Does academic practice protect emergency physicians against burnout?

Jeffrey G. Norvell MD, MBA 1  |  Annalee M. Baker MD 2  |  David J. Carlberg MD 3  |  David Diller MD 4  |  Jacqueline M. Dziedzic DO 5  |  John T. Finnell MD 6  |  Sarah Greenberger MD 7  |  Chad Kessler MD, MHPE 8  |  Bruce M. Lo MD, MBA 9  |  Brooke M. Moungey MD 10  |  Elizabeth Schiller MD 11  |  Lauren A. Walter MD 12

1 Department of Emergency Medicine, University of Kansas Medical Center, Kansas City, Kansas, USA
2 Department of Emergency Medicine, Adventura Hospital and Medical Center, FIU Herbert Wertheim College of Medicine, Aventura, Florida, USA
3 Department of Emergency Medicine, Georgetown University Hospital/Georgetown University School of Medicine, Washington, DC, USA
4 Department of Emergency Medicine, LAC+USC Medical Center, Keck School of Medicine of the University of Southern California, Los Angeles, California, USA
5 Department of Emergency Medicine, Loyola University Chicago-Stritch School of Medicine, Chicago, Illinois, USA
6 Department of Emergency Medicine, Indiana University School of Medicine, Indianapolis, Indiana, USA
7 Department of Emergency Medicine, Department of Emergency Medicine, University of Arkansas for Medical Sciences College of Medicine, Little Rock, Arkansas, USA
8 Durham VA Medical Center, Department of Emergency Medicine, Duke University, Durham, North Carolina, USA
9 Department of Emergency Medicine, Sentara Norfolk General Hospital/Eastern Virginia Medical School, Norfolk, Virginia, USA
10 The Ohio State University Department of Emergency Medicine, Columbus, Ohio, USA
11 Department of Emergency Medicine, Saint Francis Hospital and Medical Center/University of Connecticut SOM, Hartford, Connecticut, USA
12 Department of Emergency Medicine, The University of Alabama at Birmingham School of Medicine, Birmingham, Alabama, USA

Correspondence
Jeffrey G. Norvell, MD, MBA, Department of Emergency Medicine, University of Kansas Medical Center, Kansas City, KS 66205, USA.
Email: jeffnorvell@hotmail.com

Funding and support: By JACEP Open policy, all authors are required to disclose any and all commercial, financial, and other relationships in any way related to the subject of this article as per ICMJE conflict of interest guidelines (see www.icmje.org). The authors have stated that no such relationships exist.

Abstract
Burnout is a complex syndrome thought to result from long-term exposure to career-related stressors. Physicians are at higher risk for burnout than the general United States (US) working population, and emergency medicine has some of the highest burnout rates of any medical specialty. Burnout impacts physicians’ quality of life, but it can also increase medical errors and negatively affect patient safety. Several studies have reported lower burnout rates and higher job satisfaction in academic medicine as compared with private practice. However, researchers have only begun to explore the factors that underlie this protective effect. This paper aims to review existing literature to identify specific aspects of academic practice in emergency medicine that may be associated with lower physician burnout rates and greater career satisfaction. Broadly, it appears that spending time in the area of emergency medicine one finds most meaningful has been associated with reduced physician burnout. Certain non-clinical academic work, including involvement in research, leadership, teaching, and mentorship, have been identified as specific activities that may protect against burnout.
and contribute to higher job satisfaction. Given the epidemic of physician burnout, hospitals and practice groups have a responsibility to address burnout, both by prevention and by early recognition and support. We discuss methods by which organizations can actively foster physician well-being and provide examples of 2 leading academic institutions that have developed comprehensive programs to promote physician wellness and prevent burnout.

**KEYWORDS**

academic medicine, burnout, career satisfaction, emergency medicine, professional

1 | INTRODUCTION

Burnout generally is a complex syndrome thought to result from long-term exposure to career-related stressors. Widely accepted definitions of burnout include 3 key elements: depersonalization, emotional exhaustion, and a reduced sense of personal accomplishment.¹ Physician burnout arises from a complex interplay of factors at the level of the individual physician, the practice environment, and the health care system as a whole. The effects of burnout on personal and professional life are manifold: burnout has been associated with reduced sense of empathy and altruism, decreased job satisfaction, increased rates of medical errors, and higher rates of depression, substance abuse, marital difficulties, physician turnover, and suicidal ideation.²–¹⁷

One study reported a 55% burnout rate among emergency physicians versus a 44% burnout rate for physicians in general, both of which far exceeded the 28% burnout rate of the general US working population.¹⁸ As more is understood about the etiology of physician burnout, researchers have also sought to identify protective factors. One such protective factor appears to be work in academic medicine. Although direct evidence comparing academic practice versus private practice in emergency medicine is limited, there are a number of studies researching correlations between burnout rate and practice setting in other specialties that may be applicable to emergency medicine.⁴,⁵,¹³,¹⁸–²⁰ This paper aims to review existing literature to identify aspects of academic practice that are associated with lower burnout rates and greater career satisfaction among emergency physicians and methods by which health care organizations can foster physician well-being.

2 | RESEARCH ON ACADEMIC PRACTICE VERSUS PRIVATE PRACTICE

Although career satisfaction may not be a perfect surrogate for burnout, the concepts are certainly closely related. A study of ~1400 female emergency physicians revealed that simply practicing in an academic setting was an independent predictor of higher career satisfaction.²¹ Similarly, studies that included all genders across various specialties found higher career satisfaction for physicians practicing in academic medicine.⁴,¹⁴ Sinsky et al reported that physicians practicing in an academic setting are less likely than physicians in private practice to “intend to leave medicine altogether to pursue a different career within the next 2 years.”¹⁴ Multiple studies have specifically reported lower burnout rates in academic medicine as compared with private practice.⁴,⁵,¹³,¹⁸–²⁰

3 | RESEARCH ON SPECIFIC CAREER ASPECTS THAT ARE ASSOCIATED WITH LOWER BURNOUT AND HIGHER CAREER SATISFACTION

Although there is growing evidence that academic physicians are less likely to experience burnout compared with physicians in private practice, it is not entirely clear which specific qualities of an academic career may be protective against burnout. Several studies have considered this question. One group examined career fit and burnout among academic faculty and found that physicians who spend at least 20% of their professional time focused on the work they find most meaningful are at lower risk for burnout; however, spending >20% of time on meaningful work did not lead to further decreases in burnout, implying that a ceiling effect exists.²² Application of these results is complicated by different physicians finding meaning in varied areas of medical practice. In this study, for example, 68% reported that patient care was the most meaningful aspect of their work, whereas 19% ranked research as the most meaningful, followed by 9% for education, and 3% for administration.²²

Although clinical work is widely described by physicians as meaningful, and meaningful work protects against burnout, there is also literature to suggest that maintaining a balance with non-clinical activities is important. One study of 268 Canadian emergency physicians revealed that a successful research publication in the last 2 years was associated with lower emotional exhaustion. Interestingly, in this study, emergency physicians devoting a higher proportion of work hours to non-clinical duties showed consistent improvement in personal accomplishment scores.⁷ In a longitudinal study, the American Board of Emergency Medicine (ABEM) found that physicians involved in either clinical teaching or professional leadership roles were twice as likely as those without such involvement to report high career satisfaction.²³ Several studies have also associated mentorship with improved career satisfaction.²⁴–²⁸
Mentorship has also been associated with increased career advancement and physician retention, increased productivity, and lower burnout.27–29 The effects of mentorship on burnout are both direct and indirect: mentorship may lead to decreased burnout through enhanced career advancement and career satisfaction, in addition to the direct gratification of the personal relationship.

Research, leadership, and teaching/mentorship are all part of a well-rounded academic practice, and, as discussed, each has been independently identified as an activity that may protect against burnout. It appears that time spent away from clinical activities, whether in teaching or continuing professional development, may reduce physician burnout.2 Conversely, then, shifting the balance of clinical service, teaching or continuing professional development, may reduce physician burnout.

TABLE 1  Factors associated with lower burnout

| Factor                                                                 | Reference(S) |
|-----------------------------------------------------------------------|--------------|
| Focusing 20% of the professional time on work found meaningful by the individual | 22           |
| Achieving balance with non-clinical activities                         | 7,14,19,23,32 |
| Attending CME conferences                                               | 5,23         |
| Teaching role                                                           | 22,23        |
| Professional leadership roles                                           | 23           |
| Sufficient time for personal life                                      | 5,14,21,39   |
| Mentorship                                                             | 27,29        |
| Department leadership that fosters a sense of partnership and physician engagement | 42           |

TABLE 2  Factors associated with increased burnout

| Factor                                                                 | Reference(S) |
|-----------------------------------------------------------------------|--------------|
| Excessive workloads: long hours or high intensity                      | 10,14,18,54  |
| Administrative duties such as clinical documentation/medication reconciliation | 20,32 |
| Spending less than 20% of professional time on work found most meaningful by the individual | 22           |
| Poor work–life integration/work–home conflict                         | 5,18         |
| Private practice setting                                               | 4,5,13,18–20 |

Physicians in the ABEM longitudinal study who were unable to attend educational conferences or lacked sufficient time for personal life reported lower career satisfaction and higher levels of burnout.23 Similarly, physicians reported that they perceived administrative duties such as clinical documentation and medication reconciliation as burdensome and; in turn, physicians who spent more of their time engaged in these tasks reported more burnout and lower career satisfaction. Another study evaluating the relationship between clerical burden and physician burnout found significant lower burnout in academic physicians versus physicians in private practice.20 Table 1 provides a summary of job factors that are associated with lower burnout and Table 2 provides a summary of factors which are associated with increased burnout.

When addressing physician wellness, one should also consider the impact of sex on burnout and job satisfaction. Many studies report a higher risk of burnout in female physicians than male physicians.4,18,33,34 A 2014 study of emergency physicians revealed those mid-career females are much more likely to consider leaving the specialty than mid-career males.33 A study of female emergency physicians reported that practice in an academic setting, the amount of recognition at work, opportunities for career advancement, schedule flexibility, supportive colleagues, and compensation fairness were associated with higher career satisfaction.21 A study of surgeons revealed that the causes of burnout in male and female physicians were similar; however, work–home conflicts occurred more frequently in female physicians.4 Some other factors that have been associated with higher female burnout include: self-reported sex discrimination,35 sexual harassment,36 and imposter syndrome.37,38

4  SYSTEMS-BASED APPROACH TO PROMOTING WELLNESS AND PREVENTING BURNOUT

Traditionally, physician burnout has been viewed as a personal failing of the individual physician. However, addressing physician burnout should be viewed as the “shared responsibility” of both physicians and health care organizations.39 As such, strategies for combating physician burnout and promoting wellness should incorporate interventions that target both individual and systemic factors.39,40 One such departmental solution may be the implementation of scribes, which could improve emergency physician satisfaction by reducing the time devoted to clinical documentation.41 Other institutional characteristics that have been broadly associated with reduced physician burnout include pathways for decisionmaking by consensus or committee and department leadership that fosters a sense of partnership and physician engagement.42 Several authors have proposed that to prove a real commitment to the epidemic of physician burnout, organizations must track and report measures of physician burnout, engagement, and well-being, in much the same way they track traditional performance metrics such as patient satisfaction, patient volume, or cost.39,40

5  ORGANIZATIONAL WELL-BEING PROGRAMS

The Mayo Clinic and Stanford Medical Center have established well-being programs that can serve as examples for other health systems. The Mayo Clinic Program on Physician Well-Being was founded in 2007 to develop evidence-based operational strategies to address physician wellness. As opposed to addressing the needs of physicians who are already in distress, the program was developed to proactively identify factors that influence physician well-being, satisfaction and productivity, to create targeted institutional approaches that prevent burnout in the first place. This group developed the Listen-Act-Develop model to understand specific contributors to burnout, empower physicians to implement solutions, and develop leaders in a continuous improvement process.39,43 This model resulted in
physician burnout to engender higher burnout than others. Future studies can be designed to elucidate these elements, such as examining the effect of decreased support of protected time for academic faculty. Additional research should also focus on the burnout impact of other practice variations between academic and non-academic jobs, such as the degree of career advancement opportunities, availability of mentorship, professional development activities, and salary structure. Further research is also needed on the association of demographic factors with emergency physician burnout.

ACKNOWLEDGMENTS
The authors would like to thank Loren Rives, MNA for her help coordinating the manuscript.

CONFLICTS OF INTEREST
The authors declare no conflicts of interest.

REFERENCES
1. Maslach C, Leiter MP. Understanding the burnout experience: recent research and its implications for psychiatry. World Psychiatry. 2016;15(2):103-111.
2. Arora M, Asha S, Chinnappa J, Diwan AD. Review article: burnout in emergency medicine physicians. Emerg Med Australas. 2013;25(6):491-495.
3. Dyrbye LN, Shanafelt TD, Balch CM, Satele D, Sloan J, Freischlag J. Relationship between work-home conflicts and burnout among American surgeons: a comparison by sex. Arch Surg. 2011;146(2):211-217.
4. Dyrbye LN, Varkey P, Boone SL, Satele DV, Sloan JA, Shanafelt TD. Physician satisfaction and burnout at different career stages. Mayo Clin Proc. 2013;88(12):1358-1367.
5. Lin M, Battaglioli N, Melamed M, Mott SE, Chung AS, Robinson DW. High prevalence of burnout among US emergency medicine residents: results from the 2017 National Emergency Medicine Wellness Survey. Ann Emerg Med. 2019;74(5):682-690.
6. Lloyd S, Streiner D, Shannon S. Burnout, depression, life and job satisfaction among Canadian emergency physicians. J Emerg Med. 1994;12(4):559-565.
7. Lu DW, Dresden S, McCloskey C, Branzetti J, Gisonidi MA. Impact of burnout on self-reported patient care among emergency physicians. West J Emerg Med. 2015;16(7):996-1001.
8. Prins JT, van der Heijden FM, Hoekstra-Weebers JE, et al. Burnout, engagement and resident physicians’ self-reported errors. Psychol Health Med. 2009;14(6):654-666.
9. Qureshi HA, Rawlani R, Mioton LM, Dumanian GA, Kim JY, Rawlani V. Burnout phenomenon in U.S. plastic surgeons: risk factors and impact on quality of life. Plast Reconstr Surg. 2015;135(2):619-626.
10. Salyers MP, Bonfils KA, Luther L, et al. The relationship between professional burnout and quality and safety in healthcare: a meta-analysis. J Gen Intern Med. 2017;32(4):475-482.
11. Shanafelt TD, Balch CM, Bechamps G, et al. Burnout and medical errors among American surgeons. Ann Surg. 2010;251(6):995-1000.
12. Shanafelt TD, Hasan O, Dyrbye LN, et al. Changes in burnout and satisfaction with work-life balance in physicians and the general US working population between 2011 and 2014. Mayo Clin Proc. 2015;90(12):1600-1613.
13. Sinksy CA, Dyrbye LN, West CP, Satele D, Tutty M, Shanafelt TD. Professional satisfaction and the career plans of US physicians. Mayo Clin Proc. 2017;92(11):1625-1635.
15. Stehman CR, Testo Z, Gershaw RS. Burnout, drop out, suicide: physician loss in emergency medicine, part I. West J Emerg Med. 2019;20(3):485-494.
16. West CP, Huschka MM, Novotny PJ, et al. Association of perceived medical errors with resident distress and empathy: a prospective longitudinal study. JAMA. 2006;296(9):1071-1078.
17. Willi福德 ML, Scarlet S, Meyers MO, et al. Multiple-institution comparison of resident and faculty perceptions of burnout and depression during surgical training. JAMA Surg. 2018;153(8):705-711.
18. Shanafelt TD, West CP, Sinsky C, et al. Changes in burnout and satisfaction with work-life integration in physicians and the general US working population between 2011 and 2017. Mayo Clin Proc. 2019;94(9):1681-1694.
19. Busis NA, Shanafelt TD, Keran CM, et al. Burnout, career satisfaction, and well-being among US neurologists in 2016. Neurology. 2017;88(8):797-808.
20. Shanafelt TD, Dyrbeye LN, Sinsky C, et al. Relationship between clerical burden and characteristics of the electronic environment with physician burnout and professional satisfaction. Mayo Clin Proc. 2016;91(7):836-848.
21. Clem KJ, Promes SB, Glickman SW, et al. Factors enhancing career satisfaction among female emergency physicians. Ann Emerg Med. 2008;51(6):723-728 e728.
22. Shanafelt TD, West CP, Sloan JA, et al. Career fit and burnout among academic faculty. Arch Intern Med. 2009;169(10):990-995.
23. Cydulka RK, Korte R. Career satisfaction in emergency medicine: the ABEM longitudinal study of emergency physicians. Ann Emerg Med. 2008;51(6):714-722 e711.
24. Bredella MA, Fessell D, Thrall JH. Mentorship in academic radiology: why it matters. Insights Imaging. 2019;10(1):107.
25. Chung KC, Song JW, Kim HM, et al. Predictors of job satisfaction among academic faculty members: do instructional and clinical staff differ? Med Educ. 2010;44(10):985-995.
26. Farkas AH, Bonifacino E, Turner R, Tilstra SA, Corbelli JA. Mentorship of women in academic medicine: a systematic review. J Gen Intern Med. 2019;34(7):1322-1329.
27. Harolds JA. Quality and safety in health care, part XLIX: mentoring, coaching, and burnout. Clin Nucl Med. 2019;44(7):566-567.
28. Sambunjak D, Straus SE, Manusic A. Mentoring in academic medicine: a systematic review. JAMA. 2006;296(9):1103-1115.
29. Smidt MR, Janko MR, Allen S, et al. Burnout and its relationship with perceived stress, self-efficacy, depression, social support, and programmatic factors in general surgery residents. Am J Surg. 2020;219(6):907-912.
30. Greenberger SM, Finnell JT 2nd, Chang BP, et al. Changes to the ACGME common program requirements and their potential impact on emergency medicine core faculty protected time. AEM Educ Train. 2020;4(3):244-253.
31. Moreira ME, Doty CI, Galahue FE. We need our village: cORD’s response to the ACGME’s common program requirements. West J Emerg Med. 2019;20(4):538-540.
32. Rao SK, Kimball AB, Lehrhoff SR, et al. The impact of administrative burden on academic physicians: results of a hospital-wide physician survey. Acad Med. 2017;92(2):237-243.
33. Lall MD, Perman SM, Garg N, et al. Intention to leave emergency medicine: mid-career women are at increased risk. West J Emerg Med. 2020;21(5):1131-1139.
34. McMurray JE, Linzer M, Konrad TR, Douglas J, Shugerman R, Nelson K. The work lives of women physicians results from the physician work life study. The SGIM Career Satisfaction Study Group. J Gen Intern Med. 2000;15(6):372-380.
35. Moore LR, Ziegler C, Hessler A, Singhal D, LaFaver K. Burnout and career satisfaction in women neurologists in the United States. J Women Health. 2019;28(4):515-525.
36. Johnson PA, Widnall SE, Benya FF. Policy and Global Affairs. Sexual Harassment of Women: Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine. Washington, DC: The National Academies Press. 2018.
37. Villwock JA, Sobin LB, Koester LA, Harris TM. Impostor syndrome and burnout among American medical students: a pilot study. Int J Med Educ. 2016;7:364-369.
38. Templeton KB, Bernstein CA, Sukhera J, et al. Gender-based differences in burnout: issues faced by women physicians. NAM Perspectives. 2019.
39. Shanafelt TD, Noseworthy JH. Executive leadership and physician well-being: nine organizational strategies to promote engagement and reduce burnout. Mayo Clin Proc. 2017;92(1):129-146.
40. Shanafelt TD, Dyrbeye LN, West CP. Addressing physician burnout: the way forward. JAMA. 2017;317(9):901-902.
41. Hess JJ, Wallenstein J, Ackerman JD, et al. Scribe impacts on provider experience, operations, and teaching in an academic emergency medicine practice. West J Emerg Med. 2015;16(5):602-610.
42. Swensen SJ, Shanafelt T. An organizational framework to reduce professional burnout and bring back joy in practice. Jt Comm J Qual Patient Saf. 2017;43(6):308-313.
43. Swensen S, Kabacenell A, Shanafelt T. Physician-organization collaboration reduces physician burnout and promotes engagement: the Mayo Clinic Experience. J Healthc Manag. 2016;61(2):105-127.
44. https://wellmd.stanford.edu/center1.html
45. https://medicine.stanford.edu/faculty/professionalDevelopment.html
46. Murphy ML, de Vries P, Trockel M, et al. WellMD Center Status Report March 2017. https://wellmd.stanford.edu/content/dam/sm/wellmd/documents/2017-wellmd-status-report-dist-1.pdf.
47. Richter R. Battling burnout: Programs that address the stresses of being a physician begin to show results. https://stanmed.stanford.edu/2019summer/programs-addressing-doctor-burnout.html. 2019.
48. Trockel M, Hamidi M, Murphy ML, et al. 2016 Stanford Medicine Physician Wellness Report. 2017. https://wellmd.stanford.edu/content/dam/sm/wellmd/documents/Full-2016-Physician-Wellness-Survey-Report-16-Aug-2017-Final-1.pdf.
49. https://cardinalatwork.stanford.edu/faculty-staff-help-center
50. https://med.stanford.edu/content/dam/sm/gme/housestaff/wellness/SCPSSBrochure.pdf
51. https://emed.stanford.edu/fellowships/physician_wellness.html
52. West CP, Shanafelt TD, Kolars JC. Quality of life, burnout, educational debt, and medical knowledge among internal medicine residents. JAMA. 2011;306(9):952-960.
53. Young TP, Brown MM, Reibling ET, et al. Effect of educational debt on emergency medicine residents: a qualitative study using individual interviews. Ann Emerg Med. 2016;68(4):409-418.
54. Amofo E, Hanbali N, Patel A, Singh P. What are the significant factors associated with burnout in doctors? Occup Med. 2015;65(2):117-121.

How to cite this article: Norvell JG, Baker AM, Carlb erg DJ, et al. Does academic practice protect emergency physicians against burnout? JACEP Open. 2021;2:e12329. https://doi.org/10.1002/emp2.12329