vs 314). (B) Total number of positions increased to 1000 from 949 ± 34.