

# Research Priorities for Physician Wellness in Academic Emergency Medicine: Consensus from the Society of Academic Emergency Medicine Wellness Committee

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## ABSTRACT

**Background:** Physicians and trainees in academic health care settings face unique challenges to maintaining and enhancing their well-being compared to their community practice counterparts.

**Objective:** Our objective was to develop a research agenda focused on well-being, resilience, and career longevity issues specific to practicing emergency medicine in an academic setting.

**Methods:** We convened an expert group of academic emergency physicians prior to the 2018 annual meeting of the Society for Academic Emergency Medicine to determine a set of uniformly accepted research priorities in the field by consensus.

**Results:** Three themes emerged as components of a comprehensive research agenda: 1) origins and natural history of burnout, resilience, well-being and other related concepts; 2) influence of early training and the learning environment; and 3) impact of burnout, attrition, and lack of organizational or system support for wellness on operations.

**Conclusion:** We believe that this agenda will inform future research and effective interventions to support physician and trainee well-being.

Emergency medicine (EM) has received much attention in both academic circles and popular media for its high rates of burnout among physicians and trainees.<sup>1</sup> Although the literature on the prevalence of burnout, depression, suicidality, and substance abuse has increased dramatically over the past 10 years, there is little evidence that these same issues are being effectively addressed or that prevalence is on the decline.<sup>2</sup> Furthermore, for physicians and trainees in an academic setting, the challenges to maintaining well-being may be

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Received July 13, 2018; revision received October 26, 2018; accepted October 29, 2018.

Approved by the SAEM Board of Directors.

The authors have no relevant financial information or potential conflicts to disclose. Author Contributions: Study concept and design—ASC, MLW, LDS, RAM, SH, and ALB; acquisition of the data—ASC, MLW, LDS, DWL, RAM, HM, SH, and ALB; analysis and interpretation of the data—ASC, MLW, LDS, DWL, RAM, HM, SH, and ALB; drafting of the manuscript—ASC, MLW, LDS, DWL, RAM, and HM; critical revision of the manuscript for important intellectual content—ASC, SH, and ALB; and study supervision—ASC.

Supervising Editor: Lalena M. Yarris, MD.

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AEM EDUCATION AND TRAINING 2018;2:S40–S47.

different than those in the community practice and have unique aspects that deserve their own consideration.

Due to the availability of specialty services, academic centers and large university hospitals often receive the highest-acuity patients from the surrounding areas and physicians must be ready on a regular basis for the complex challenges that accompany these patients. Faculty physicians must balance the roles of researcher and educator in addition to demonstrating clinical excellence. Their productivity is judged not just on the basis of their clinical care, but also on their ability to obtain grant funding, publish original research, and receive teaching awards.<sup>3</sup> Sustaining a reasonable work–life balance can be difficult with this increased number of expectations and obligations.<sup>4,5</sup> EM physicians in community practice also have their unique struggles, although a detailed discussion of their specific challenges is outside of the scope of this consensus document.

Trainees, who by definition practice in an academic setting, face challenges similar to those of their faculty counterparts.<sup>6</sup> They must balance the roles of student and clinician, while at the same time exploring possible careers as educators, researchers, advocates, and administrators. Additionally, they maintain a high number of clinical hours that frequently do not follow circadian rhythm principles,<sup>7</sup> are continually changing rotations on different services within the hospital,<sup>8</sup> have decreased autonomy,<sup>9</sup> and may experience bullying<sup>10</sup> due to their trainee status.

The goal of this expert consensus was to establish a research agenda to catalyze funding opportunities for studying interventions, develop larger networks for multi-institutional studies, and disseminate information to inform critical stakeholders. Uniform consensus will help to create common and synergistic research pathways among EM wellness researchers. We aimed to leverage the collective knowledge of current experts in the field of well-being in EM to develop a clear and visionary research agenda for the future.

## **METHODOLOGY**

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In 2018, the Society for Academic Emergency Medicine (SAEM) founded a wellness committee with the mission of advancing research to support the well-being of EM physicians and trainees in academic careers. All members of the committee were appointed by the SAEM President-Elect based on their expertise in this field. The President-Elect and the SAEM Board

of Directors provided objectives to each committee. Two objectives for the wellness committee were to: 1) develop a series of discussion papers, perspectives papers, and white papers to address physician wellness and 2) begin work to create an all-encompassing conceptual model that reflects the domains affecting clinician well-being and resilience. To address these objectives in part, six self-selected members of the wellness committee formed a subcommittee. This subcommittee met prior to the SAEM annual meeting in May 2018 to establish initial priorities for developing a research agenda and to conduct a preliminary review of the existing literature. Each subcommittee member conducted their own review of the literature and the group refined priorities on several conference calls. On May 16, 2018, during the SAEM annual meeting, the initial work and list of priorities from the subcommittee was shared and further refined through discussion and consensus of the larger SAEM Wellness Committee (refer to Table 1 for the list of members.) What follows are the most important research priorities identified in this discussion and their rationale for inclusion.

### **Analysis/Critique**

Three strategic research priorities were identified by consensus of the entire SAEM Wellness Committee. These priorities serve to provide a suggested research agenda that would have the greatest impact on well-being within academic EM (Table 2).

### **RESEARCH PRIORITY 1: ORIGINS AND NATURAL HISTORY**

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Many studies have described the prevalence of burnout, depression, and other markers of the lack of well-being among health care provider populations.<sup>9</sup> However, there remains little research, particularly qualitative research, investigating the root causes of professional fulfillment or lack thereof among physicians. While prevalence studies capture a snapshot of physician well-being, they do not provide nuanced and contextual information about the unique factors that lead to burnout in some individuals and professional engagement and resilience in others. A better understanding of the origins and longitudinal progression of these states overtraining and a subsequent career in academic EM will enhance efforts aimed at improving the well-being of EM physicians as well as the training and patient care they provide.

**Table 1**  
SAEM Wellness Committee Members 2017–2018 Listed in Alphabetical Order

Name	Institution
Steve Bird, MD	University of Massachusetts Medical School
Andra Blomkalns, MD, MBA	Stanford University School of Medicine
Arlene Chung, MD, MACM	Maimonides Medical Center
Linda Davis-Moon, MSN, APRN-BC	Thomas Jefferson University
Deborah Diercks, MD, MSc	University of Texas Southwestern Medical Center
Sheryl Heron, MD, MPH	Emory University School of Medicine
Nadine Himelfarb, MD	Alpert Medical School, Brown University
Michelle Lall, MD	Emory University School of Medicine
David W. Lu, MD, MSCI, MBE	Maine Medical Center
Rita Manfredi, MD	George Washington University School of Medicine and Health Sciences
Chad Meyer, MD, PhD	Ohio State University Wexner Medical Center
Laura McPeake, MD	Alpert Medical School, Brown University
Leon Sanchez, MD, MPH	Beth Israel Deaconess Medical Center/Harvard Medical School
Rosanna Sikora, MD	West Virginia University School of Medicine
James Takayesu, MD, MS	Massachusetts General Hospital
Katren Tyler, MD	University of California, Davis, School of Medicine
Jonathan Warczak, medical student	University of Rochester School of Medicine and Dentistry
Matthew Wong, MD, MPH	Beth Israel Deaconess Medical Center/Harvard Medical School

**Table 2**  
Research Priorities and Key Questions on Well-being Developed by Expert Consensus

Research Priority	Key Questions
Origins and natural history	What is the research on the natural history of burnout? Is the natural history of physicians in academic medicine different than those in community practice? What is the research on well-being beyond burnout?
Early training and the learning environment	How does the learning environment impact trainee well-being? What are the knowledge and skills that we can teach residents to ensure their resilience, well-being, and joy in practice during training and for the duration of their careers? What is the optimal assessment method for measuring the well-being of residency programs as well as individual residents?
Impact on operations	What is the relationship between burnout and patient or departmental outcomes? What is the estimated financial cost of burnout to individual physicians and to health care organizations? Which organizational programs and structures best foster resilience and well-being?

### What Is the Natural History of Burnout?

An enhanced and better understanding of the natural history of emergency physician burnout is especially critical in light of the changing landscape of health care. Among practicing physicians, burnout has been associated with early retirement and reductions in clinical hours.<sup>11</sup> This is especially relevant given concerns about an impending national shortage of physicians and rapid transformations in the practice of medicine, including a greater emphasis on performance metrics, electronic health record documentation, meaningful use of resources, and hospital reimbursement.<sup>11,12</sup> Within EM, recent residency graduates may experience less control over their work in large institutional settings compared to the physician-run practices of past

generations. Few studies in the literature have examined the role of burnout in physicians' career choices which is a relationship that may have significant ramifications for EM as a specialty. Longitudinal and qualitative studies are therefore necessary to determine how burnout impacts emergency physicians at various points in their careers and to better understand how it may shape their career choices.

### Is the Natural History of Physicians in Academic Medicine Different Than Those in Community Practice?

Both individual and workplace factors contribute to professional burnout.<sup>13</sup> Prior research has demonstrated that the major contributors to burnout are

workplace related. These include the perceived adequacy of clerical and ancillary staff support, satisfaction with electronic health records, and leadership engagement.<sup>14,15</sup> For academic EM physicians, there may be additional workplace challenges. Regulatory changes in residency programs that require faculty to work more clinical hours as well as an increasingly competitive research funding environment likely serve as unique contributors of burnout among academicians.

### **Can There Be Well-being Beyond Burnout?**

Well-being is not equivalent to the absence of burnout. Professional fulfillment and well-being encompass many other elements, including work engagement, career satisfaction, resilience, and grit. These can be measured quantitatively or qualitatively using tools with varying levels of validity evidence. This broader view of well-being is consistent with the recent efforts by the National Academy of Medicine, which recently launched the Action Collaborative on Clinician Well-Being and Resilience, a network of more than 60 organizations committed to improving our understanding of the challenges to clinician well-being and to promote evidence-based, multidisciplinary solutions that will improve patient care by caring for the caregiver.<sup>16</sup> It is important for future studies examining academic EM physicians' work experiences to determine which human and environmental factors enhance resilience, engagement, and career satisfaction, in addition to those that protect from burnout.

## **RESEARCH PRIORITY 2: EARLY TRAINING AND THE LEARNING ENVIRONMENT**

Prior work has demonstrated that EM residents exhibit similar rates of burnout as practicing emergency physicians as early as in the second year of their training.<sup>6,17,18</sup> This is consistent with research demonstrating that burnout peaks during residency and fellowship.<sup>19</sup> However, many important questions remain about how burnout evolves over the careers of emergency physicians. For example, individual and workplace characteristics such as a low tolerance for uncertainty and a poor sense of clinical autonomy are associated with burnout during residency.<sup>5</sup> Are the individual and workplace factors that contribute to burnout during training different than those that impact practicing physicians during other stages of their careers? When physicians in any stage of their careers report burnout, how long does it typically last? And how do they recover, or not recover, from burnout?

Medical school and residency are critical times for the acquisition of the knowledge, skills, and values essential to becoming an effective and balanced emergency physician. In 2016, the Accreditation Council for Graduate Medical Education (ACGME) revised its Common Program Requirements Section IV in response to research highlighting that physicians are at increased risk for burnout and depression.<sup>20</sup> The ACGME also recognized that the learning and working environment plays a critical role in the well-being of residents and faculty and updated its Clinical Learning Environment Review (CLER) guidelines to reflect this understanding. The CLER Pathways Version 1.1 now states that “the focus area formerly called Duty Hours, Fatigue Management, and Mitigation is now called Well-being and has evolved to address four interrelated topics: work-life balance, fatigue, burnout, and support of those at risk of or demonstrating self-harm.”<sup>21</sup>

Despite this directive from the ACGME, there are few evidence-based recommendations on how to best monitor burnout and promote well-being among physicians and trainees. A pilot study in a single residency program suggested that EM faculty were quite poor in being able to accurately predict burnout among EM trainees.<sup>22</sup> Because wellness habits, like many other practices, may be “imprinted”<sup>23</sup> during residency training, focusing on the role of burnout and other related states in the unique environment of academic medicine has the potential for long-lasting effects for both individual physicians and the specialty.

### **How Does the Learning Environment Impact Trainee Well-being?**

Early exposure of medical students to the specialty of EM should include a frank discussion regarding the realities of practice. This may also involve the messaging given to potential EM medical students and the tone set in residency. There may be an association between mismatched expectations for students who believe that they are pursuing a “lifestyle specialty”<sup>24,25</sup> and the later high rates of burnout, stress, depression, and other conditions that are seen in EM residents once they begin training.<sup>13,26</sup> Would better alignment of the expectations and reality of inherent stressors present in the practice of EM improve the well-being of trainees, and subsequently the attendings, who chose to become emergency physicians?

Additional considerations for the learning environment include adjusting educational strategies for

generational differences and “the millennial learner,”<sup>27</sup> explicitly addressing bullying and harassment<sup>10</sup> and considering issues of overwork and duty hour reporting.<sup>28</sup> Finally, does early training or the learning environment impact the decision of residents to pursue a career in academic EM versus a career in the community practice setting?

### **What Are the Knowledge and Skills That We Can Teach Residents to Ensure Their Resilience, Well-being, and Joy in Practice During Training and for the Duration of Their Careers?**

We need to identify cognitive and noncognitive processes that can be used in the clinical environment that effectively protect against burnout, anxiety, stress, depression, and other conditions that can lead to attrition from the field or other undesired outcomes.

Once students enter residency training, we need to investigate the factors that are present in the clinical learning environment that enable them to thrive and achieve their best work even under the most difficult circumstances. Prior research has identified elements at the individual or personal level that affect each learner and some small studies have begun to investigate the efficacy of targeted interventions such as mindfulness training,<sup>29</sup> debriefing,<sup>30</sup> narratives,<sup>31</sup> and reflective practice.<sup>32</sup> Identifying programmatic features that promote resilience would allow a closer focus on how to improve the educational process individually and systematically enhance postgraduate training overall.

Once these processes are defined, we need to create the tools and curricula to translate this knowledge into practice so that trainees can develop resilience for the duration of their careers. These processes may include, but are not limited to, stress management, mindfulness, and acute stress response mitigation. Research in this area would be in contrast to studies that investigate the effectiveness of interventions that occur outside of the workplace (e.g., social events, counseling). Finally, is there a difference in how we approach teaching wellness during residency training and after residency training? What are those differences?

### **What Is the Optimal Assessment Method for Measuring the Well-being of Residency Programs as Well as Individual Residents?**

Multiple assessment tools currently exist that could potentially be used to assess individual residents. The

most well known of these tools is the Maslach Burnout Inventory. Other commonly used tools include the Perceived Stress Scale and Patient Health Questionnaire. To the best of our knowledge, there have been no large-scale comparison studies to determine which of these tools are best suited to assessing EM residents. Factors to consider would be validity, reliability, and strength of prior studies using it in our population of interest.

Taking this argument one step further, how often should we assess the well-being of an entire residency program? Does this entail assessments of individual residents at certain intervals? Or do we need a new assessment tool entirely? With the increasing availability of curricula and resources focused on resident well-being, we need to develop a reliable means to assess the effectiveness of these interventions at both the individual and the program levels.

## **RESEARCH PRIORITY 3: IMPACT ON OPERATIONS**

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Large-scale changes within health care systems require the support of important stakeholders such as hospital leadership, governing bodies, and national specialty organizations. To engage these stakeholders, conversations on improving the well-being of frontline providers must share a common language that includes patient care outcomes, reporting metrics, and financial resources. Presenting an argument for reducing physician burnout alone often is not sufficient. Therefore, it is critical to demonstrate the link between measures of well-being and their implications for provider turnover, reimbursement, quality measures, and other operations metrics.

### **What Is the Relationship Between Burnout and Patient or Departmental Outcomes?**

There are likely many negative downstream consequences for patients because of physician burnout. Intuitively, physicians who enjoy and are engaged with the practice of medicine are likely to provide better care than those who are not. Preliminary evidence suggests that there is an association between physician burnout and medical errors.<sup>12,33–35</sup> Further research in this area is important to understand the nature and severity of this problem. Expanding the scope of the problem and reframing physician well-being as a patient safety issue would be salient to the larger medical community.

Research has largely focused on how the work environment contributes to physician burnout. However, physicians also create and contribute to their work environment. Research shows that EM physicians with burnout wait longer to pick up new patients.<sup>36</sup> Other departmental performance measures may be affected, such as emergency department (ED) patient length of stay, practice intensity, and hospitalization rate. Further research is needed to examine the impact of EM physician burnout on ED operations.

### **What Is the Estimated Financial Cost of Burnout to Individual Physicians and to Health Care Organizations?**

Preliminary research suggests that burnout is associated with plans to decrease clinical hours and to leave medicine early.<sup>37,38</sup> There are long-term financial implications for physicians who work less, particularly in the beginning of their careers. Decreased academic productivity of academic EM physicians will decrease the amount of research and intellectual products being generated. Fewer physicians will reduce the available manpower to care for our patients. Changes in physician availability are disruptive for organizations and recruiting physicians is expensive. We need to accurately estimate the cost of lost physician manpower and reframe the issue as a human resource management issue. Furthermore, assessing the cost of physician burnout may provide an approximate as to how much money should be invested in well-being programs.<sup>11</sup>

### **Which Organizational Programs and Structures Best Foster Resilience and Well-being?**

Interventions focused on individuals may be effective at counteracting burnout, but structural and organizational interventions may be more robust and durable.<sup>39</sup> The work and environment of the ED is unique. The unpredictable clinical workload, repeated task switching, rotating shift work, and overnight shifts pose threats to EM physicians' well-being that do not impact other specialties.<sup>40-42</sup> EM physicians should expect a work environment that fosters clinical productivity and mental well-being. There are many ways in which ED operations could be improved to enhance EM physician well-being, which may include improvements to the physical space of the ED, streamlining the electronic health record system, and scheduling shifts according to circadian rhythms.

## **IMPLICATIONS**

Much of the research on physician well-being in the ED has been conducted in single departments, residency programs, and with small sample sizes focused on individual rather than systemic issues. This has limited the generalizability and robustness of any significant results from these studies. It is our hope that this consensus document will inform future research and support multi-institutional and grant-funded studies with the continued development of larger research networks and dissemination of critical information to decision makers at all levels. We must bring focused attention to deliberately defining the origins and natural history of this critical issue, determine the effect on trainees in the learning environment, and uncover the consequential impact of system operations, thereby approaching effective, generalizable solutions. Methodologically sound research on the systemic, psychosocial, and physiologic stressors of working in an academic emergency medicine setting will bring us closer to achieving our goals.

The authors acknowledge the contributions of the following members of the SAEM Wellness Committee who were involved in the consensus process: Steve Bird, MD; Linda Davis-Moon, MSN, APRN-BC; Deborah Diercks, MD, MSc; Nadine Himelfarb, MD; Michelle Lall, MD; Chad Meyer, MD, PhD; Laura McPeake, MD; Rosanna Sikora, MD; James Takayesu, MD, MS; Katren Tyler, MD; and Jonathan Warczak.

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