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Moonlighting in residency: a dermatology perspective

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Abstract

Background

Moonlighting refers to the practice of medicine outside one's training institution in exchange for financial compensation. High medical debt-to-income ratios drive residents to seek additional compensation during residency.

Objective

To gather information to establish the current practices of moonlighting and to better understand the thoughts and experiences of dermatology residency program directors regarding moonlighting.

Methods

All allopathic and osteopathic dermatology residency program directors in the United States and Puerto Rico received a blinded survey between February 1, 2017 and April 1, 2017 through an email link.

Results

Response rate was 47.0%. Of the programs that responded, 63.16% allowed moonlighting. In three regions, 100% of programs allowed moonlighting. The geographic area with the lowest percentage of programs permitting moonlighting was New England with 25%.

Limitations

This survey only reflects the field of dermatology and beliefs/policies of program directors.

Conclusion

This survey highlighted that training programs allowing moonlighting tend to have a more positive outlook on the practice than programs who do not. Results revealed trends that suggest that states in regions with less access to dermatologic care were more inclined to allow moonlighting.

Keywords: moonlighting, dermatology residency, residents, student loan debt

Introduction

Moonlighting is defined as the delivery of medical care outside of the training institution in exchange for compensation [1]. The practice of moonlighting during residency training is controversial and there is great variation in moonlighting practices across specialties and programs. For example, some programs place restrictions on the post graduate year level a resident may moonlight, the setting at which a resident may moonlight (home institution versus external), or academic requirements that must be met prior to moonlighting; other programs have no restrictions regarding resident moonlighting.

Moonlighting during residency serves to add a significant increase in salary potential as well as provide an additional outlet for residents to enhance their skill set, along with building self-confidence and autonomy. It is estimated between 16-65% of residents moonlight across all specialties [2]. A study of residents moonlighting in radiology showed debt as the major driving force for moonlighting and residents who participated in moonlighting were more likely to have higher debt [3]. Up to seventy-six percent of medical students graduate with an average of over \$189,165 in educational debt. Moreover, because residents earn an average of \$54,107 per year, they are typically unable to begin paying off their loans, or in some cases cover the interest on their loans until earning an attending salary [4]. This leads to a further accumulation of debt as the principal on their loans rises during residency

Table 1. Percent responding to the survey out of 121.

	%	n
Respondents	47	57

years. High debt results in financial pressures when searching for a job after finishing residency and makes residents more unwilling to accept the lower salaries offered in academic positions [5]. Several medical specialties including dermatology suffer from difficulty recruiting and retaining academic faculty. Moonlighting can potentially double residents' earnings to help alleviate this financial burden.

Although moonlighting can serve as a source of extra income for residents, concerns by program directors restrict some programs from allowing moonlighting. Some believe moonlighting interferes with resident training duties and others believe there is a safety issue regarding whether or not a resident is equipped to provide care without supervision. Although studies exist regarding moonlighting in other fields such as radiology, emergency medicine, and internal medicine, there is no study to date that specifically examines moonlighting in the field of dermatology. This cross-sectional survey served to gather information to establish the current practices of dermatology resident moonlighting and to better understand the thoughts and experiences of dermatology residency program directors regarding moonlighting.

Methods

Approval from the Drexel University Institutional Review Board (IRB) was obtained prior to initiation of the study. All allopathic and osteopathic dermatology residency program directors in the United States and Puerto Rico received a blinded survey between Feb 1, 2017 and April 1, 2017 through an email link. The survey was designed and implemented using Qualtrics (Provo, Utah, USA). All answers were recorded anonymously. Some questions were conditional based upon answer to previous questions. Some questions allowed for a free text response while most were predetermined answers. Programs were divided regionally based on definitions set forth by the Fellowship and Residency

Electronic Interactive Database (FREIDA). Statistical analysis including means and proportions was carried out using Qualtrics and Excel (Microsoft, Redmond, WA, USA).

Results

Out of 121 program directors, 57 responded to the survey. Highest response rates came from the east south central and mountain regions with a 60% response rate. The lowest response rate came from the east north central region. Of the 57 programs that responded, 63.16% answered their respective program currently allows moonlighting. **Table 1** exhibits that in three regions, 100% of programs allowed moonlighting (west south central, east

Table 2. Dermatology programs that allow moonlighting survey data.

Allows moonlighting	63.16 (%)	36 (n)
Have restrictions on what level residents can moonlight	65.71	23
Only PGY3 residents and above can moonlight	40.00	14
Only PGY4 residents and above can moonlight	25.71	9
Have academic restrictions on which residents can moonlight	88.57	31
Must score above a certain level on the in service exam	20.00	7
Must be considered in good academic standing	68.57	24
Moonlight in evening dermatology clinics at associated residency program	16.36	9
Moonlight at weekend dermatology clinics at associated residency program	14.55	8
Moonlight at dermatology clinic not associated with residency program	36.36	20
Moonlight at non-dermatology shifts	32.73	18
Always supervised by attending while moonlighting	24.24	8
Sometimes supervised by attending while moonlighting	6.06	2
Do not have a maximum on number of hours per week allowed for moonlighting	57.58	20
Never supervised by attending while moonlighting	9.09	3
Supervision depend on level of comfort	6.06	2
Believe moonlighting negatively affects training	12.12	4
Believe moonlighting does not affect training	45.45	15

south central, and mountain). The geographic area with the lowest percentage of programs that allowed moonlighting was New England with 25%.

As shown in **Table 2**, of the programs responding they do not currently allow moonlighting, 23.81% answered they previously had allowed moonlighting. The most common reason for no longer allowing moonlighting was concern over interfering with resident duties (57.14%). Other free text answers included taking study time away from residents, prohibited by the institution, not yet competent to provide care without supervision, forbidden by government rules, work hour restrictions, and not allowed by graduate medical education office (ACGME).

Demonstrated in **Table 3**, out of the 36 programs responding they do participate in moonlighting, 34.29% answered they have no restrictions on what level residents can moonlight, 40% answered only postgraduate year 3 (PGY3) residents and above can moonlight, and 25.71% answered only PGY4 residents and above can moonlight. In addition, 11.43% answered there were no academic restrictions placed to determine which residents can moonlight, 20% answered only residents who score above a certain percentage on the in-training exam (now the BASIC and CORE exams) can moonlight, and 68.57% answered only residents considered in good academic standing can moonlight. When asked about restrictions on moonlighting settings, 25.71% allowed evening dermatology clinics at their associated residency program, 22.86% allowed

Table 3. Dermatology programs that do not allow moonlighting survey data

Does not allow moonlighting	36.84 (%)	21 (n)
Previously allowed moonlighting	23.81	5
Moonlighting interferes with resident duties	57.14	12
Concerns over safety	0	0
No benefit to residents	4.76	1
Believe moonlighting negatively affects training	61.90	13
Believe moonlighting does not affect training	33.33	7
Believe moonlighting positively affects training	4.76	14.76

Table 4. Geographic distribution of respondents.

Geographic distribution of respondents	% Allowing moonlighting	n
East North Central (IL,IN,MI,OH,WI)	75.0	6
East South Central (AL,KY,MS,TN)	100.0	3
Mid Atlantic (NJ,NY,PA)	40.0	4
Mountain (AZ,COID,MT,NM,NV,UT,WY)	100	3
New England (CT,MA,ME,NY,RI,VT)	25.0	1
Pacific (AK,CA,HI,OR,WA)	80.0	4
South Atlantic (DC,DE,FL,GA,MD,NC,SC,VA,WV)	50.0	6
West North Central (IA,KS,MN,MO,ND,NE,SD)	50.0	2
West South Central (AR,LA,OK,TX)	100.0	7
Outside the United States	0	1

weekend dermatology clinics at their associated residency program, 57.14% allowed dermatology clinics not associated with their residency programs, and 51.43% allowed non-dermatology shifts such as the emergency department, urgent clinic, and others. Regarding supervision, 61.51% answered that residents are always supervised by an attending while moonlighting, 15.38% answered sometimes, and 23.08% answered never. The average number of moonlighting hours residents worked per week was reported as 4.3 hours. For 57.58% of programs, there was no maximum on the number of hours per week residents are allowed to moonlight whereas others followed the 80-hour limit set forth by the ACGME.

Discussion

Although the allure of moonlighting may be partially driven by the desire for independence and the ability to refine one’s clinical skills, the major motive is financial compensation. There is a significant and increasing financial burden on residents from college debt, medical school loans, costs of licensing and certification fees, textbooks, review courses, and equipment. Moreover, residents must be able to support costs of living for both themselves and for their families. Resident salaries are modest and many residents’ debt-to-income ratio is unsustainable. These financial pressures enhance the likelihood of residents to moonlight.

The American Board of Dermatology uses the guidelines set forth by the ACGME, which states

“moonlighting must not interfere with the ability of the resident to achieve the goals and objectives of the educational program.” Furthermore, the ACGME states policies and procedures in agreement with the institutional and program requirements for resident duty hours should be set forth and PGY1 residents should not be permitted to moonlight. This places a limit of clinical and education work hours, including moonlighting, to 80 hours per week averaged over a four-week period. The American Academy of Dermatology (AAD) does not have an official position statement on moonlighting.

A study done in the field of emergency medicine showed that 10% of programs prohibit moonlighting, although 90% of directors believe it interferes with resident duties. Program directors believed residents who moonlighted were more likely to have poor conference attendance, lower in-training examination scores, scheduling conflicts with residency shifts, and incomplete research projects compared to those residents who did not participate in moonlighting [6]. A survey conducted on moonlighting among general surgery residents who interrupt residency training with periods of research concluded that moonlighting not only served a financial benefit, but also helped the residents maintain their clinical skills during their non-clinical years [7]. Our survey showed a different trend in the field of dermatology. Of the 36 programs allowing moonlighting, over 84% believe it either has a positive influence or does not make an impact on training. In contrast, the majority of the dermatology programs who do not allow moonlighting tended to have a negative outlook on moonlighting. It is interesting to note, however, only four of the 21 programs that do not allow moonlighting because it negatively impacts training actually allowed it in the past. The remaining programs may not be well informed about moonlighting.

“Ethical Considerations in Dermatology Residency” discusses the use of moonlighting amongst dermatology residents. It underscores that in addition to the financial incentive, moonlighting also exposes residents to various work environments,

which may help in guiding the future career paths or community practices they may go on to pursue [8]. However, the article also outlines the potential negative effects for patients receiving care from a moonlighting resident. In some communities, there is limited access to specialty care, including dermatology services, that moonlighting residents can provide. Patients receiving care may not realize these residents are not yet board certified in dermatology. There is an uneven geographic distribution of dermatologists within the US. The regional trends seen in this study may correlate with a disparity in access to dermatologic care in each state. For example, all the programs responding from east south central, west south central, and mountain regions allowed moonlighting. The states in these regions have few dermatology training programs and dermatologists in relation to the population. In a study conducted to examine trends in geographic distribution and density of United States dermatologists, the top 10 most dermatologist-dense areas in the US between 2009 and 2016 included areas of Massachusetts, New Hampshire, and Maine [9]. Results from our study demonstrated New England as the region with the lowest percentage of moonlighting. We hypothesize programs in regions with less access to specialty care may be more likely to allow their residents to moonlight.

Conclusion

This is the first study to our knowledge investigating the current trends regarding the use of moonlighting during dermatology residency, which differs among programs and regions. Moonlighting will continue to be a controversial subject until we fully understand both the risks and benefits on the graduate medical education system. Dermatology program directors who allow moonlighting tended to have a positive outlook and were from regions with less access to specialty care. Further studies are needed to assess the use of moonlighting across other specialties and to investigate the potential for moonlighting to alleviate debt and encourage residents to pursue an academic career.

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