

UC Davis

Dermatology Online Journal

Title

Landscape of dermatology education in allopathic medical schools across the United States

Permalink

<https://escholarship.org/uc/item/8zz4431f>

Journal

Dermatology Online Journal, 31(2)

Authors

Poppens, McKayla

McClain, Weston

Collier, Erin

et al.

Publication Date

2025

DOI

10.5070/D331265303

Copyright Information

Copyright 2025 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

Landscape of dermatology education in allopathic medical schools across the United States

McKayla Poppens, MD^{1a}, Weston McClain, JD¹, Erin Collier, MD, MPH², Kyle Cheng, MD, MS², Marcia Hogeling, MD²

¹ David Geffen School of Medicine, University of California Los Angeles, Los Angeles, California, USA, ² Division of Dermatology, Department of Medicine, David Geffen School of Medicine, University of California Los Angeles, Los Angeles, California, USA

Keywords: curriculum, dermatology, medical education, USMLE

Dermatology Online Journal

Vol. 31, Issue 2, 2025

To the Editor

Despite its importance and clinically high prevalence, prior research has shown that dermatologic topics are infrequently taught in medical school. Among 252 surveyed primary care residents, only 28% felt their medical school curriculum adequately prepared them to treat common dermatologic diseases.¹ Currently, there is no consensus about how or to what extent medical schools should teach dermatology curricula.² This survey study describes the current state of dermatologic education across American medical schools as well as faculty-desired changes and hindrances to change in an era of rapid curricular evolution.

A 22-item survey was developed using RedCap® based on literature review and discussions with dermatology program faculty and residents (**Survey**). Questions gathered data on medical school demographics, methods used to teach, and extent of dermatology curricula in each year of medical school (structure and function of the skin, morphology, pediatric dermatology, dermatologic surgery/oncology, cutaneous manifestations of systemic diseases, histology of the skin, and biopsy techniques). The survey also asked for opinions about the requirement for dermatologist-led instruction, adequacy of the extent of instruction, the requirement for dedicated courses (longitudinal lectures or experiences across an academic year), and desired next-decade changes and hindrances to implementation. The web-based survey was disseminated to the 280-member Association of Professors in Dermatology³ via email in March 2023. Collected responses were anonymous and analyzed with STATA 16.1 software. Participants who answered “No” or did not respond to the screening question, “Are you a current medical school dean, dermatology department chair, or dermatology faculty member engaged in medical student education?” were removed (n=14). Descriptive statistics and tabulations were uti-

Table 1. Medical school characteristics of affiliated faculty respondents (n=72).

Characteristic	Responses n=72 n (%)
<i>Allopathic medical degree awarded</i>	72 (100)
<i>Class size</i>	
<100	6 (8.3)
100-200	53 (73.6)
>200	13 (18.1)
<i>Affiliated department or division of dermatology</i>	72 (100)
<i>Affiliated dermatology residency</i>	70 (97.2)
<i>Dermatology department chair</i>	18 (25.0)
<i>Dermatology faculty member</i>	54 (75.0)
<i>Region</i>	
West	9 (12.5)
Southwest	7 (9.7)
Southeast	20 (27.8)
Midwest	15 (20.8)
Northeast	21 (29.2)

lized for medical school demographic data and survey responses.

From 48 programs in 26 states, 72 eligible members of the Association of Professors in Dermatology participated in the survey. All respondents were dermatologists at allopathic degree-granting institutions. Nearly all (97.2%) were affiliated with a dermatology residency program. One quarter of respondents (18/72) were dermatology department chairs, whereas the remainder (54/72) were teaching faculty (**Table 1**).

a Corresponding Author: McKayla Poppens MD, 10833 Le Conte Avenue, Los Angeles, CA 90095, Tel: 310-825-6373, Email: mckaylapoppens@gmail.com

Table 2. Dermatologic concepts taught in medical school stratified by year (n=72).

Concept	Year 1 n=72 n (%)	Year 2 n=72 n (%)	Year 3 n=72 n (%)	Year 4 n=72 n (%)	Not formally taught n=72 n (%)	Unsure n=72 n (%)
<i>Structure and function of the skin</i>	38 (52.8)	22 (30.6)	5 (6.9)	7 (9.7)	3 (4.2)	4 (5.6)
<i>Morphology of the skin</i>	26 (36.1)	27 (37.5)	9 (12.5)	12 (16.7)	5 (6.9)	5 (6.9)
<i>Pediatric dermatology</i>	15 (20.8)	18 (25.0)	11 (15.3)	15 (20.8)	18 (25.0)	5 (6.9)
<i>Dermatologic surgery and oncology</i>	16 (22.2)	16 (22.2)	12 (16.7)	14 (19.4)	19 (26.4)	3 (4.2)
<i>Cutaneous manifestations of systemic diseases</i>	23 (31.9)	27 (37.5)	10 (13.9)	16 (22.2)	5 (6.9)	5 (6.9)
<i>Histology of the skin</i>	35 (48.6)	22 (30.6)	4 (5.6)	10 (13.9)	4 (5.6)	4 (5.6)
<i>Biopsy techniques</i>	13 (18.1)	6 (8.3)	12 (16.7)	21 (29.2)	21 (29.2)	3 (4.2)

Approximately half of respondents detailed that skin structure and function (38/72) and histology of the skin (35/72) are taught in the first year of medical school at their respective institutions ([Table 2](#)). Around a fifth described that pediatric dermatology (15/72) and dermatologic surgery/oncology (16/72) are also taught in the first year. Fewer (13/72) also introduced biopsy techniques during the first year of training. Nearly 30% (21/72) reported that biopsy techniques are not taught at any point in the four-year curriculum. Additionally, a quarter of institutions reported no formal exposure to any dermatologic surgery/oncology (19/72) or pediatric dermatology (18/72) concepts.

The average number of dedicated dermatology courses also varies by institution and year ([Table 3](#)). Typically, more dedicated dermatology courses were offered in year four (1.3, SD 1.22) compared to year one (0.57, SD 0.60). The total number of dedicated dermatology courses offered across all years varied significantly among all medical schools. Notably, 5% offered as many as 9 courses (3/58), whereas 20% offered a single (12/58) and 10% (6/58) no courses in the four-year curriculum. The most common teaching methods included electives (58/72, 80.6%), followed by dermatology interest group participation (53/72, 73.6%), and didactic clinical lectures (44/72, 61.1%).

Nearly 85% of respondents (49/58) believed students should receive more dermatology instruction in medical school ([Table 4](#)). Almost all (55/58) also recommended that medical schools should require at least one dedicated dermatology course for all students. The next most desired curricular changes included earlier clinical exposure to dermatology (34/72, 47.2%), vertical curriculum integration (27/72, 37.5%), and dermatologist-taught lectures (25/72, 34.7%). Respondents also identified the most important hindrances to desired curricular changes

([Table 4](#)): limited curriculum availability (42/72, 58.3%), lack of importance recognition (31/72, 43.1%), and unavailability of dermatology faculty (28/72, 38.9%).

This study builds on existing literature by demonstrating that medical schools inconsistently teach dermatology topics. Additionally, this data helps to clarify the preferences dermatologists have about the extent of exposure, desired changes, and hindrances to improving dermatologic education within the United States. This data may aid leaders in medical education when considering changes to their medical school's curriculum in the future.

Although most respondents thought dermatology topics should be taught to a greater extent in medical schools, current trends in medical education appear to be moving in the opposite direction. In the wake of recent United States Medical Licensing Examination changes, many schools are considering restructuring their preclinical curriculums.⁴ Shorter, condensed curricula are likely to further reduce the amount of dermatology taught as made evident by recent changes at some institutions highlighted in free-response answers of our survey. This creates a challenge for educators to meet the needs of dermatologic education in a shrinking, dedicated space to do so. Current dermatology teaching methods in medical schools are shown in [Figure 1](#) and the total number of dedicated dermatology courses are shown in [Supplemental Figure 1](#).

A time of evolving curricula of many medical schools lends itself to proposed changes that should include strategies for expanding dermatology education. Highly important but inadequately taught topics included skin infections, wound care, drug eruptions, infestations, and viral exanthems.⁵ Proposed methods for improving dermatologic education in medical schools have included requiring a dermatologic clerkships, teaching cadaver skin

Table 3. Number of dermatologic courses offered in each year of medical school (n=58).

	3+ Courses n (%)	2 Courses n (%)	1 Course n (%)	None n (%)	Unsure n (%)	Mean (SD)
Year 1	1 (1.7)	0 (0)	27 (45.6)	25 (43.1)	5 (8.6)	0.57 (0.60)
Year 2	1 (1.8)	5 (8.8)	19 (33.3)	26 (45.1)	6 (10.5)	0.77 (1.04)
Year 3	4 (6.9)	2 (3.5)	13 (22.4)	33 (56.9)	6 (10.3)	0.75 (1.19)
Year 4	7 (12.1)	8 (13.8)	18 (31.0)	19 (32.8)	6 (10.3)	1.3 (1.22)

Table 4. Desired next-decade curricular changes to dermatology education within medical schools and expected hindrances to change (n=72).

Desired change	Responses n = 72 n (%)
Earlier exposure	34 (47.2)
Vertical curriculum integration	27 (37.5)
Lectures taught by dermatologists	25 (34.7)
Interactive learning	22 (30.6)
Online instruction	17 (23.6)
Required clerkships	11 (15.3)
Other	3 (4.2)
Nothing	3 (4.17)
Unsure	2 (2.8)
Hindrances to desired change(s)	
Curriculum availability (time)	42 (58.3)
Lack of recognition of the importance of dermatology	31 (43.1)
Dermatology faculty availability (time)	28 (38.9)
Medical school interest	20 (27.8)
Cost	12 (16.7)
Resistance from other departments	6 (8.3)
Student interest	5 (6.9)
Other	3 (4.2)
Nothing	4 (5.6)
Unsure	3 (4.17)

dermatologic education should be expected of all medical schools.

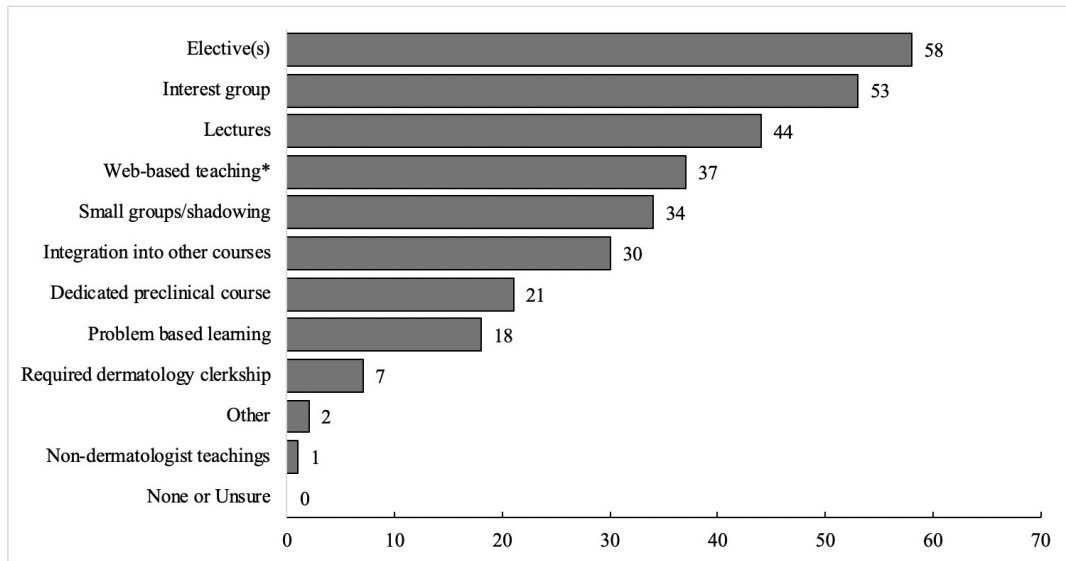
Limitations include a survey response rate of about 25%. Of this, responses were only received from allopathic medical schools, and nearly all (97.2%) were at medical schools affiliated with dermatology residencies. As such, the results of this survey may not represent the state of dermatologic education at osteopathic schools or those without affiliated residencies. Lastly, the survey results may include response bias as the dermatology faculty who responded may have the most interest in current and future dermatologic education.

Potential conflicts of interest

The authors declare no conflicts of interest.

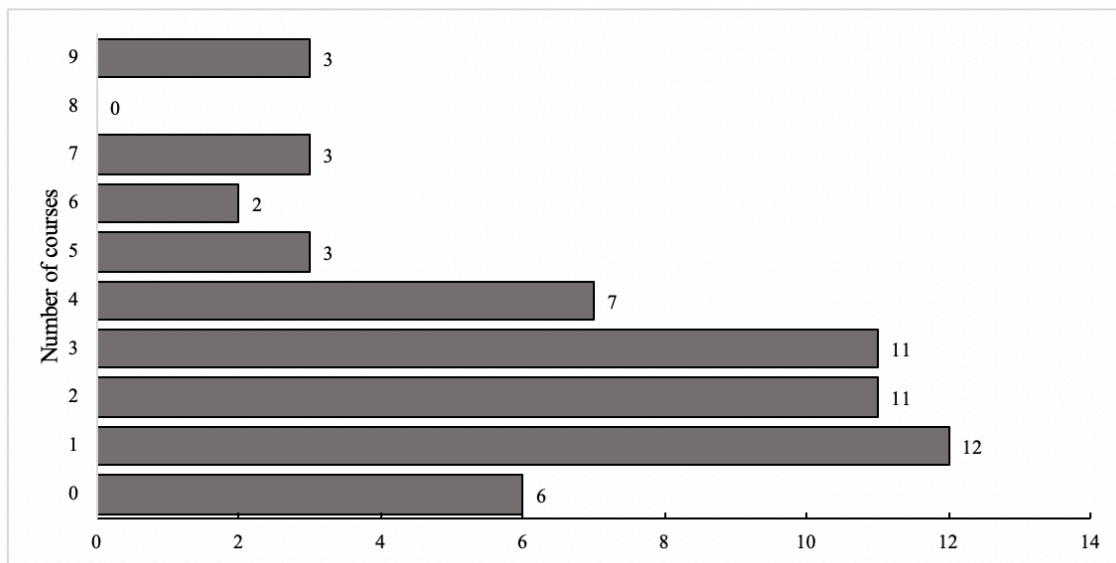
biopsies, and providing seminar courses.⁵ Innovative solutions for curricular integration as highlighted in this survey may include inclusion of dermatology subjects into skill-based sessions, objective structured clinical examinations, and even anatomy labs, which can provide unique opportunities for integration outside of traditional lecture-based spaces. These methods could improve the exposure to dermatology for students who may otherwise not get any formal dermatologic education in residency. Future research should focus on obtaining a consensus among dermatology leaders in education to advocate for the topics and extent to which

Figure 1. Current medical school teaching methods for dermatology education (n=72).



*Web-based teachings may include American Academy of Dermatology medical student curriculum, Aquifer, WiseMD, among others.

Supplemental Figure 1. Total number of dedicated dermatology courses offered across all four years of medical school (n=58).



References

1. Hansra NK, O'Sullivan P, Chen CL, Berger TG. Medical school dermatology curriculum: Are we adequately preparing primary care physicians? *J Am Acad Dermatol*. 2009;61:23-29. PMID:19409656
2. McCleskey PE, Gilson RT, DeVillez RL. Medical student core curriculum in dermatology survey. *J Am Acad Dermatol*. 2009;61. doi:[10.1016/j.jaad.2008.10.066](https://doi.org/10.1016/j.jaad.2008.10.066). PMID:19410336
3. Association of Professors of Dermatology. 2024. Accessed June 17, 2024. <https://www.dermatologyprofessors.org/#>
4. Murphy B. Medical schools ponder move to shorter pre-clerkship curriculum. *Am Med Acad*. 2021. Accessed June 17, 2024. <https://www.ama-assn.org/medical-students/clinical-rotations/medical-schools-ponder-move-shorter-pre-clerkship-curriculum>
5. Murase JE. Understanding the importance of dermatology training in undergraduate medical education. *Dermatol Pract & Concept*. 2015;5. PMID:26114062