

Rural Residency Curricula: Potential Target for Improved Access to Care?

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PRACTICE POINTS

- Access to dermatologic care in rural areas is a growing problem.
- Dermatology residency programs can influence medical students and resident dermatologists to provide care in rural and geographically isolated areas.
- Presenting detailed curricula that impact access to care on residency program websites could attract applicants with these career goals.

To the Editor:

There is an irrefutable trend toward urban dermatology practice in the United States, leading to growing problems with rural access to care. The provision of rural clinical experiences and telehealth in dermatology residency training might increase the likelihood of trainees establishing a rural practice.

In 2017, the American Academy of Dermatology released an updated statement supporting direct patient access to board-certified dermatologists in an effort to reduce morbidity and mortality associated with skin disease.¹ Twenty percent of the US population lives in a rural and medically underserved location, yet these areas remain largely underserved, in part because of an irrefutable trend toward urban dermatology practice.²⁻⁴ Successful approaches to improving rural access to dermatology care are poorly defined in the literature.

Several variables have been shown to influence a young physician's decision to establish a clinical practice in geographically isolated areas, including rural upbringing, longitudinal rural clinical experiences during medical training, and family influences.⁵ Location of residency

training is an additional variable that impacts practice location, though migration following dermatology residency is a complex phenomenon. However, training location does not guarantee retention of dermatology graduates in any particular geographic area.⁶ Practice incentives and stipends might encourage rural dermatology practice, yet these programs are underfunded. Last, telemedicine in dermatology (including teledermatology and teledermoscopy), though not always an ideal substitute for a live visit, can improve access to care in geographically isolated or underserved areas in general.⁷⁻⁹

Focused recruitment of medical students interested in rural dermatology practice to accredited dermatology residency programs aligned with this goal represents another approach to improve geographic diversity in the field of dermatology. Online access to this information would be useful for both applicants and their mentors.

We assessed viewable online curricula related to rural dermatology and telemedicine experiences at all Accreditation Council for Graduate Medical Education (ACGME)-accredited residency programs. Telemedicine experiences at Veterans Health Administration (VHA) health systems also were assessed.

Methods

This study was exempt from review by the institutional review board at the University of Minnesota (Minneapolis, Minnesota)(IRB #STUDY00004915) because no human subjects were involved. Online curricula of all ACGME-accredited dermatology residency programs in the United States and Puerto Rico were reviewed from November to December 2018. The following information was recorded: specialized "rural-track" training; optional elective time in rural settings; teledermatology training; and teledermoscopy training.

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The authors report no conflict of interest.

The eTable is available in the Appendix online at www.mdedge.com/dermatology.

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Additionally, population density at each program's primary location was determined using US Census Bureau data and with consideration to communities contained within particular Metropolitan Statistical Areas (MSAs)(eTable). Data were obtained from the VHA system to assess teledermatology services at VHA locations affiliated with residency programs.

Results

Of 154 dermatology residency programs identified in the United States and Puerto Rico, 142 were accredited at the time of data collection. Fifteen (10%) were based in communities of 50,000 individuals or fewer that were not near a large metropolitan area. One program (<1%) offered a specific rural track. Fifty-six programs (39%) cited optional rotations or clinical electives, or both, that could be utilized for a rural experience. Eighteen (12%) offered teledermatology experiences and 1 (<1%) offered teledermoscopy during training. Fifty-three programs (37%) offered a rotation at a VHA hospital that had an active teledermatology service.

Comment

Program websites are a free and easily accessible means of acquiring relevant information. The paucity of readily available data on rural dermatology and teledermatology opportunities is unfortunate and a detriment to dermatology residency applicants interested in rural practice, which may result in a missed opportunity to foster a true passion for rural medicine. A brief comment on a website can be impactful, leading to a postgraduate year 4 dermatology elective rotation at a prospective fellowship training site or a rural dermatology experience.

The paucity of dermatologists working directly in rural areas has led to development of teledermatology initiatives to reach deeply into underserved regions. One of the largest providers of teledermatology is the VHA, which standardized its teledermatology efforts in 2012 and provides remarkable educational opportunities for dermatology residents. However, many residency program and VHA websites provide no information about the participation of dermatology residents in the provision of teledermatology services.

A limitation of this study is that it is based on online published curricula. Dermatology residency programs with excellent rural curricula that are not published online might exist.

Residency program directors with an interest in geographic diversity are encouraged to provide rural and teledermatology opportunities and to update these offerings on their websites, which is a simple modifiable strategy that can impact the rural dermatology care gap by recruiting students interested in filling this role. These efforts should be studied to determine whether this strategy impacts resident selection as well as whether focused rural and telemedicine exposure during training increases the likelihood of establishing a rural dermatology practice in the future.

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APPENDIX

eTABLE. Comparison of Viewable Online Curricula of ACGME-Accredited Dermatology Residency Programs by Rural Track Training, Rural Clinical Rotation Opportunities, and Experience in Teledermatology/Teledermoscopy^a

Program name	City	State	Population ^b (associated metropolitan area, if applicable)	Rural track	Optional elective opportunity	Teledermatology
University of Arkansas for Medical Sciences	Little Rock	AR	198,606	N	Y	N
Mayo Clinic College of Medicine and Science (Arizona)	Scottsdale	AZ	249,950 (1,455,632)	N	Y	N
Midwestern University Osteopathic Postdoctoral Training Institute	Peoria	AZ	168,181 (1,455,632)	N	Y	N
Kaiser Permanente Southern California (Los Angeles)	Los Angeles	CA	3,792,621	N	Y	N
Los Angeles County-Harbor-UCLA Medical Center	Torrance	CA	146,758 (3,792,621)	N	Y	N
OPTI West (Newport Beach) Program	Newport Beach	CA	86,160	N	Y	N
Stanford Health Care-Sponsored Stanford University	Redwood City	CA	86,685	N	Y	N
UCLA David Geffen School of Medicine/UCLA Medical Center	Los Angeles	CA	3,792,621	N	Y	N
University of California Davis Health	Sacramento	CA	501,901	N	Y	Y
University of California (San Diego) Medical Center	La Jolla/San Diego	CA	46,000 (1,400,000)	N	Y	N
University of California (San Francisco)	San Francisco	CA	884,363	N	Y	Y
University of Southern California/LAC+USC Medical Center	Los Angeles	CA	3,792,621	N	N	Y
University of Colorado	Aurora	CO	366,623 (600,158)	N	N	Y
University of Connecticut	Farmington	CT	25,340	N	Y	N
Yale-New Haven Medical Center	New Haven	CT	131,014	N	Y	N
Howard University	Washington	DC	693,972	N	Y	N
MedStar Health/Washington Hospital Center	Washington	DC	693,972	N	Y	N
HCA West Florida GME Consortium/Largo Medical Center	Largo	FL	84,754	N	Y	N
Mayo Clinic College of Medicine and Science (Jacksonville)	Jacksonville	FL	892,062	N	Y	N

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eTABLE (CONTINUED)

Program name	City	State	Population ^b (associated metropolitan area, if applicable)	Rural track	Optional elective opportunity	Teledermatology
Orange Park Medical Center	Orange Park	FL	8705 (821,784)	N	Y	N
University of Florida	Gainesville	FL	132,249	N	Y	N
Emory University School of Medicine	Atlanta	GA	486,290	N	N	Y
Philadelphia College of Osteopathic Medicine	Roswell	GA	94,786	N	Y	N
University of Iowa Hospitals and Clinics	Iowa City	IA	75,798	N	Y	N
Loyola University Medical Center	Maywood	IL	25,090 (2,716,450)	N	Y	N
McGaw Medical Center of Northwestern University	Chicago	IL	2,716,450	N	Y	N
Southern Illinois University	Springfield	IL	114,868	N	Y	N
University of Chicago	Chicago	IL	2,716,450	N	Y	N
University of Louisville School of Medicine	Louisville	KY	621,349	N	Y	N
Boston University Medical Center	Boston	MA	685,094	N	N	Y
MA General Hospital/Beth Israel Deaconess Medical Center/Brigham and Women's	Boston	MA	685,094	N	Y	Y
Tufts Medical Center	Boston	MA	685,094	N	Y	Y ^c
University of Maryland	Baltimore	MD	611,648	N	Y	N
St Joseph Mercy Livingston	Ann Arbor	MI	121,477	N	Y	N
University of Michigan Health System	Ann Arbor	MI	121,477	N	N	Y
Mayo Clinic College of Medicine and Science (Rochester)	Rochester	MN	115,733	N	Y	N
University of Missouri-Columbia	Columbia	MO	121,717	N	N	Y
University of Mississippi School of Medicine	Jackson	MS	166,965	Y	Y	N
Mary Hitchcock Memorial Hospital/ Dartmouth-Hitchcock	Lebanon	NH	13,522	N	Y	N
University of New Mexico School of Medicine	Albuquerque	NM	558,545	N	Y	Y
Icahn School of Medicine at Mount Sinai	New York	NY	8,622,698	N	N	Y
New York Presbyterian Hospital (Cornell Campus)	New York	NY	8,622,698	N	Y	N

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eTABLE (CONTINUED)

Program name	City	State	Population ^b (associated metropolitan area, if applicable)	Rural track	Optional elective opportunity	Teledermatology
Stony Brook Medicine/ University Hospital	Stony Brook	NY	13,740 (8,622,698)	N	Y	N
Duke University Hospital	Durham	NC	267,743	N	Y	Y
University of North Carolina Hospitals	Chapel Hill	NC	59,862	N	Y	N
Wake Forest University School of Medicine	Winston- Salem	NC	244,605	N	Y	N
Cleveland Clinic Foundation	Cleveland	OH	385,525	N	Y	N
Ohio State University Hospital	Gahanna	OH	35,297 (787,033)	N	Y	N
University of Cincinnati Medical Center/College of Medicine	Cincinnati	OH	301,301	N	Y	N
Penn State Milton S Hershey Medical Center	Hershey	PA	14,257	N	Y	N
Sidney Kimmel Medical College at Thomas Jefferson University/TJUH	Philadelphia	PA	1,580,863	N	Y	N
University of Pennsylvania Health System	Philadelphia	PA	1,580,863	N	Y	N
UPMC Medical Education	Pittsburgh	PA	302,407	N	Y	Y
Brown University	Providence	RI	47,600	N	Y	N
University of Tennessee	Memphis	TN	652,236	N	Y	N
Baylor University Medical Center	Dallas	TX	1,341,075	N	Y	N
Medical City Weatherford	Weatherford	TX	30,654	N	Y	N
Texas A&M College of Medicine- Scott and White Medical Center (Temple)	Temple	TX	74,503	N	Y	N
Texas Tech University Health Sciences Center at Lubbock	Lubbock	TX	253,888	N	Y	Y
University of Texas Medical Branch Hospitals	Galveston	TX	50,497	N	Y	Y
OPTI West (Springville Dermatology)	Springville	UT	33,294	N	Y	N
University of Vermont Medical Center	Burlington	VT	42,239	N	Y	N
University of Wisconsin Hospitals and Clinics	Madison	WI	255,214	N	Y	Y

Abbreviations: ACGME, Accreditation Council for Graduate Medical Education; N, no; Y, yes; NA, not available.

^aACGME accreditation status is current through November 12, 2018 at <https://apps.acgme.org/ads/Public/Programs/Search>.

^bPopulation based on estimates from the US Census Bureau for July 1, 2017 at <https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk>.

^cTeledermatology and teledermoscopy within curriculum.