

## RESEARCH LETTER

**Dermatology Education for Medical Students: Assessing Participation Rates in Clinical Dermatology Electives**

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## ABSTRACT

**Introduction:** Skin conditions affect 1.9 billion people worldwide and are a common reason for patients to seek health care. With the high prevalence of skin disease, it is vital that medical students should receive clinic-based education in recognizing and treating skin disorders. University of Pittsburgh School of Medicine currently offers a 4-week clinical dermatology elective to third or fourth year medical students. However, in an increasingly crowded clinical curricula, the dermatology elective is not taken by many students.

**Methods:** We assessed the percentage of UPSOM students who completed the dermatology elective and analyzed the residency selection of these students between academic years 2012 to 2022. We also explored dermatology elective offerings of medical schools across the United States that have a dermatology residency program and investigated the number of schools offering a shortened elective through the American Medical Association's FREIDA database.

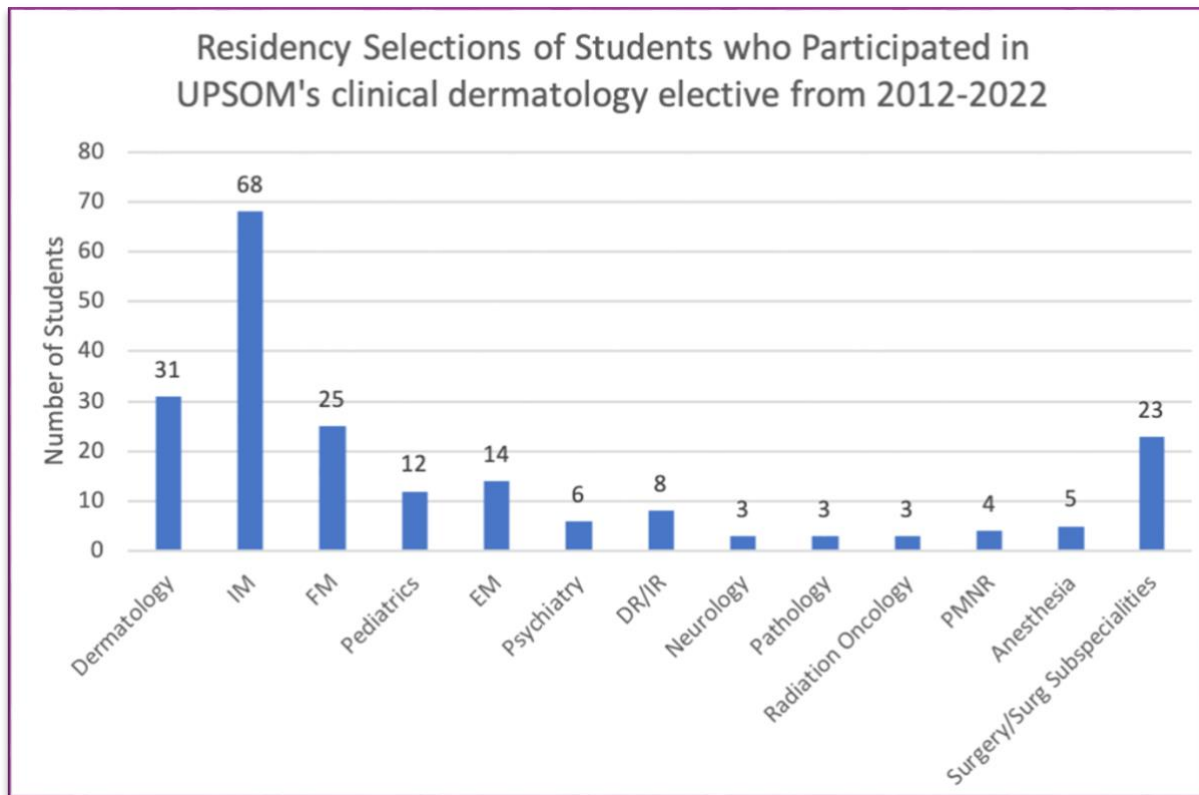
**Results:** During academic years (AY) 2012 to 2022, 1579 students were enrolled at UPSOM. In this time period, 205 (13.0%) students participated in the elective course. Of these 205 students, 31 (15.1%) pursued dermatology residency, 105 (51.2%) pursued primary care and 22 (10.7%) students pursued surgical subspecialties. Of the 142 dermatology residency programs, only nineteen programs (17.0%) offer a shortened elective.

**Discussion:** Many medical students graduate medical school with little to no dermatology training, despite a high likelihood of encountering skin disease in their future careers. Offering a shortened clinical dermatology elective may allow for more students to participate in hands-on dermatology training.

## INTRODUCTION

Skin conditions affect billions of people worldwide and are a significant reason for patients to seek health care.<sup>1</sup> Approximately one-third of patients who present to their primary care office have at least one skin

concern.<sup>2</sup> With the high prevalence of skin disease, health professionals across all areas of practice should receive clinic-based education in recognizing and treating skin disorders. Medical students with greater hands-on clinical dermatologic training may be better prepared to manage skin diseases in their future careers.



**Figure 1.** Medical students who participated in UPSOM’s clinical dermatology elective from 2012-2022, residency specialty selection. Only 205 students of the total 1579 students enrolled at UPSOM from AY 2012-2022 took the clinical dermatology elective.

Currently, all students at the University of Pittsburgh School of Medicine (UPSOM) participate in a five-day dermatology course in the preclinical years. UPSOM also offers a four-week clinical dermatology elective. In an increasingly crowded curricula, numerous medical students cannot participate in a dermatology elective. In this study, we analyzed the clinical dermatology elective offerings and its utilization at UPSOM and other medical schools with the goal of determining how much clinic dermatology exposure is received by students not pursuing dermatology as a career. We hypothesize that students pursuing non-dermatology careers will receive less clinical dermatology training, despite a high likelihood of encountering cutaneous disease in their future careers.

## METHODS

We analyzed residency match results of UPSOM students who participated in the dermatology course between 2012-2022 based on data from the registrar’s office. We also explored dermatology elective offerings of medical schools across the United States that have a dermatology residency program and investigated the number of schools offering a shortened elective. A list of these programs was created using the American Medical Association’s FREIDA database, including only residency programs within the United States and associated with medical schools. Information on schools’ elective offerings was determined through their websites and directly contacting their registrar’s office.

## RESULTS

Of the 1579 students enrolled at UPSOM from 2012-2022, 205 (13.0%) students participated in the dermatology elective. Of these 205 students, 31 (15.1%) pursued dermatology residency, 105 (51.2%) pursued primary care, and 69 (33.6%) pursued other specialties (**Figure 1**). Of the total 1579 students enrolled at UPSOM during this period, only 174 (11%) students who did not pursue dermatology residency graduated having participated in the dermatology elective. Of the 142 dermatology residency programs in the United States, 112 (78.8%) medical schools offer a clinical dermatology elective. Nineteen (17.0%) offer a shortened elective. One program requires a 1-week rotation for all medical students, and the remaining programs offer 2 to 3 weeklong electives for students not pursuing dermatology.

## DISCUSSION

Our data suggests many students at UPSOM currently receive no clinical dermatology education despite high chances of encountering skin conditions in their careers. While students participate in a week-long dermatology course during preclinical years, this course is meant to serve as an introduction to common skin lesions. Additionally, existing literature suggests that participation in hands-on clinical learning, as opposed to solely didactic curriculum, can enhance understanding and retention of knowledge.<sup>3,4</sup> Only 105 students who pursued primary care out of the entire UPSOM student body during the ten-year period graduated with clinical dermatology experience. In a 2-year-study, 38.5% of patients who presented to their primary care physician (PCP) had at least one skin problem, and for 60% of these patients it was

their chief complaint.<sup>2</sup> This underscores the importance of all physicians, particularly PCPs, having the ability to recognize, diagnose and treat basic dermatologic complaints.

A limitation of this study is the assumption that students do not take the elective due to lack of time in their schedule as opposed to lack of interest. However, it can be theorized more medical students may be interested in exploring dermatology if shorter electives were offered. Future studies will focus on implementation of shortened dermatology electives and subsequent medical student participation rates.

**Conflict of Interest Disclosures:** None

**Funding:** None

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