

A Survey-Based Study Assessing Preparedness of Dermatology Trainees to Serve on the Wards during the COVID-19 Pandemic

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Abstract

Background & Aims: No public health crisis in recent history has demanded the re-deployment of housestaff from subspecialty residencies to assist with inpatient care. As such, no attempts have been made to date to characterize the preparedness of dermatology trainees to assume those inpatient clinical responsibilities outside the scope of regular dermatology practice.

Methods: In April 2020, an IRB-approved web-based survey was distributed to current US dermatology trainees and included questions regarding previous training and perceived preparedness for redeployment to the emergency department (ED), inpatient wards and intensive care unit (ICU). Ordinal logistic regression was performed to examine associations between preparedness and independent variables.

Results: 90 unique responses were returned. 32.2% of respondents reported redeployment due to the COVID-19 pandemic, with the majority (76.0%) serving on inpatient wards. Most respondents completed an internal medicine (IM) preliminary year (44.4%) or transitional year (TY) (43.3%) prior to dermatology residency. A statistically significant association was noted between internship type and preparedness for deployment to inpatient wards ($p=0.04$, OR 2.29 95% CI [1.02, 5.16]) and the ICU ($p<0.001$, OR 4.57 95% CI [1.82, 11.47]). Specifically, respondents who completed an IM preliminary year scored higher on a self-reported preparedness scale to serve in inpatient and ICU settings compared to those who completed TYs.

Conclusions: Prior to dermatology residency, trainees must complete a one-year internship to obtain a broad foundation in clinical medicine. However, eligible programs are highly variable and include first-year residencies in several specialties as well as so-called TYs. TYs typically include a combination of internal medicine, surgical and elective rotations. The potentially less rigorous training afforded by TYs is reflected by our survey's findings, in which respondents who had performed TYs felt less prepared to assume inpatient medicine responsibilities compared to their counterparts who performed more robust IM internships.

Introduction

Prior to the COVID-19 pandemic, no public health crisis in recent history – including the AIDS pandemic – has demanded the redeployment of physicians from all practice settings to assist with inpatient care. Indeed, the likelihood of dermatologists being redeployed to COVID-19 wards seemed exceedingly unlikely until the initial wave of redeployed internists was insufficient to address the onslaught of sick patients.² Suddenly, dermatologists found themselves being asked to draw from knowledge learned during medical internship to assist on the frontlines.³ As residents (including the two co-first authors, Dr. K. Shaw and Dr. T. Karagounis) were being deployed to assist with COVID-19 efforts, we saw a unique opportunity to sample dermatology trainees' views on their preparedness to serve in expanded patient care capacities.

Methods and Materials

- In April 2020, an IRB-approved web-based survey was distributed to current US dermatology trainees via their program directors.
- The survey included questions regarding previous training and perceived preparedness for redeployment to the emergency department (ED), inpatient wards and intensive care unit (ICU).
- 90 unique responses were returned with an even sampling across all three postgraduate years.
- Ordinal logistic regression was performed to examine associations between preparedness and independent variables.

Results

- 32.2% of respondents reported redeployment due to the COVID-19 pandemic, with the majority (76.0%) serving on inpatient wards.
- More than half of respondents (51.9%) volunteered for re-deployment.
- Most respondents completed an internal medicine (IM) preliminary year (44.4%) or transitional year (TY) (43.3%) prior to the start of dermatology residency.
- A statistically significant association was noted between internship type and preparedness for deployment to inpatient wards ($p=0.04$, OR 2.29 95% CI [1.02, 5.16]) and the ICU ($p<0.001$, OR 4.57 95% CI [1.82, 11.47]); association with ED preparedness was not significant (Figure 1). In other words, respondents who completed an IM preliminary year scored higher on a self-reported preparedness scale to serve in inpatient and ICU settings compared to those who completed TYs.
- Those who completed ICU rotations during their internships felt more prepared to serve in the ICU compared to those who had not ($p<0.001$, OR 6.95 95% CI [1.84, 26.56]).
- Perceived preparedness for redeployment was inversely associated with number of years post-internship with first-year dermatology residents self-assessing as more prepared for inpatient medicine compared to their more senior counterparts ($p=0.02$, OR 0.58 95% CI [0.36, 0.92]).
- Nearly one quarter (24.4%) of respondents reported that their dermatology residency programs did not require advanced cardiac life support (ACLS) or basic life support (BLS) certification maintenance, which may have contributed to trepidation regarding redeployment.

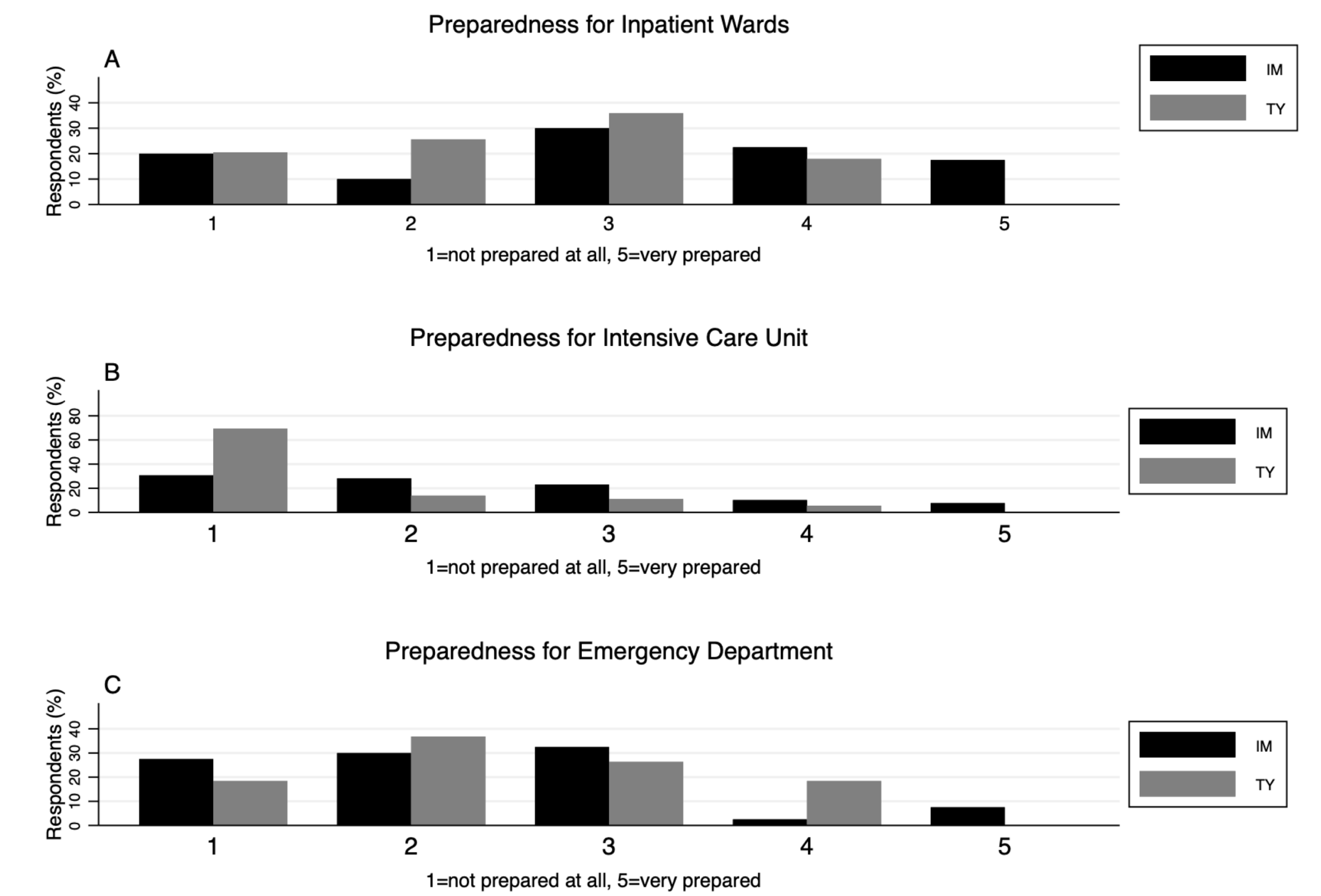


Figure 1. Perceived preparedness of dermatology residents to serve in inpatient medicine (A), intensive care unit (B) and emergency department (C) settings based on internship type. IM, internal medicine preliminary year; TY, transitional year

Conclusions

- As dermatologists, we identify as subspecialists and consultants. However, obtaining a strong foundation in clinical medicine remains paramount, both to provide comprehensive care to medically complex dermatology patients and to assist in unprecedented, albeit infrequent, public health crises like the COVID-19 pandemic.
- In the United States, that foundation is primarily obtained prior to dermatology residency, when trainees complete at least a one-year medical internship.
- Over the years, eligible programs have become increasingly variable and include so-called "transitional years." TYs, also known as a "flexible post-graduate years," typically include a less rigorous combination of internal medicine, surgical and elective rotations.⁴
- While our low response rate limits the generalizability of our data, it is important to note that those US dermatology residents who completed less rigorous internships felt *less prepared* to assume inpatient medicine responsibilities compared to their counterparts who performed more robust internal medicine years.
- As we dermatologists take stock in the aftermath of the first wave of the COVID-19 pandemic and prepare for future surges, a careful review of dermatology resident training is warranted.
- While additional studies are needed to better interrogate dermatology resident education, emphasizing the importance of strong foundations in clinical medicine will no doubt serve our discipline well going forward.

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