Workforce Shortage of Pediatric Dermatologists: A Medical Student's Perspective

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PRACTICE **POINTS**

- Addressing a lack of exposure to pediatric dermatology in medical school and increasing support for students who are interested in the field can help alleviate the shortage of physicians at the earliest point in training.
- Increasing access to pediatric dermatology resources, such as lecture series and mentorship opportunities, could further broaden the medical student knowledge base.
- There is an opportunity to create residency tracks that increase the number of dermatology residency applicants who are medical students interested in pursuing pediatric dermatology.

There is a shortage of pediatric dermatologists in the United States, with fewer than 2% of practicing dermatologists specializing in pediatrics.[1] Pediatric dermatology has the third highest referral rate by pediatricians but also is the third most challenging specialty to access, with an average appointment wait time of 92 days.[2,3] Another factor leading to increased appointment wait times is the specificity of care required for pediatric patients. Frequently, pediatric patients evaluated by a general dermatologist will be referred to their pediatric dermatology colleagues. As medical students, we were introduced to the field of pediatric dermatology through different avenues—personal experience, research mentorship, or a clinical rotation in medical school. We found ourselves curious about the discrepancy between the supply of and demand for pediatric dermatologists and wondered what could be done to increase awareness of this subspecialty among medical students. We believe this workforce shortage can be ameliorated by improving early exposure to pediatric dermatology. In this article, we explore the existing framework surrounding pediatric dermatology in medical education and offer feasible recommendations and solutions to realistically combat this problem.

Pediatric dermatologists are essential to the greater dermatology community. Pediatric dermatologists receive advanced training in complex pediatric skin conditions that often is lacking in general dermatology residency. A large percentage of pediatric dermatology patients seen in academic medical centers have already been seen by general dermatologists who subsequently referred them to specialty care. In one study, 9.6% (10/108) of practicing pediatric dermatologists noted that their referrals were from general dermatologists.[4] In another study, 42% (19/45) of referrals to a multidisciplinary pediatric dermatology-genetics were from general dermatologists.[5] Given the shortage of pediatric dermatologists, these referrals undoubtedly overwhelm the system, and the results of these studies underscore the reality that general dermatologists do not necessarily feel adequately trained in complex pediatric conditions, creating an intrinsic need for pediatric dermatologists.

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Admani et al[6] reported that early mentorship was the single most important factor to 84% (91/109) of survey respondents who pursued pediatric dermatology. Forty percent (40/100) of survey respondents chose their specialty of pediatric dermatology during pediatrics residency, 34% (34/100) during medical school, 17% (17/100) during dermatology residency, and 5% (5/100) during internship, indicating that medical school is a crucial time for recruitment.[6] It has been noted in the literature that more medical students matched to dermatology residency from schools with dermatology clerkships built into the curriculum than from schools without dedicated dermatology rotations, suggesting that early clinical exposure to dermatology fields has a predictable influence in matching.[7] Currently, only about 10% (15/155) of allopathic medical schools in the United States offer a formal elective in pediatric dermatology via the Association of American Medical College's Visiting Student Learning Opportunities program.[8] When this information was cross-referenced with the most recently matched pediatric dermatology fellowship class (2023-2024), provided by the Fellowship Directors Chair of the Society for Pediatric Dermatology, we found that 17% (4/24) of the matched fellows attended one of these 15 medical schools. We also found that the 2023-2024 pediatric dermatology fellowship class had 12 unmatched spots out of 36 total positions nationwide (33%), highlighting a gap in pediatric dermatology care and placing further strain on an already underserved subspecialty. These data suggest that, while dermatologists may decide to pursue pediatric dermatology fellowships during residency, there is an opportunity to foster interest during medical school training and improve the fellowship match rate.

Several medical schools in the United States incorporate pediatric dermatology into their curricula, including lectures in preclinical courses and career panels to pediatric dermatology electives in the third and fourth years. These institutions can serve as models for other medical schools. Within preclinical content, we recommend creating a designated dermatology unit that can incorporate common pediatric dermatology pathologies also seen by general practitioners, such as common childhood rashes, atopic dermatitis, alopecia areata, seborrheic dermatitis, and acne. Rare pediatric diseases such as epidermolysis bullosa, tuberous sclerosis, and Ehlers-Danlos syndrome also may be included in the unit. If schools are not able to offer a stand-alone dermatology preclinical course, this content can be added to the immunology, musculoskeletal, infectious diseases, or genetics courses to account for the multisystemic effects of some of these conditions. Ideally, schools would offer elective exposure to pediatric dermatology during the clinical years of medical school to increase knowledge of the field; for example, pediatric dermatology materials could be included in core clerkships, as much of this content is applicable to the general pediatrics rotation. In particular, a lecture on common rashes in pediatric patients could be given before starting the core pediatric rotation. Additionally, problem-based pediatric dermatology cases could be implemented during the core pediatrics rotation. If students are offered an independent dermatology clinical elective, the already formatted 2- and 4-week basic dermatology courses designed by the American Academy of Dermatology could serve as suggested teaching guides or as self-teaching resources that could complement the dermatology rotation.[9,10] Pediatric topics (eg, pediatric cutaneous fungal infections) are included within the American Academy of Dermatology basic dermatology curriculum.[8,9]

Increasing access to pediatric dermatology resources such as lecture series and mentorship opportunities could further broaden the pediatric dermatology knowledge base of medical students. Within medical school dermatology interest groups, there is an opportunity to have a pediatric dermatology lead to help coordinate lecture series and journal club sessions for interested students. The Society for Pediatric Dermatology and the Pediatric Dermatology Research Alliance have created programs to support students, and we encourage schools to raise awareness of these organizations as well as conference and grant opportunities. These initiatives foster meaningful mentor-mentee relationships, and more medical students may be interested if they are aware of these support networks.

There also may be opportunities to create residency tracks that increase the number of dermatology residency applicants. Programs such as the newly implemented pediatric dermatology track at the University of Pennsylvania and New York University allow medical students who are interested in pursuing pediatric dermatology to have a more focused and linear training path.[11,12] Due to the inherent competition in matching into dermatology, we surmise that many students with interest in pediatric dermatology are lost to pediatric residencies. Given the large percentage of pediatric residents who ultimately develop an interest in pediatric dermatology, holding a spot for pediatric dermatology applicants—akin to the combined medical-dermatology spots—may be an avenue to increase the pool of pediatric dermatology fellows.[1,6] Another avenue is to encourage the development of first-year pediatric internship tracks that lead directly into dermatology residency, such as newly established programs at the University of Pennsylvania and New York University.[11,12]

As a group of both aspiring and practicing pediatric dermatologists, we have identified opportunities for formalized education in and early exposure to this subspecialty during medical training instead of leaving the discovery of the field to chance. The gaps in medical education that we have identified have already led us to present potential curricular changes to the medical education committee at our home institution. We hope to inspire the development of strong pediatric dermatology education at the medical school level.

While the solution to the pediatric dermatology workforce shortage is complex and multifaceted, there is a unique opportunity to target medical students through mentorship, access to education, and clinical experiences. We recommend that medical schools implement these educational methods and track the efficacy of these interventions to quantify the predicted association between an increased workforce and early exposure to pediatric dermatology. Addressing a lack of exposure to the field and increasing support of students pursuing pediatric dermatology can help to alleviate the shortage at the earliest point in training.

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