INTRODUCTION

Wellness and burnout are complex, multi-dimensional phenomena. While burnout seems to be focused primarily on one's workplace, wellness seems to be influenced by additional factors and is a broader-reaching concept [1–3]. Residency program leadership is not in the position to influence all aspects of residents’ lives that contribute to overall wellness. However, the wellness and burnout literature suggests many work-related areas that program leadership should consider in order to minimize resident burnout and hopefully contribute to their overall wellness. Burnout affects 50% of all physicians with rates as high as 76% in residents, and burnout levels have been found to reliably increase between the beginning and middle of intern year [4–11]. Further, the American Council on Graduate Medical Education (ACGME) has added a wellbeing section in their common residency program requirements for 2019 [12]. Residency programs must therefore consider ways to conceptualize, prioritize and implement these initiatives [12].

While detailed conceptual models of overall clinician well-being have been developed previously, we do not know of a model developed specifically for resident wellness. Therefore, we aim to develop a model through the lens of residency program leadership, since residents have some overlapping yet some specific needs when compared to the overall clinician workforce [13,14]. Through reviewing currently existing frameworks and considering the context of resident-specific needs, we developed a resident-focused five-domain framework that programs could consider when developing their local wellness and burnout initiatives (figure 1).

Domain #1: Individual / Personal Wellness Factors

A significant determinant of personal wellness is the ability to live in accordance with one’s values and enjoy a sense of life satisfaction [3]. Given that every resident is a unique individual, their specific needs may be very different compared to peers [3]. Examples of personal wellness factors include regular exercise, nutrition, sleep hygiene, mental health, mindfulness and meditation practices, time with friends or family, and religious or spiritual connections [15].

While it may not be possible to influence this domain to a great extent on the programmatic level, and residents should have the autonomy to choose how to spend their time, programs could encourage residents to think about the individual factors that contribute to their overall wellness and encourage trainees to prioritize them during non-working hours. While there is evidence to suggest that incorporating mindfulness programs into residency training can lead to improved resilience, increased wellness, and decreased burnout and reduced stress, some studies have found less promising
results for all-comers and others have suggested caution prior to incorporating a one-size-fits-all intervention during mandatory conference time [16,17]. We therefore suggest considering voluntary or asynchronous sessions on mindfulness, positive thinking, self-compassion and resilience, which have been found to be successful [15,18–21]. Normalizing and encouraging the utilization of therapy and counseling when needed would also be beneficial. According to the ACGME, programs should ensure that resident schedules enable them to attend counseling and primary care appointments [12]. While residency program leadership can only somewhat affect this first domain, the following four domains can be influenced much more significantly on a programmatic level.

**Domain #2: Work Hours & Scheduling**

Ninety-eight percent of surveyed EM residents identified their work schedule as a key contributor to their overall wellness, and residents from other specialties cited lack of control over their schedule as a major contributor to burnout [22,23]. While the ACGME duty hour requirements provide some structure for scheduling, resident work schedules are still largely controlled by individual residency programs. Especially for specialties that utilize shift work, there is still a large variation in scheduling practices that have the potential to significantly impact resident wellness. Further, shift length preferences seem to vary between studies [22,24,25]. In one study, residents identified circadian scheduling with blocked night shifts, the ability to request a day off, and the ability to have a full weekend off as important factors in their work schedule satisfaction [22]. Residency programs could work toward optimizing resident wellness by integrating such scheduling principles and trying to ensure their scheduling practices prioritize the aspects most important to their own residents.

**Domain #3: Work Environment / Workplace Culture**

While ACGME clinical learning environment review (CLER) visits are now required every two years and investigate six areas of focus for all residency training institutions, many aspects of the work environment and culture are still created and influenced by residency programs and departmental leadership [26]. Creating a staffing plan so that residents have a sustainable workload and ensuring they understand work expectations is an important consideration. Developing a culture of wellness, psychological safety, recognition and reward, and enjoyment and satisfaction at work can also be significantly influenced by the program. The program can increase the control the residents have over their workplace by working with them to identify frustrations and barriers to efficient workflows and partnering with departmental leadership to develop solutions [27–31].

**Domain #4: Community & Interconnectedness**

The sense of community, relatedness and interconnectedness can be enhanced by residency program based initiatives. Programs can plan or facilitate social bonding events throughout the year, allowing residents to strengthen connections with each other and attendings, which facilitates development of an informal peer support system that can be utilized in times of distress. Events can be organized to include residents’ significant others and families to encourage the development of a larger community. Programs can also develop formal advising / mentoring programs as well as “residency families” to facilitate residents developing personal connections with attendings, senior residents, and each other [15].

**Domain #5: Dealing With the Hardships of Medicine**

Lastly, residency programs can develop educational initiatives for residents to talk about and learn coping strategies for common hardships encountered by medical professionals. Making these difficult topics part of the normal conversation and equipping the residents with proactive coping strategies will improve resilience during difficult times. This occurs via both interconnectedness and knowledge of / competence in applying such coping strategies. In our experience, themes that are useful to discuss with residents include: dealing with second victim syndrome* (SVS) after a medical error or a difficult case; acknowledging and responding to impostor syndrome*; coping with mental health issues (specifically depression or suicidal thoughts) in themselves or a colleague; as well as others depending on individual programmatic needs. Programs could also consider developing a formalized peer support system, as the majority of physicians cite physician colleagues as the most desired source of potential support, far above the desire to use the employee assistance program or mental health professionals [32–34].

**CONCLUSION**

We have developed a conceptual model for wellness and burnout interventions specific to residency training programs that should be used in conjunction with local individual residency program needs assessments. Eliciting priorities and ideas from the main stakeholders, the residents, will allow programs to utilize that information to guide the content of future interventions within these five domains [35]. Regular needs assessments will allow programs to focus more time and effort in domains where it is likely to produce the greatest benefit.

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*Second victim syndrome - suffering that the health care provider experiences as a result of the psychological trauma the event causes.

*Imposter syndrome - feelings of inadequacy that persist despite evident success.
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