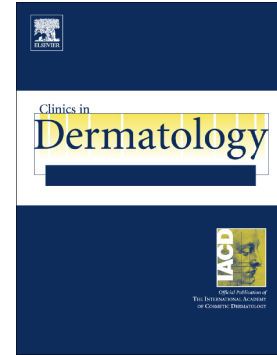


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Preparing for the business of medicine

Jordan V Wang, Christian A Albornoz, Ezra Hazan, Matthew
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Comment and Controversy
Edited by Stephen P. Stone, MD

Business administration training for dermatology residents: Preparing for the business of medicine

Jordan V Wang, MD, MBE, MBA; Christian A Albornoz, MD; Ezra Hazan, MD; Matthew Keller, MD; Nazanin Saedi, MD

Department of Dermatology and Cutaneous Biology, Sidney Kimmel Medical College at Thomas Jefferson University, Philadelphia, PA

CORRESPONDING AUTHOR

Jordan V Wang, MD, MBE, MBA, Department of Dermatology and Cutaneous Biology, Thomas Jefferson University, 833 Chestnut Street, Suite 740, Philadelphia, PA, 19107; Tel: (215) 955-6680; Fax: (215) 503-3333; Email: jordan.wang@jefferson.edu

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ABSTRACT

Previous studies have evidenced the lack of practice management and business training components in the residency curriculum, and satisfaction with this training, when provided, was low. Whether considered good or bad, medicine has been moving increasingly towards becoming more business-centric. Dermatology represents a unique field, since most residents choose to pursue private practice, where competent business skills are helpful to running a successful clinic. Our study examines the current state of business administration training for dermatology residents in ACGME-approved programs as of 2017-2018. Our results show that residents both value and desire business administration training. However, the current training provided is considered to be insufficient and inadequate. Promoting and encouraging the teaching of business administration skills, while still balancing core competencies, may help to prepare residents in navigating the future of our field.

Effective business administration skills are important to the practice of medicine. In a recent survey, about 86% of dermatology residents reported having no practice management

component in their curriculum.¹ Other surveys demonstrated the importance that dermatology residents place on business and practice management training, while their satisfaction with this training was low.^{2,3} Dermatology offers a unique opportunity, since the majority of residency graduates ultimately choose to pursue private practice,^{4,5} where competent and effective business administration skills may prove to be even more beneficial to successful businesses. Despite the known importance of effective business administration skills, no formal studies have thoroughly examined the business administration training provided by dermatology residency programs.

Survey

An online survey was emailed in March 2018 to program coordinators, who were instructed to forward to residents, of current ACGME-approved dermatology residency programs as of 2017-2018. The survey included demographic data in addition to experiences with and preferences for business administration training.

A total of 109 residents completed the survey. The majority practiced in an urban location (72.5%) compared to suburban (24.8%) and rural (2.8%) settings. The vast majority planned to pursue predominately private practice (82.6%) versus academia (17.4%).

Of all respondents, 92.7% believed business administration skills are either very important or extremely important to the field of dermatology. Residents planning to pursue private practice were significantly more likely to believe it was extremely important (83.3% vs 36.8%; $p < .001$). Business administration skills believed to be most beneficial to the practice of dermatology included marketing and branding (87.2%), billing and coding (80.7%), strategic thinking and business strategy (78.0%), business operations management (76.2%), contract negotiations (65.1%), and accounting and budgeting (58.7%) (Figure 1).

While less than half of the residents (39.5%) had formal business administration training as part of their residency curriculum, 93.9% of those who did not have this training, desired it. When provided, training most commonly covered billing and coding (100%), leadership and teamwork skills (17.9%), and contract negotiations (14.3%). Those who had this training mostly rated its quality as either poor or fair. The vast majority (98.2%) believed that business administration training is beneficial for a dermatologist.

Conclusions

Overall, our study supports that residents believe business administration skills are important to the practice of dermatology. Unsurprisingly, those planning to pursue private practice believed these skills to be more important than those pursuing academia. However, it is important to note that these skills are also translatable and helpful in academia. For example, proficiencies in leadership and business operations can allow for increased efficiency, satisfaction, and productivity, which can translate into improved quality of care and patient satisfaction. Current business administration training during residency is insufficient and inadequate. While our study begins to shed light on this topic, further studies are needed to look into the most effective methods to teach these skills, while still allowing for a comprehensive education focused on core competencies. Modernizing a traditional dermatologic curriculum by offering new skillsets requires a fine balance that warrants considerable attention without compromising core dermatologic education.

REFERENCES

1. Nijhawan RI, Smith LA, Rohrer TE, Mariwalla K. Are dermatology residents adequately prepared for the business of medicine? *J Am Acad Dermatol.* 2013;68:340-341.
2. Freeman SR, Greene RE, Kimball AB, et al. US dermatology residents' satisfaction with training and mentoring: Survey results from the 2005 and 2006 Las Vegas Dermatology Seminars. *Arch Dermatol.* 2008;144:896-900.
3. Freiman A, Barzilai DA, Barankin B, et al. National appraisal of dermatology residency training: A Canadian study. *Arch Dermatol.* 2005;141:1100-1104.
4. Lim JL, Kimball AB. Residency applications and identification of factors associated with residents' ultimate career decisions. *Arch Dermatol.* 2009;145:943-944.
5. Wu JJ, Ramirez CC, Alonso CA, et al. Dermatology residency program characteristics that correlate with graduates selecting an academic dermatology career. *Arch Dermatol.* 2006;142:845-580.

Editor's Comment:

We hear a lot about "practice gaps" - this highlights a "training gap"

Stephen P. Stone, MD

ssone@siumed.edu

FIGURE LEGENDS

Figure 1. Business administration skills believed to be most beneficial by residents.

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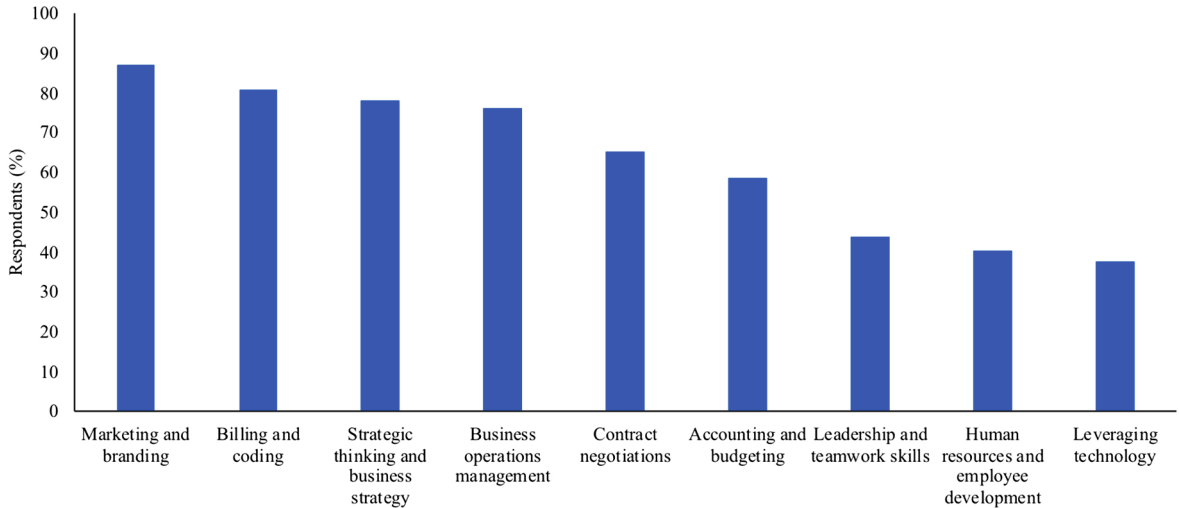


Figure 1