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A national cross-sectional analysis of dermatology away rotations using the Visiting Student Application Service database

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Abstract

The highly competitive nature of the dermatology match requires applicants to undertake a variety of measures in the hopes of securing a residency position. Among the opportunities available to applicants is the chance to participate in away or "audition" rotations during their final year of undergraduate medical education. Away rotations are now performed by a majority of medical students applying into dermatology, but little research has been done to describe the nature of this opportunity for interested applicants. An analysis of all dermatology electives offered in the Visiting Student Application Service (VSAS) database was performed. Results indicate that students have the option to pursue electives in a variety of subjects offered by 100 sponsoring institutions spread across a wide geographic distribution. Although many opportunities exist, this analysis sheds light on several areas for improving the quality of this experience for interested applicants, including providing more electives in advanced subject matter, permitting more flexibility in scheduling, and promoting wider participation in VSAS.

Keywords: medical students, undergraduate medical education, away rotations, residency application, clerkships, dermatology education

Introduction

Given the highly competitive nature of the dermatology residency match [1], medical student applicants often elect to perform away or "audition"

rotations for further training at institutions where they hope to match [2-4]. The American Association of Medical Colleges (AAMC) established the Visiting Student Application Service (VSAS), a web-based portal allowing students from accredited medical and osteopathic schools to browse and apply to electives offered by 199 registered host institutions [5]. Since its introduction, VSAS has represented the largest standardized database of available electives and has greatly enhanced the accessibility and ease of the away rotation application process. In doing so, the database presents a unique and previously unexplored opportunity to assess the current state of dermatology elective options as seen by medical students.

Methods: We queried the publicly-searchable 2017-2018 VSAS database on June 26, 2017 with the keywords "dermatology" and "dermatologic." All entries were reviewed for sponsoring institution, rotation type, sponsoring specialty, location by state, availability to MD or DO students, duration, and number of times electives were offered per year. Descriptive statistics were performed.

Results

A total of 176 electives hosted by 100 sponsoring institutions were identified (**Table 1**). Most institutions offered 1 elective (58%), with 6 institutions offering 4 or more electives. Most electives offered were in general dermatology (66.4%), although opportunities also existed for pediatric dermatology (9.1%), advanced dermatology (6.8%), dermatology research (6.3%), and dermatopathology (4.5%). Few institutions (5.1%) offered electives in non-traditional

Table 1 Characteristics of dermatology electives available in VSAS for 2017-2018

| General Information | |
|---|--------------|
| Total programs listed in VSAS | 176 |
| Number of sponsoring institutions | 100 |
| Number (%) of sponsoring institutions offering | |
| 1 away rotation | 58 (58.0) |
| General Dermatology | 56 (96.6) |
| Pediatric Dermatology | 2 (3.4) |
| 2 away rotations | 27 (27.0) |
| 3 away rotations | 9 (9.0) |
| 4 or more away rotations | 6 (6.0) |
| Type of Rotation | n (%) |
| General Dermatology | 117 (66.4) |
| Advanced Dermatology | 12 (6.8) |
| Pediatric Dermatology | 16 (9.1) |
| Dermatopathology | 8 (4.5) |
| Dermatology Research | 11 (6.3) |
| Dermatology Surgery | 4 (2.3) |
| Other (e.g. Humanities in Dermatology) | 9 (5.1) |
| Sponsoring Specialty | n (%) |
| Dermatology | 156 (88.6) |
| Internal Medicine | 11 (6.3) |
| Pediatrics | 8 (4.5) |
| Other | 1 (0.6) |
| Geographic region | n (%) |
| Midwest | 42 (23.9) |
| Northeast | 35 (19.9) |
| South | 64 (36.4) |
| West | 35 (19.9) |
| Number of times rotation is offered per year | |
| Mode | 9 times |
| Range | 1-32 |
| Number (%) permitting applicants to designate their own dates | 19 (10.8) |
| Duration of rotation | |
| Mode | 4 weeks |

| | |
|--|--------------|
| Range | 2 – 8 weeks |
| Number (%) rotations by duration | |
| 2-weeks | 26 (14.8%) |
| 3-weeks | 9 (5.1%) |
| 4-weeks | 140 (79.5%) |
| 8-weeks | 1 (0.6%) |
| Number (%) offered as both 2- and 4- week long rotations | 13 (7.5%) |
| Availability to MD or DO students | n (%) |
| Programs open to MD students only | 26 (14.8) |
| Programs open to MD and DO students | 150 (85.2) |

topics, including dermatology in the humanities, phototherapy, and oncodermatology. Among institutions offering a single elective, 96.6% were in general dermatology. In addition, 36.4% of electives were offered in southern states, with the remainder approximately equally distributed nationally. There was large variability in the number of rotations offered per elective annually, ranging from 1 to 32, with nearly 80% of electives lasting 4 weeks long. Thirteen percent offered both 2- and 4-week-long rotations. Only 10.8% of electives allowed flexibility for students to designate their own rotation dates. Of those identified, 14.8% of electives were open to MD students only.

Discussion

The service offered by VSAS has greatly streamlined and simplified the application process for away rotations. This is particularly useful for dermatology applicants, for whom away rotations have become an integral part of the residency application. Indeed, a recent study reported that a majority of applicants matched at either their home institution or at a program at which they completed an away rotation [3]. For candidates coming from home institutions without an established dermatology residency program, the away rotation also offers an invaluable opportunity for career exploration and further learning opportunities. Given the importance of the away rotation for future candidates, we sought to characterize the currently available elective options as seen by students utilizing VSAS and investigate areas in which this opportunity could be improved.

Our results demonstrate that a large number, variety of contents, and geographic distribution of dermatology rotations currently exist. Although opportunities for studying more advanced and non-traditional areas of dermatology are offered by a number of schools, the majority of institutions listed in VSAS offer only one elective in general dermatology, with this proportion increasing compared to a survey of away rotations performed in 2009 [6]. This may limit opportunities for students to explore their interests in the field and expand their knowledge base in dermatology. Thus, institutions may consider offering a greater number of electives in dermatologic sub-specialties or incorporating more advanced subject matter into the general dermatology electives.

Elective opportunities may also benefit from more flexibility in scheduling options. Although most electives were 4-weeks in duration, a number of institutions offered the option to take the same elective as a 2-week rotation. Host institutions may consider increasing the availability of these kinds of arrangements to allow applicants more time to explore multiple programs. Additionally, given the need to schedule multiple away rotations, students may benefit from having the option to designate their own dates, which was offered by only 10.8% of programs listed in VSAS.

Of note, a number of dermatology electives were not open to DO students. Such restrictions should be reconsidered given the upcoming transition to single-accreditation between the Accreditation Council for Graduate Medical Education and the

American Osteopathic Association for graduate medical education programs. Furthermore, whereas VSAS already presents the most centralized database of elective rotations, it remains an opt-in service for host institutions, with 100 institutions currently registered. We would encourage participation from all schools and dermatology programs to further streamline the dermatology residency application process for future candidates.

Conclusion

Away rotations represent a powerful opportunity for institutions to attract talented future physicians into dermatology and for aspiring dermatologists to explore the field across multiple learning environments. Our analysis demonstrates that a large number, variety of contents, and geographic distribution of electives are currently available to students through VSAS [5], a database created by the AAMC to streamline the application process for students seeking to complete away rotations. However, several areas of improvement may be explored to further enhance the away rotation experience for dermatology applicants.

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