

LETTER

Experiences of resident dermatologists during the COVID-19 pandemic: A cross-sectional survey

Dear Editor,

The coronavirus disease 2019 (COVID-19) pandemic has necessitated modifications in clinical and educational environments. Dermatology residents' experiences during the early part of the pandemic have been described.¹ Our objective was to assess the effect of the pandemic on dermatology residents as the pandemic progressed.

After Institutional Review Board exemption (Protocol No: 20-04021753) from the Weill Cornell Medicine, an anonymous survey was emailed to resident dermatologists at our institution, as well as to dermatology residency program directors for distribution to residents. Surveys were collected during 26 May 2020 to 1 July 2020, with 60 respondents (estimated 60% response rate).

Participant demographics are summarized in Table 1. The majority of respondents were female (61.7%, $P = .004$), located in the Northeast (61.0%, $P = .02$), and affected by "stay-at-home" orders (83.3%, $P < .001$). Respondents were approximately evenly distributed from postgraduate years 2 through 4.

Table 2 highlights findings regarding the pandemic's impact on residency. Overall, 59.6% of respondents stated that the pandemic had negatively impacted their education. Over 90% of subjects reported having virtual didactics, with a subset canceled (42.6%) or postponed (34.0%). Residents reported reductions in clinic volume, from a baseline of 68.4 ± 49.0 patients/wk before the pandemic to 15.1 ± 16.1 patients/wk during the study period ($P < .001$). There was an increase in telemedicine visits/wk from 0.95 ± 4.0 to 19.6 ± 27.1 pre-pandemic to pandemic periods, respectively ($P < .001$). Despite a majority reporting a hospital shortage in personal protective equipment (PPE) (63.8%), 74.5% felt they had adequate PPE to perform their duties. Of the 31.9% of respondents redeployed to non-dermatology services, all were located in the Northeast. A majority of residents reported feeling unprepared to provide nondermatological duties (66.0%) and feared redeployment (68.1%).

This study highlights experiences of our resident workforce. Despite expressing fear of redeployment and becoming sick with COVID-19, many residents delivered patient care in nondermatology settings and caring for COVID-19 patients. As COVID-19 cases continue to increase in the United States, it is critical that residents receive appropriate training, preemptively, to alleviate such concerns if the need for redeployment arises again.²

A majority of respondents noted that modifications to education proposed early in the pandemic, such as online didactics and incorporation of residents in teledermatology appointments, had been incorporated into their training.^{3,4} Yet, despite these initiatives, our study

supports findings by other authors who have researched the impact of COVID-19 on residents in other surgical and medical specialties, with that by Rana et al finding that 50% of medical and surgical residents believed that COVID-19 had a negative impact on their clinical training.⁵ As in-person activities have yet to return to pre-pandemic baseline, it is crucial to continue innovating ways to supplement

TABLE 1 Demographic characteristics of survey respondents

Characteristic	N (%)
Total number of survey responses	60
Gender	
Female	37 (61.7%)
Male	21 (35.0%)
Prefer not to answer	2 (3.3%)
Race/ethnicity	
White	37 (61.7%)
Asian	13 (21.7%)
Black or African American	1 (1.7%)
Mixed race	3 (5.0%)
Prefer not to answer	6 (10.0%)
Region	
Northeast	36 (61.0%)
Southeast	14 (23.7%)
Midwest	2 (3.4%)
West	7 (11.9%)
Relationship status	
Single	6 (10.0%)
Married	32 (53.3%)
In a relationship	20 (33.3%)
Prefer not to answer	2 (3.3%)
Percent with children	12 (20.0%)
Year of residency	
PGY-2	22 (36.7%)
PGY-3	20 (33.3%)
PGY-4	18 (30.0%)
Average number of residents per year in residency program	5.56 ± 2.11
Affected by a stay-at-home order	50 (83.3%)

Abbreviation: PGY, postgraduate year.

TABLE 2 Effect of COVID-19 on resident experiences and feelings regarding the pandemic

Effect of COVID-19	N (%)
Currently seeing patients in-person	40 (66.7%)
Average number of patients seen in-person per week	
Prior to the COVID-19 pandemic	68.40 ± 49.0
During the COVID-19 pandemic	15.10 ± 16.1
Types of patients being seen in clinic	
All	23 (48.9%)
Urgent	22 (46.8%)
Not seeing any patients	2 (4.3%)
Average number of telemedicine visits per week	
Prior to COVID-19	0.95 ± 4.02
During COVID-19	19.62 ± 27.06
Experiences with teledermatology during COVID-19	
Somewhat or overwhelmingly positive	30 (65.2%)
Neither positive nor negative	5 (10.9%)
Somewhat or overwhelmingly negative	7 (15.2%)
Did not reply	4 (8.7%)
How did you manage inpatient consults?	
Both in-person and via telemedicine	33 (70.2%)
No consults	10 (21.3%)
Only in-person	2 (4.3%)
Only via telemedicine	2 (4.3%)
Percent redeployed to nondermatology services To where?	15 (31.9%)
ED	0 (0%)
ICU	1 (6.7%)
Inpatient ward	11 (73.3%)
Postoperative surgery	0 (0%)
Urgent care center	0 (0%)
Other	4 (26.7%)
Number who do not feel prepared to provide nondermatological duties	31 (66.0%)
Number who fear being redeployed	32 (68.1%)
Number who fear getting sick with COVID	45 (95.7%)
Number with a PPE shortage at their hospital	30 (63.8%)
Number who feel they have an adequate supply of PPE to perform their duties	35 (74.5%)
How has COVID-19 impacted your dermatological education?	
Negatively	28 (59.6%)
Neither negatively nor positively	11 (23.4%)
Positively	6 (12.8%)
How has COVID-19 impacted your didactics?	
Lectures moved online	44 (93.6%)
Canceled lectures	20 (42.6%)
Postponed lectures	16 (34.0%)

Abbreviations: COVID-19, coronavirus disease 2019; ED, emergency department; ICU, intensive care unit; PPE, personal protective equipment.

traditional teaching. In addition to online didactics and Grand Rounds, programs should consider incorporating cadaver lab skills sessions to augment surgical training and online mentorship and medical student education to support trainees' professional development.

This study is subject to several limitations. The data collected represent a small percentage of dermatology residents, and the cross-sectional nature of the study reflects a timepoint during an evolving pandemic wherein changes in disease prevalence and PPE availability are likely to impact survey responses.


Dermatology resident training has been significantly impacted by the COVID-19 pandemic. Our study emphasizes the need for increased measures to ensure that residents feel safe in their work environments and are prepared for independent practice despite this period of upheaval.


CONFLICT OF INTEREST

The authors declare no potential conflict of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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