

# UC Davis

## Dermatology Online Journal

### Title

Effects of virtual interviews on dermatology match trends: a retrospective cohort analysis

### Permalink

<https://escholarship.org/uc/item/8xz080cs>

### Journal

Dermatology Online Journal, 29(3)

### Authors

Diamond, Carrie  
Cardones, Adela R  
Liu, Beiyu  
[et al.](#)

### Publication Date

2023

### DOI

10.5070/D329361438

### Copyright Information

Copyright 2023 by the author(s). This work is made available under the terms of a Creative Commons Attribution-NonCommercial-NoDerivatives License, available at <https://creativecommons.org/licenses/by-nc-nd/4.0/>

Peer reviewed

# Effects of virtual interviews on dermatology match trends: a retrospective cohort analysis

Carrie Diamond<sup>1</sup> MD, Adela R Cardones<sup>2,4</sup> MD MHSc, Beiyu Liu<sup>3</sup> PhD, Cynthia L Green<sup>3</sup> PhD, Erin Lesesky<sup>4</sup> MD

Affiliations: <sup>1</sup>Duke University School of Medicine, Durham, North Carolina, USA, <sup>2</sup>Department of Dermatology, Kansas University Medical Center, Kansas City, Kansas, USA, <sup>3</sup>Department of Biostatistics & Bioinformatics, Duke University School of Medicine, Durham, North Carolina, USA, <sup>4</sup>Department of Dermatology, Duke University Health System, Durham, North Carolina, USA

Corresponding Author: Erin Lesesky MD, Duke University Health System, 3135, Durham, NC 27710, Tel: 919-395-8801, Email: [erin.lesesky@duke.edu](mailto:erin.lesesky@duke.edu)

*Keywords: COVID-19, dermatology residency, home institution, match outcomes, virtual interviews*

To the Editor:

Prior studies evaluated the impact of the virtual interview cycle on the dermatology match [1-3]. We sought to build upon existing literature evaluating the impact of two years of virtual interviews on the dermatology match.

Many reasons make it more likely for medical students to match at their home institution, including the strength of relationships and knowledge of the system. We wanted to examine if changes in the interview process from the COVID-19 pandemic affected dermatology match outcomes. Specifically, we hypothesized that restrictions on away rotations and changing to virtual interviews may make students more likely to match within their "home bubble" since these changes decreased the opportunity for students to experience new institutions and cities. We defined their "home bubble" as their hometown state/region, undergraduate institution/state/region, and medical school institution/state/region. We performed an analysis comparing two years of virtual interviews (2021 and 2022) with three years of in-person interviews (2018-2020).

Publicly available data from dermatology program, undergraduate and medical school websites, and social media were utilized to gather data on 2460 applicants who matched in dermatology from 2018-2022. A control group was established using match data from 2018-2020 to establish baseline in-person

institutional matches (undergraduate and medical school), in addition to regional and state matches (hometown, undergraduate, medical school), to which the virtual matches were compared. We used an 8-region division as detailed by the Bureau of Economic Development, resembling the regional model utilized in the dermatology supplemental application [4]. International residents and residents from Puerto Rico were excluded (N=83). Data are presented as the frequency and percentage of students who had virtual and in-person interviews for residency matches. A chi-square test of independence was performed to examine the association between interview type and the institution/location of residency match. In addition, the odds ratio (OR) of students who had virtual versus in-person interviews with a 95% confidence interval (CI) is reported.

A significant increase was found in students matching at their home medical school institution for virtual (24.8%) compared to in-person interviews (20.3%; OR: 1.29, 95% CI [1.05-1.59], P=0.010), (**Table 1**). A significant increase in students matching in their hometown state during virtual interviews versus in-person (32.3% and 24.9%, respectively, P=0.005) was determined. Hometown regional matches also increased during virtual versus in-person interviews (44.3% and 31.7%, respectively, P<0.001).

**Table 1.** Frequency and percentage of institutional, state, and regional dermatology residency match data from 2018-2022 between virtual and in-person interviews.

	Virtual	In-person	Total	Odds ratio (95% CI)	Unadjusted P value
<b>Residency institution match: medical school</b>					
Yes	208 (24.8%)	271 (20.3%)	479 (22.1%)	1.29 [1.05-1.59]	0.010
No	631 (75.2%)	1062 (79.7%)	1693 (77.9%)		
Total	839	1333	2172		
<b>Residency institution match: undergraduate school</b>					
Yes	40 (7.4%)	64 (7%)	104 (7.1%)	1.07 [0.71-1.61]	0.76
No	501 (92.6%)	855 (93%)	1356 (92.9%)		
Total	541	919	1460		
<b>Residency state match: medical school state</b>					
Yes	343 (40.9%)	508 (38.1%)	851 (39.2%)	1.12 [0.94-1.34]	0.20
No	496 (59.1%)	825 (61.9%)	1321 (60.8%)		
Total	839	1333	2172		
<b>Residency region match: medical school region</b>					
Yes	461 (55%)	699 (52.5%)	1160 (53.5%)	1.11 [0.93-1.32]	0.25
No	377 (45%)	633 (47.5%)	1010 (46.5%)		
Total	838	1332	2170		
<b>Residency state match: undergraduate school state</b>					
Yes	145 (26.9%)	227 (24.7%)	372 (25.5%)	1.12 [0.88-1.43]	0.36
No	395 (73.1%)	693 (75.3%)	1088 (74.5%)		
Total	540	920	1460		
<b>Residency region match: undergraduate school region</b>					
Yes	238 (44.6%)	375 (41.1%)	613 (42.4%)	1.15 [0.93-1.43]	0.20
No	296 (55.4%)	537 (58.9%)	833 (57.6%)		
Total	534	912	1446		
<b>Residency state match: hometown state</b>					
Yes	162 (32.3%)	172 (24.9%)	334 (28%)	1.44 [1.12-1.86]	0.005
No	339 (67.7%)	518 (75.1%)	857 (72%)		
Total	501	690	1191		
<b>Residency region match: hometown region</b>					
Yes	235 (44.3%)	249 (31.7%)	484 (36.8%)	1.71 [1.36-2.15]	<0.001
No	296 (55.7%)	537 (68.3%)	833 (63.3%)		
Total	531	786	1317		

Study limitations include the availability of publicly accessible data, specifically undergraduate and hometown data. Data was only collected through April 2022 and more data may now be available following this date.

There has been an increasing trend toward matching in locations where students have previous connections, specifically medical school institutions and hometown states and regions. There are substantial benefits of virtual interviews for students including lower costs and improved equity. However, this is contrasted with the decreased ability to experience new locations and institutions

and meet faculty and residents in person. Thus, the question of whether to continue with virtual interviews is an important one. The purpose of this study was to evaluate if virtual interviews are affecting match outcomes. If they are in a negative way, should interviews return to in-person? This study shows that students are more likely to match within their “home bubble” with virtual interviews which may be viewed as a negative consequence. We advocate for improved data collection with after-match survey implementation in dermatology to gather data that will be important in deciding how to move forward with an equitable residency interview process.

## Potential conflicts of interest

The authors declare no conflicts of interest.

## References

1. Dowdle TS, Ryan MP, Wagner RF. Internal and geographic dermatology match trends in the age of COVID-19. *J Am Acad Dermatol.* 2021;85:1364-6. [PMID: 34375667].
2. Ederle A, Shahriari S, Whisonant C, et al. The impact of COVID-19 on the dermatology match: an increase in the number of students matching at home programs. *Dermatol Online J.* 2021;27(9). [PMID: 34755988].
3. Narang J, Morgan F, Eversman A, et al. Trends in geographic and home program preferences in the dermatology residency match: A retrospective cohort analysis. *J Am Acad Dermatol.* 2022;86:645-7. [PMID: 33581188].
4. Crone TM. An Alternative Definition of Economic Regions in the United States Based on Similarities in State Business Cycles. *Rev Econ Stat.* 2005;87:617-26. [DOI: 10.2139/ssrn.574185].