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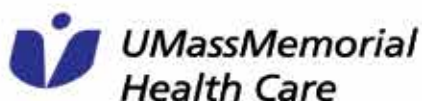
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Editorial

Jane Lochrie, MD



Jane Lochrie, MD

Burnout among health care providers is becoming a national crisis. Studies now suggest that more than 50 percent of practicing physicians are burned out. This is twice the prevalence of providers in other fields when controlled for work hours and other factors. Burnout is highest for those on the front line and emergency medicine, family medicine and internal medicine physicians and neurologists. Up to 40 percent of practicing surgeons experience some level of burnout during their career. Approximately 50 percent of medical students and up to 75 percent of residents report feeling burnout at any

given time, depending on specialty. Similarly, 43 percent of registered nurses report a high degree of emotional exhaustion, and every year, 400 U.S. physicians commit suicide.

Burnout has been consistently described as a multidimensional process with three central concepts: emotional exhaustion, depersonalization and reduced personal accomplishments. Physicians who are burning out are more prone to errors, are regarded as less empathetic, are more likely to leave the practice of medicine and self-report more instances of suboptimal care.

The current health care environment has three goals: better patient care experience, improved population health and lower cost. This has led to additional reporting requirements, an inefficient electronic medical record, and increased pressure to improve throughout and reduce costs with less time and resources to see increasingly medically complex patients. Physicians are caught between the demands of the health care system and their desire of a meaningful relationship with their patients. This issue of *Worcester Medicine* will explore the high cost of burnout in the Worcester health care system.

In the first article, Dr. Diane Shannon asserts that truly addressing burnout requires leadership to tackle the underlying causes of burnout, including changing patient demographics, increasing cost constraints, new federal and state regulations and other external factors that have reshaped the daily work experience. These problems affect all members of the health care team, and most importantly, the patient.

Drs. Yogaratnam and Nguyen explore how burnout is affecting the pharmacist. One nationwide study reported 68 percent of respondents reported experiencing job stress and job overload. They opine that pharmacists may be less likely to prevent, intercept and act on critical medication-related problems. Other studies suggest that subjective work overload may be related to interruptions when counseling patients and increased monitoring demands lead to burnout. Academic

pharmacists that have a mentor and other social support were associated with decreased burnout.

The Physicians Health Service, a corporation of the Massachusetts Medical Society, has long recognized the magnitude of the burnout crisis. Dr. Harvey Kowaloff describes two of the significant interventions to address the problem. The coaching program is helpful to physicians that have isolated burnout symptoms. The Medical Professional Empowerment Program has a series of podcasts that provide the professionals with actionable tools and techniques aimed at developing skills in self-management, self-care, work-life balance, teamwork, conflict management and more.

Dawn Carpenter, DNP, ACNP-BC, CCR, a critical care nurse and nurse practitioner, relates that nurses who experience high rates of moral distress, where conflicts arise around patient treatment goals that are contrary to the nurse's values, experience a high degree of burnout. A negative work environment can have a "contagion effect," where burnout is the result of attitudes and negative conditions of the employment environment.

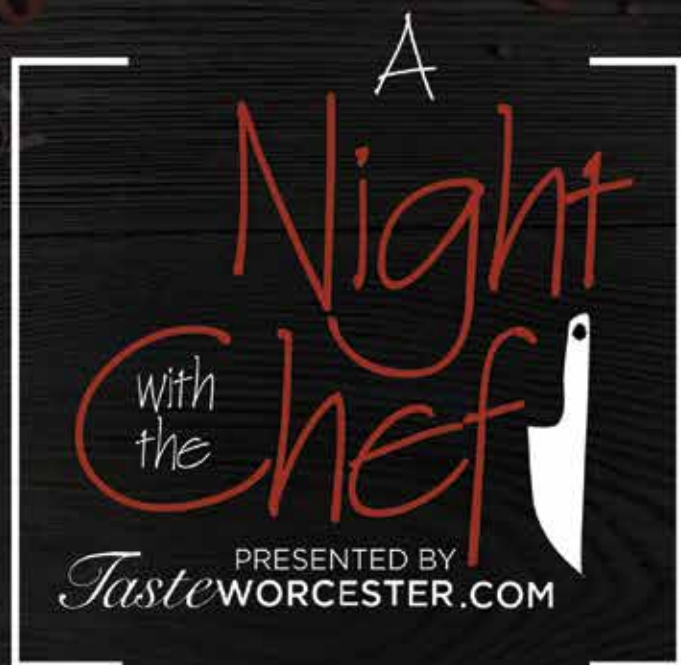
Drs. LaFemina and Winton report that 69 percent of surgical residents experience physical exhaustion, cynicism, guilt and feelings of ineffectiveness. This burnout can be associated with failure to seek routine health care, depression, anxiety, sleep disturbance, substance abuse and suicide. The authors describe the Wellbeing Program for residents in the surgical program at UMass/Memorial, which is aimed at increasing resiliency, increasing competency and improving patient safety, quality and satisfaction.

Another little-mentioned form of burnout, caretaker burnout, is described by Dr. Blanchard. He maintains that this is a job that no rational person would desire. There are long hours without any scheduled breaks and no formal training or manual to guide you, despite requiring high cognitive and emotional skills. The job is done out of love, devotion and selflessness, and yet, the end result often is the caregiver develops depression and financial hardship.

With the increased stress and demands from all sides, Dr. George Abraham illustrates the struggles of physicians to stay in practice. He explains the alarming trends of provider suicide, alcoholism, substance abuse, fractured family life, depression and other mental health issues. Other disturbing trends include physician premature retirements, rapid turnover of providers, the related cost of onboarding of new providers and medical students leaving mid-training to enter less demanding occupations.

Every year, the Massachusetts Medical Society has a writing competition, the Berlin Award. This year's winner is Laurel Dezieck, MD. Make sure to read her prize winning article, "Citrus meidca var. sarcodactylis." (I think the heroine may be suffering from burnout.)

As always, take time to enjoy the President's Message (not Trump), Legal Consult and Society Snippets.



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Addressing Physician Burnout: Individual Solutions Versus System and Workplace Fixes

Diane W. Shannon, MD, MPH



Diane W. Shannon, MD, MPH

The prevalence of burnout among physicians is estimated to be more than 50 percent and has grown in recent years.¹ This alarming trend is largely due to changing patient demographics, increasing cost constraints, new federal and state regulations and other external factors that have reshaped the daily work experience of physicians.² Too often today, physicians spend more time on data entry than in direct patient care.³

Professional burnout, as it has been defined by researchers, is a response to stress in the

workplace.⁴ It consists of three components: emotional exhaustion, depersonalization or cynicism and a low sense of personal accomplishment in one's work. It is caused by a "mismatch" between the worker and the workplace in one or more of six domains: workload, control, reward, community, fairness and values.⁴

Burnout among physicians has significant negative consequences, including effects on patient safety, quality of care, the patient experience and personal costs to the individual physician: depression, substance use, suicide.⁵ It also affects health care organizations and our health care system as a whole, as physicians choose to cut back on clinical hours, retire early or leave clinical practice for other careers.

Effectively addressing burnout requires an understanding of its true causes – just as an accurate diagnosis of respiratory distress is essential to effective treatment. Despite the fact that the cause is quite often systemic, frequently individual physicians and the health care organizations in which they work respond as if it were a problem solely within the individual. Too often, physicians and leaders "neglect the organizational factors that are the primary drivers of physician burnout."⁵

As my co-author, Paul DeChant, MD, MBA, and I stated in our book, *Preventing Physician Burnout: Curing the Chaos and Returning Joy to the Practice of Medicine*, "Rather than searching out systems issues, it may be tempting to think of the inherent stresses of practice, the traits and characteristics of physicians, mental health issues, and the effects of the culture of medicine as being the culprits. However, the widespread nature of burnout today indicates that clinicians with burnout are not 'weak links' but rather 'canaries in the coal mine.'"⁶

Why the instinctive focus on individual-based solutions? It may seem easier to create wellness programs and schedule mindfulness training to

reduce stress than to identify and address the underlying problems in health care that fuel that stress.

Make no mistake; individual-based solutions are incredibly valuable. Practicing medicine is inherently stressful and that will always be true. All clinicians can benefit from strategies that boost well-being and stress resilience. However, relying on these strategies to "fix" burnout is short-sighted. It also fans frustration among physicians who are keenly aware of the system and workplace problems that hinder their daily work.

There's another important reason to address the system and workplace problems fueling physician burnout. These problems affect others on the health care team and the most important person in the health care system – the patient. Fixing an inefficient scheduling system will reduce frustration for the physician and improve patient access and satisfaction. Developing a robust end-of-visit process will decrease the number of follow-up phone calls the physician needs to address and improve patient safety. An EHR with relevant reminders will reduce the cognitive load for physicians and improve the quality of care. Mitigating the documentation burden will allow physicians to spend more time speaking with patients and improve the patient's experience of care. All these parameters are important performance metrics for any health care organization.

Addressing the system and workplace problems that are driving physician burnout is not a quick and easy task. It does take more time and effort than offering individual-level strategies. And there is no detailed guidebook on how to address these problems, because the answer varies across different clinical settings. A good place to start, however, is by querying clinicians about their top workplace frustrations.

Leaders can use surveys, focus groups or one-on-one interviews to gather this information – or they can shadow physicians and nurses and see firsthand the issues and bottlenecks that are adversely affecting both clinicians and patients. Leaders can identify the most impactful problems – from the clinician's perspective – and begin addressing them. Sometimes the fixes require large capital investments, but quite often small, inexpensive changes, like rejiggering the daily clinic schedule to better accommodate documentation time, can have a big impact.

It's true that fixing the underlying system and workplace issues is a more difficult nut to crack than providing individual-based support. But just as a bicycle needs both wheels to roll properly, burnout prevention requires both individual and system solutions. Clinicians need resilience support to be at their best, and they need a functional, efficient workplace in which to do their best work.

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Diane W. Shannon, MD, MPH, is a freelance health care writer in the Boston area. She can be reached at dshannon@mdwriter.com or www.mdwriter.com.

Burnout in Pharmacy

Dinesh Yogaratnam, PharmD, BCPS, BCCCP, and Amanda Nguyen, PharmD



Dinesh Yogaratnam, PharmD, BCPS, BCCCP



Amanda Nguyen, PharmD

Like other health care professionals, pharmacists are susceptible to workplace stress, job-related anxiety and even career burnout. In a nationwide survey of more than 1,700 pharmacists, 68 percent of respondents reported experiencing job stress and work overload.¹ Burnout, which is distinct from stress and anxiety, develops insidiously as pharmacists are persistently overwhelmed by physical or emotional stressors. Stressors can be quantified objectively (e.g., number of prescriptions filled per hour) or subjectively (e.g., the degree to which one feels rushed or distracted). Burnout has been recognized to manifest across three main domains.² The first domain, emotional exhaustion, may result in fatigue, low interest in work and a narrow emotional bandwidth. The second domain, depersonalization, may cause the pharmacist to become less empathetic towards their patients. In the third domain, reduced personal accomplishment, pharmacists may begin to feel as though their efforts and contributions result in substandard or meaningless outcomes. Pharmacists who are burnt out may be less engaged with and attentive to their work, their health care team and their patients. As a result, they may be less likely to prevent, intercept and act upon critical medication-related problems. To better address this concern, research has been conducted to evaluate the prevalence, risk factors and consequences of burnout among various pharmacy practice settings.

One of the more common settings for pharmacists is the community retail pharmacy. A survey analysis of 165 community pharmacists evaluated how subjective workload correlated with perceived task performance (medication profile review and counseling patients), job satisfaction and burnout.³ Subjective workload is considered an important measure of job satisfaction, and it should be a meaningful consideration when evaluating adequacy of staffing levels. The results showed interruptions were negatively associated with pharmacists' perceived ability to adequately counsel a patient on a new medication. This poor performance was associated with a higher degree of burnout. However, interruptions did not have a strong correlation with pharmacists' perceived ability to perform thorough medication profile reviews. This suggests that sources of stress, like interruptions, may lead to burnout depending on the task its affecting. Another notable

finding was that increased monitoring demands (reacting to prevent problems, concentrating on critical tasks, vigilantly observing for things to go wrong) was associated with increased job satisfaction and less burnout. This suggests that having a "big picture" understanding of the entire pharmacy operation, as well as understanding co-workers' roles and responsibilities, can potentially reduce stress and the risk of burnout. Workflows that limit counseling session interruptions and promote a greater sense of situational awareness may help to improve job satisfaction and reduce burnout.

A survey of 48 pediatric inpatient pharmacists at two large teaching hospitals evaluated how the type and intensity of mental workload during the medication dispensation process impacted the perceived likelihood of medication error, job satisfaction and burnout.⁴ Not surprisingly, increasing external demands – such as interruptions, divided attention and feeling rushed – were negatively associated with perceived risk of medication error, job satisfaction and burnout. However, increasing internal demands, such as the perceived difficulty in performing complex dose calculations, did not negatively impact safety and employee outcomes; interestingly, these internal factors even had a positive impact on job satisfaction. These findings further suggest that creating workflows that allow pharmacists to give their undivided attention to critical tasks may be an important factor for reducing the risk of burnout.

Pharmacists not only face burnout in retail and hospital settings, but also in academia settings. In a study of 758 pharmacy practice faculty members, burnout was evaluated using the Maslach Burnout Inventory-Educator Survey (MBI-ES), which measures burnout in multiple dimensions, including emotional exhaustion (EE), depersonalization (DP) and personal accomplishment (PA).⁵ Higher EE and DP scores and lower PA scores are associated with more burnout. Just more than 40 percent of the surveyed pharmacy practice faculty had high EE scores.⁶ The survey revealed that women, individuals without a hobby, individuals without a mentor, individuals with young children and those who work more than 50 hours a week had higher EE scores.⁶ On the other hand, having a mentor or other forms of social support was associated with reduced burnout via decreased DA scores and increased PA scores.⁶ Developing formal mentor-mentee relationships may be one way for junior faculty to lessen the risk of burnout as they embark on their academic career.

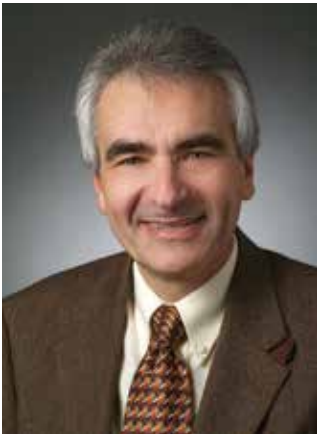
Pharmacists can experience burnout in a variety of settings. Some suggestions to prevent and mitigate burnout include assessing and responding to the subjective workloads of the pharmacists during various tasks; creating workflows that minimize external factors like interruptions and distractions, especially for critical cognitively demanding tasks; and encouraging formal mentor-mentee relationships. These proposed solutions to manage pharmacist burnout require additional research that focuses on how reducing pharmacist burnout would affect patient safety outcomes and employee satisfaction outcomes.

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Physician Burnout: The Next Public Health Crisis?

Harvey Kowaloff, MD, MMM



Harvey Kowaloff, MD, MMM

life balance ratings, which also differed among specialties, with many front-line patient care specialties (e.g. internal medicine, emergency medicine) demonstrating the highest scores.

Consequences of burnout. For the individual, self-described burnout is a marker for serious personal distress. Burnout has been demonstrated to be an independent risk for serious mental health and substance use disorders. The risk of alcohol use disorders is increased 25 percent, and suicidal ideation increased 200 percent among a cohort of physicians describing high levels of burnout symptomatology.⁴ Beyond the personal tragedy, studies have demonstrated that burnout is a factor in medical error, poor patient care experiences and deterioration in the physician workforce.⁴ Physician burnout was an independent predictor of medical error, and patients of physicians reporting high degrees of depersonalization and low job satisfaction have less satisfaction with their hospital experiences and are less likely to adhere to medical advice.⁴ Physicians with higher burnout scores are twice as likely to leave a job for reasons other than retirement.⁴

Factors that may precipitate burnout. While problematic work-life balance contributes to burnout, there is a set of drivers – personal, institutional and socio-cultural – that increase the likelihood of burnout among physicians. As Shanafelt, et al., noted, with the prevalence of burnout symptoms approaching 50 percent of physicians, it is likely that the origins of burnout are “rooted in the environment and care delivery system rather than in the personal characteristics of a few susceptible individuals.”³ We physicians are accustomed to long hours and the inherent stress of decision-making under conditions of uncertainty. Historically, in exchange for these inherent challenges, physicians were afforded a high degree of autonomy and an implicit respect for their effort in service to a higher mission. I submit that the current epidemic of burnout is a manifestation of an underlying existential unrest within the profession. Physicians serve multiple clients, including the patient, the payer and the health care provider corporation. Former clarity of mission – we worked in service and dedication overwhelmingly to our patient – has been replaced by a set of requirements that are often dissociated from, if not frankly at odds with, that historic purpose.

We are familiar with these matters: payer quality scorecards upon which our compensation is based; the health care provider systems’ calls for higher productivity, leading many physicians to feel they have become a commodity in the health care system; the Internet and electronic health care records; and our societal push to improve physician access despite diminishing resources

in primary care are but a few of the factors contributing to professional burnout. Contrast the iconic image of the physician who continues to work well into his/her senior years for the sheer delight and sense of purpose in her/his work with the contemporary colleague who speaks of retiring once he/she can financially afford to do so because it “just isn’t what I signed on for...” As a profession and as public policy, we cannot ignore this problem and must, in fact, respond to burnout as the impending public health crisis it is becoming.

Responding to the burnout epidemic. Burnout stems from multiple sources that are internal to the individual, as well as external factors characteristic of the health care environment. Approaches to prevent and/or manage burnout have thus been multi-faceted. An extensive review of this literature is beyond the scope of this article. Here are a few ideas that have promise.

Individual-focused interventions. Stress reduction and mindfulness programs have had some limited success in helping physicians become more “present” when working with patients and colleagues and, hopefully, to regain the sense of purpose and reduce the feelings of depersonalization and lost control that underlay burnout. Life coaching is a promising intervention for burnout. Coaching is not psychotherapy but is an action-oriented approach to empower individuals to create and sustain positive changes that can reduce the burnout state by restoring meaning and purpose to the physician’s life and work.

Institutional and systems-focused interventions. Medical staff leaders must first acknowledge the magnitude and seriousness of the burnout problem if they are to intervene to make positive changes. Physician well-being must be as fundamental a focus of management as is productivity, clinical quality and patient satisfaction/access. Creating work teams to address operational and systematic problems can be very powerful in restoring the accountability and control that is perceived as lacking in the burnout state. Physicians on the front lines of patient care must have meaningful input into the conditions within which they practice. If management creates a culture in which the physician becomes a commodity, burnout is likely to be widespread and severe.

In Massachusetts, the Physician Health Service (PHS), a corporation of the Massachusetts Medical Society explicitly created to assist physicians with health problems that affect professional performance, has recognized the magnitude of the burnout crisis and initiated efforts to address the problem. Two notable interventions are life coaching and the Medical Professionals Empowerment Program (Med PEP). PHS refers clients to an expanding network of coaches with special expertise and experience working with physicians. Coaching can be helpful when confronted with isolated burnout symptomatology, as well as a part of a more extensive program to address problematic workplace behavioral concerns. The Med PEP program, newly created by PHS working with a team of colleagues, consists of a “series of podcasts to acquaint physicians and other health professionals with a variety of actionable tools and techniques aimed at helping to develop and enhance skills in self-management, self-efficacy, self-care, work-life balance, emotional intelligence, interpersonal aptitude, teamwork, conflict management and change management.” It is hoped that, over time, physicians will avail themselves of these and other tools to prevent and/or to manage the early signs of burnout. For more information on coaching, MedPEP and the entire spectrum of PHS programs available to help physician colleagues, please contact PHS at (781) 434-7404 or go to the PHS website at www.massmed.org/phshome.

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Harvey Kowaloff, MD, MMM, is the associate medical director of Physician Health Service.

Burnout: A Pandemic Needing Emergent Attention

Dawn Carpenter, DNP, ACNP-BC, CCRN



Dawn Carpenter, DNP, ACNP-BC, CCRN

As a critical care nurse and nurse practitioner for more than 25 years, I have heard about burnout since my first days in critical care, but I really didn't know much about it. A quick literature search on "burnout" revealed staggering numbers of articles published in just the last two years. The search showed me it is not just about nursing or just a phenomenon that occurs in the United States. Burnout has been noted in multiple health care disciplines, including, but not limited to, nursing, dentistry, midwifery, physical therapists, pharmacists and medicine, and affects all levels of providers, from students to attending physicians. These articles identified burnout occurring in more than 14 countries,

including the United States, Greece, China, Australia, South Africa, Korea, Iran, Israel, Portugal, Italy, Ethiopia, Lebanon, Norway, Switzerland and Belgium. Health care professionals have experienced burnout working with many different patient populations and in many different types of units/facilities. Burnout is experienced among health professionals working within the Veterans Health Administration and in emergency departments, acute care, critical care, long-term care, neonatal and pediatric intensive care, psychiatry, oncology and palliative care, as well as when working with specific patient populations, such as those with Human Immunodeficiency Virus, Alzheimer's disease and cancer.

Burnout is "characterized by emotional exhaustion that results in depersonalization and decreased personal accomplishment" and was first described by Maslach in 1976.¹ Burnout can lead to fatigue, exhaustion and detachment in health care professionals and threatens quality of care and patient safety. As described above, burnout is pervasive among health professionals, affecting those working with almost all patient populations around the world at every level of training.

A pandemic occurs "over a wide geographic area and affecting an exceptionally high proportion of the population."² One might argue that burnout is a pandemic as it affects a large cadre of health care workers over a wide geographic area. Nurses who experience high rates of moral distress, where conflicts about treatment goals for critically ill patients are contrary to the nurse's values, create an environment predisposing nurses to burnout.³ Risk factors associated with burnout have been divided into four categories: personal characteristics, organizational factors, quality of working relationships and exposure to end-of-life issues.⁴ It is disconcerting that a negative work setting can have a "contagion effect," where one acquires burnout simply from the attitudes and situations of the employment environment.⁵

The three classic symptoms of burnout are emotional exhaustion, depersonalization and reduced personal accomplishment.⁴ The prevalence of burnout specifically in critical care nurses ranges from 25 percent to 33 percent, with 86 percent having one of the three symptoms, the most common being emotional exhaustion.⁴ Moral distress, compassion fatigue and perceived delivery of inappropriate care or non-beneficial care overlap with burnout.⁴

The consequences of burnout are not benign. It affects both health care professionals and patient care. For the individual health care professional, specific consequences include post-traumatic stress disorder (PTSD), alcohol abuse and suicidal ideation.⁶ Of the critical care nurses who have symptoms

of burnout, 18 percent meet the criteria for PTSD. Of those with PTSD, 98 percent have symptoms of burnout.⁷ In theory, screening for burnout followed by interventions, where appropriate, may prevent the transition to PTSD for some.

Institutional consequences are also significant and include excessive turnover, lower staff morale, lower patient satisfaction and increased health care costs. In 2007, the average cost to replace one nurse was as high as \$88,000.⁸

Unfortunately, patients also suffer when their caregivers have burnout. Burnout is associated with reduced overall quality of care, higher rates of health care-related infections, higher mortality and increased number of medical errors.^{9,10} In addition, a vicious cycle has been noted between providers who make medical errors and their level of distress, where this distress can lead to more errors.¹¹

My literature search on burnout noted a paucity of intervention studies to prevent or treat burnout. Most intervention studies on burnout predominantly focused on individual interventions, involving a single discipline or organization, and were designed to build resilience within individuals, enhance coping strategies and adopt mindfulness-based stress reduction practices.¹² Dyrbye (2017) contends this is disconcerting, as problems within the health care system also contribute to burnout.¹² Can a pandemic of this proportion be resolved only by helping people respond to the stressors that precipitate burnout? We need to step back and examine systems that may be contributing to stressful environments and excessive demands upon health care professionals and make changes when appropriate.

To address and decrease burnout among health care professionals, Dyrbye (2017) detailed three main areas in need of research. The first involves factors in health care systems that contribute to distress, including organizational environment, practice environment, financial environment and regulatory and liability environments. The second area focuses on understanding the impact of an individual health care professional's distress on patient outcomes, and the third focuses on interventions to improve the work lives of health care professionals.¹²

To address issues of organizational factors and relationships, the American Association of Critical Care Nurses set six standards to create and sustain healthy work environments. These six areas include: skilled communications, true collaboration, effective decision-making, appropriate staffing, meaningful recognition and authentic leadership.¹³ To date, these standards have not been specifically linked to reducing burnout.

The risks and cost to patients, providers and institutions must be addressed immediately. We need to take care of the caregivers. If we don't take care of each other, how can we possibly take care of our patients? By "we," I mean the entire health care team – you, me, doctors, pharmacists, therapists and all who support the health care teams (managers, directors, administrators, faculty and researchers). Our collective teams must tackle this pandemic as we did with Ebola and the Zika virus. We made significant strides in these areas by making it a priority.

We need to do the same for burnout. We need to make this an international agenda, test well thought-out interventions in multicenter, multinational RCT's and then publish systematic reviews and meta-analyses of these studies as we would with any disease our patients encounter. We need to put the health and well-being of health care professionals front and center. This cannot happen without support and adequate funding. Together, we can do this!

Dawn Carpenter, DNP, ACNP-BC, CCRN, is an assistant professor and coordinator of the Adult Gerontology Acute Care Nurse Practitioner Track program at the University of Massachusetts Worcester. She is also a practicing nurse practitioner in the Critical Care Department at UMass Memorial Medical Center.

Addressing Burnout and Fostering Resilience at UMass: Two Initiatives

Raghu Appasani, MS4; Leah Shesler, MS4; Katarina Anderson, MS4; and Preetam Cholli, MS4



Raghu Appasani, MS4, Leah Shesler, MS4, Katarina Anderson, MS4 and Preetam Cholli, MS4

Burnout syndrome consists of a constellation of symptoms, including emotional and physical exhaustion, depersonalization, cynicism and feelings of low personal accomplishment and is prevalent among medical professionals at all levels of training.¹¹ It is likely a consequence of many factors, including long hours, lack of personal recovery time, extensive training, threats of litigation, exponentially changing systems and documentation burdens, as well as a tradition of esteeming self-denial as an expected hardship of the healer's role.

In 2011, a national survey conducted by the Mayo Clinic showed that 45 percent of U.S. physicians met criteria for burnout, which increased to 54 percent in a follow-up survey three years later.¹⁵ While these statistics are striking for our profession as a whole, studies show that younger physicians and trainees are particularly susceptible to developing burnout, potentially because they have not had the time or training to establish adequate coping mechanisms. It is estimated that up to 50 percent of medical students exhibit signs or symptoms of burnout during their undergraduate medical career.² The prevalence of burnout is further magnified among residents, due to increased educational and clinical pressures with even less recovery time.¹³ In a study that surveyed internal medicine residents for symptoms of burnout, 76 percent met criteria.¹⁶

Burnout has significant consequences for both providers and patients. Among clinicians, it can lead to depression, anxiety, substance abuse and suicide. Approximately 300-400 physicians die by suicide in the U.S. per year,³ a phenomenon that has unfortunately affected medical students as well.¹² Burnout also impacts patient care, being linked to lower patient satisfaction and increased rates of medical errors.¹⁰ Interestingly, residents with symptoms of burnout were more likely to self-report instances of providing suboptimal care, which may further contribute to their sense of depersonalization and emotional exhaustion.¹⁶

While there is no standard intervention for addressing this troublesome trend within medicine, it is ironic that members of a community dedicated to caring for others have such difficulty caring for themselves and that many of us still struggle to develop effective strategies to address our common experiences. It is encouraging that training programs across the country have developed methods

to address this issue – for instance, the use of mindfulness meditation, reflective writing, small-group discussion, patient debriefing forums and organized wellness activities encouraged by the Accreditation Council for Graduate Medical Education.^{1,7,9}

Efforts to promote wellness and cultivate tools to enhance resiliency are undoubtedly valuable, especially for medical trainees.^{4,17,18} Yet, while it is essential for

students and residents to cultivate strategies to adapt to the stressors that they will experience as clinicians, it is equally important that interventions emphasize transforming the broader systems and climate of health care, of which burnout is a symptom. A necessary component of this is the recognition that occupational stress and burnout are phenomena not unique to physicians but affect all providers, including nurses, social workers and ancillary staff.⁸ To catalyze broader change, efforts to promote wellness and resiliency must bring together individuals across the full spectrum of training and disciplines to foster effective teamwork and prevent medical errors.¹⁰

We discuss two initiatives at UMass aimed at decreasing burnout through the development of coping mechanisms and fostering a community that allows space for medical providers to discuss the challenges of our profession. We hope that these efforts will spark conversation and change at the departmental, institutional and cultural levels surrounding burnout, its causes and solutions.

In 2015, medical students (Leah Shesler, Emily Levoy, PGY-2, and James Doolin, PGY-2) and David Hatem, MD,* developed an optional enrichment elective called Promoting Resilient and Empathic Physicians (PREP), designed exclusively for third-year students to address the stressors of transitioning to clinical rotations. The elective uses mindfulness meditation and reflective writing to accomplish the following: broaden reflection skills introduced during the third-year medical curriculum, learn new and expand on existing coping mechanisms, prioritize self-care within a demanding schedule and cultivating relationships within a small group, and allow participants to feel comfortable discussing challenges and successes. Ultimately, our hope is that the elective will improve self-care and resiliency, leading not only to decreased burnout and a better student experience, but also to more empathetic patient care and improved outcomes. Students report that a major benefit of the elective is being part of a community of peers with whom they feel comfortable sharing experiences.

In early 2017, the authors of this piece, along with UMMS faculty member Lela Giannaris, Ph.D.** (anatomist/medical educator

with a passion for encouraging humanism at the start of medical school), developed an initiative aiming to address burnout on an interdisciplinary, departmental level. Advancing Resiliency and Compassionate Healthcare (ARCH) aims to work with individual departments at UMASS Memorial Healthcare to dedicate time on a voluntary basis to discuss factors contributing to burnout. In collaboration with faculty and resident representatives, real-world cases will be gathered and presented to trainees, faculty and interdisciplinary staff in a traditional “morning report” format. These case examples, presented in a familiar structure, will serve as a vehicle to spark broader conversations centered on humanism, burnout, resiliency and institutional change. We hope that grounding these topics in this format will bypass the hesitation some may feel in exploring these topics and will reduce the discomfort individuals may otherwise feel in forums which rely on participants to initiate and guide discussion. Ideally, as each case is explored, participants will feel encouraged to share their own anecdotes and experiences, fostering an open environment where concerns and vulnerabilities can be shared in the service of group exploration. Feedback and recommendations for departmental changes will be recorded and shared with faculty to promote system-wide burnout prevention at all levels of training. By engaging providers involved at all levels of patient care, we hope to create a more nuanced, comprehensive and interdisciplinary approach to burnout prevention while fostering greater protective interdisciplinary bonds in our clinical community.

Burnout among medical professionals is a historically significant, yet growing, problem, but should not be accepted as an unfortunate inevitability in medicine.¹⁴ Contributing factors seem to be driven by our culture of hard work, self-sacrifice and the desire to heal others. While these traits are necessary in caring for our patients, in excess, they can lead us to neglect our own mental and physical limits.⁵ Programs such as PREP and ARCH are designed to increase recognition of personal and institutional factors that contribute to burnout, while destigmatizing the issue through discussion to empower providers to care for themselves and each other across disciplines. By proactively addressing the underlying causes of burnout as a united force, we can emphasize the richness and humanity of our profession – for ourselves, our peers and our patients. We hope PREP and ARCH will be among the first steps to address burnout in our Worcester medical community – and catalyze the broader change, which, while dependent on our individual efforts, is best accomplished together.

If you have experienced or witnessed burnout, have comments on the initiatives mentioned above or would like to participate or contribute, please contact us at archprogramumass@gmail.com.

**Dr. David Hatem, MD, general internist and co-director of UMass Learning Communities.*

***Dr. Eustathia Giannaris, Ph.D., assistant professor and core faculty for the anatomy course with a passion for encouraging humanism at the start of medical school.*

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All students contributed equally to this article.





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Combating burnout in surgical trainees

Jennifer LaFemina, MD, FACS, and Michael Winton, MD



Jennifer LaFemina, MD, FACS



Michael Winton, MD

While a career in medicine and the privilege it offers to care for patients has the potential for tremendous opportunity for professional and personal satisfaction, burnout is a major challenge facing medicine. Concerns for burnout bridge all specialties and impact all health care professionals. Surgeons and surgical trainees, specifically, may be at particular risk, with studies suggesting that 30 percent to 48 percent of surgeons and up to 69 percent of surgical residents demonstrate characteristic findings of emotional exhaustion, depersonalization and a low sense of personal accomplishment.^{1,2,3}

At the individual level, surgical residents, like others, experience physical exhaustion, cynicism, guilt and a feeling of ineffectiveness. Burnout can be associated with the failure to seek routine health care, depression, anxiety, sleep disturbances and excessive sleepiness, substance abuse and addiction and, sadly, suicidal ideation and suicide. Burnout impacts all around the individual, leading to strained or broken interpersonal relationships with family, significant others and co-workers.

More recently, organizations have started to recognize that burnout is not just a single individual's "problem." Rather, burnout translates to an overall organizational dilemma, as it leads to medical errors, hostility towards patients and reduced patient satisfaction. In a survey of U.S. surgeons, 9 percent reported they made a major medical error in the preceding three months. More than 70 percent of these errors were attributed to burnout.⁴

Those suffering from burnout have historically been silently suffering, attempting to cope with counterproductive measures – embracing the delayed gratification of "when I finish my training" or resorting to substance abuse. These measures do little to foster the growth and development of competent and resilient physicians who thrive both in the professional and personal realms. The best way to prevent burnout is to increase resilience and to protect and develop those values that the trainee holds true.

In the Department of Surgery and the General Surgery Residency Program at the University of Massachusetts Medical School, we have created and launched our "Wellbeing Program." The objectives of our program include:

- Teaching our future surgeons techniques to reduce burnout and to

increase resiliency.

- Augmenting traditional surgical training to develop surgeons who are increasingly competent in the changing world.
- Improving patient safety, quality and satisfaction.

To achieve these goals, the program encompasses four pillars that characterize the professional and personal values of the residents: physical, mental, social and professional (Fig. 1). Each pillar has a defined agenda. Residents who desire to take part will have the opportunity to engage in a voluntary study to determine if implementation of the program has an impact on the stated objectives.

Physical: Defined as a focus on the different physiologic body systems, this pillar will focus on the physical health of the residents and includes discounted a gym membership at the University of Massachusetts Medical School, strategic napping and sleep training, and protected time to seek routine health care.

Mental: Characterized by a focus on emotional health, this component will fuel positive emotions and a sense of being connected to something more global. This component is critical for residents to develop and refine skills needed to maintain a patient-first, humanistic approach in each patient encounter. This component encompasses our positive feedback initiative, mediation and yoga sessions (in part through the UMMS Center for Mindfulness), philanthropic efforts and the Anatomy of Humanism course. The latter will incorporate small group sessions that explore interpersonal relationships with co-residents, staff and patients and will be orchestrated by Laura Lambert, MD, who is a surgical oncologist and palliative care physician.

Professional: Defined as the pursuit of workplace success, this pillar will champion establishing and nurturing effective mentoring relationships. To accomplish this, we have expanded our formal multigenerational mentoring program.

Social: Characterized by a goal to nurture positive relationships in all forms, this pillar will encompass a Wellbeing Retreat, team-building and conflict management training and social hours that unite residents, faculty, friends, interprofessional groups and significant others.

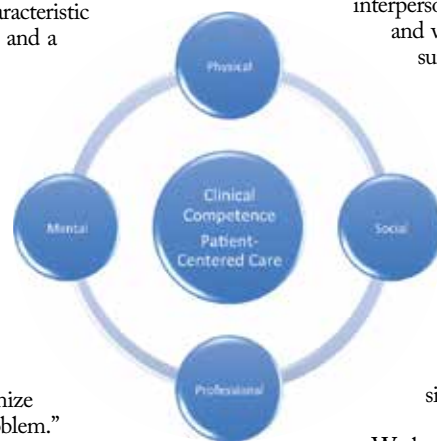


Figure 1

We have accomplished the first hurdle: to acknowledge that burnout is a major dilemma facing U.S. medicine and, in this case, surgeons and surgical trainees. The next major hurdle will be to implement effective programs and to demonstrate that these programs fulfill their stated objectives. With this active dialog and the investment that we already see at UMMHC and UMMS by residents and faculty, we expect to see the development of new generation of surgeons: a group that thrives professionally and personally, is competent and, at the same time, approaches their calling with a patient-centered, humanistic approach.

Figure 1. Pillar of the University of Massachusetts General Surgery Residency Wellbeing Program.

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Jennifer LaFemina, MD, FACS, is an assistant professor of Surgery and the program director of the General Surgery Residency at University of Massachusetts Medical School/University of Massachusetts Memorial Health Care. Michael Winton, MD, is the chief resident of General Surgery.

Caring for the Caregivers

Gary Blanchard, MD

It would be a job posting for which one would never rationally apply: long hours without the guarantee of regular breaks; no formal on-the-job training offered nor any manual provided, despite requiring high cognitive and emotional skills; and an omnipresent feeling of being undervalued and underappreciated for your time and effort by your colleagues.

In my job as a geriatrician, I have seen soldiers with military combat experience sobbing uncontrollably, ridden by guilt, unable to fulfill the ongoing, relentless requirements of this post. I have seen practicing physicians assume this job and suffer nervous breakdowns, ravaged by insomnia, depression and isolation. I have seen attorneys, engineers and teachers all similarly struggle – as this 24/7/365 role does not spare the well-educated, the financially secure, the physically strong or the emotionally resilient.

It is the role of a caregiver – for another human being, typically with some degree of physical, cognitive or emotional frailty.

And, as a geriatrician who bears almost daily witness to the pressures of this role, I am here to implore you: we – I – all of us – need to start listening more to those who care for our patients.

Important disclaimer: This “job” is usually not considered to be formal employment, even for those who readily acknowledge they have solely assumed the role of a de facto nursing home (only without any team support or shift work). Very few take this position for the money involved. By and large, it is done out of love, devotion and selflessness – and yet, the end result is that the care provided by these people often results in their own depression and financial hardship. These are the people who often suffer in silence.

Underlying this boom of caregiving, of course, is America’s rapidly aging population. More than 10,000 adults turn 65 every day and begin collecting Medicare. The average 70-year-old will require about 2.7 years of help in order to stay in their own home given future disability and functional impairment at the end of their life (JAMA 2015). To meet that need, nearly one in three U.S. adults have been conscripted into the role of caregivers – 43.5 million of whom provide care to those in midlife or older adults (National Caregiving Alliance, 2017). As a result, for every person in a nursing home in America, there is another frail older adult with functional deficits who is not in a nursing home, due primarily to the efforts of their caregiver in helping with basic ADL support and organizing/administering medications. And these caregivers not only work pro bono, they do so at great personal financial risk – an estimated \$522 billion annually (in lost wages, leaving the workforce altogether, etc.), a number that dwarfs the \$221 billion we typically spend annually on formal long-term care (GeriPal, 2014).

These people are a geriatrician’s best friend. They are elderly spouses, with medical problems of their own. (One elderly couple for whom I cared would beautifully complement the other’s deficits – the husband, with cognitive impairment but fewer physical limitations, received careful instructions from his wife, blinded by diabetic retinopathy and unable to see her insulin vials, on how to administer her insulin.) They are adult children in their prime working years, saving for retirement, with jobs that do not look favorably on unanticipated family medical

problems. They are grandchildren – millennials – forestalling their own education to help support their grandparent and parents. We cannot do what we do without their daily support.

The risk of caregiver burnout is particularly high for those caring for older adults with dementia and behaviors/neuropsychiatric symptoms. Physicians often assume the lay public knows how to effectively communicate with patients with Alzheimer dementia and/or treat behaviors in Alzheimer patients. But, truly, until you have been in the position of dealing with an older adult at 3 a.m. who is pacing and frantic with agitation and restlessness, none of us can truly know. (Not to mention that we often simply assume everyone has the requisite health literacy to know how to dress wounds, give Lovenox shots, recognize signs of hypoglycemia, etc.)

So, how do we as physicians do better? How can we help those caregivers at risk of burnout and, in so doing, possibly even prevent episodes of elder abuse committed by simply overtaxed, overwhelmed caregivers? My personal humble advice, to which I strive but do not always achieve:

- Encourage the caregiver to function as a member of the care team in your office as much as possible.
- Provide education about dementia and refer caregivers to local agencies for support, particularly Elder Services of Worcester Area (ESWA), which has information on and access to various programs related to caregiver education, support groups, resource utilization (e.g., home health aides, homemakers) and respite services in the community (including adult day programs).
- Encourage caregivers to improve their self-care and maintain their health, emphasizing that the primary predictor of whether an older adult can stay at home is their own emotional health.
- Technology can help relieve some of the burden of caregiving in myriad creative ways. For the older adult, an iPod Shuffle with familiar music, using large headphones, can be very soothing, while home cameras and a GPS tracking device can be invaluable in cases of wandering. For the caregiver, an app for managing a loved one’s medications or for mindfulness and meditation can be incredibly helpful. Online support could come from caregiver groups, blogs or forums. I would advise contacting ESWA to learn more about available technology options to assist with caregiving.
- Consider enrollment in a program like Summit Elder Care for those frail older adults who qualify for a nursing home but who choose to stay at home.

When I see an overwhelmed, overburdened caregiver of a patient of mine, I feel as if – at least on some level – I have let them down. If my primary responsibility as a geriatrician is to maximize the ability of an older adult to remain independent for as long as possible, there is oftentimes no higher yield intervention than allying with a devoted caregiver and fortifying our team to honor the wishes of an older adult.

Dr. Blanchard, a geriatrician, is the geriatrics medical director at Saint Vincent Hospital (SVH). He is the leader of SVH’s Nurses Improving the Care of Health System Elders (NICHE) team, which is devoted to improving the care of vulnerable older adults utilizing interdisciplinary team approaches. He is an assistant professor of medicine at the University of Massachusetts Medical School, where he also serves as a Learning Community mentor.

Burned Out or Snuffed Out: The Imperative for Wellness

George M. Abraham, MD, MPH, FACP



George M. Abraham, MD, MPH, FACP

Health care in the U.S., at this time, is undergoing pressures like probably no other field. With exponentially increasing costs, there is increased application of quality metrics, whether relevant or not to improving patient care, in an attempt to drive down costs. Hospitals and health care systems are forced to deal with mergers and acquisitions, creating ever-changing competitors in the workplace; the public reporting of data as a surrogate marker of quality; and shortages in the workforce (physicians and nurses), leading to challenges in staffing and maintaining service lines.

Physicians are caught in this maelstrom with, on one side, patient demands for prompt access to care, speedy diagnosis and high-tech treatments, and on the other, the challenge of productivity (increase in patient encounter volume) and grappling with an inefficient documentation system (an electronic health record which costs hundreds of millions of dollars and whose promise is to capture all facts of an encounter to help increase revenue, often at the cost of efficiency and logical thinking). Little wonder, then, that the practice of medicine is becoming a profession that does not treat kindly anyone who is “faint of heart.” With the increased stress and demands from all sides, physicians are struggling to stay in the practice of their chosen profession, making the old adage much more relevant today when we say “physician, heal thyself.”

It is under such circumstances that there has been increasing conversation at all levels and across the country about the imperative to develop wellness strategies to preserve the workforce. Challenges of transition in the workforce, with premature retirements and rapid turnover, bodes ill in terms of discontinuity of care, the large costs associated with new recruitment and onboarding, and provider and patient dissatisfaction.

There are some other alarming trends that make the need for wellness more dire. Unofficial data from multiple sources estimate approximately one suicide per day in the U.S. of either a provider, trainee or student. Those who are not driven to harming themselves fall victim to alcoholism or substance abuse, fractured family life, depression and other mental illness, among other issues.

Other concerning trends include medical students quitting mid-training and many others choosing to go to other professions that are less demanding. Anecdotes of students taking their own lives are not that uncommon, while many others express “buyer’s remorse,” as they realize that this is not what they had idealized as what the profession entails.

What is less well explored is the effect of burnout on productivity, medical errors and lower patient satisfaction. There are a few studies that suggest an increased rate of error with increasing stress.

National studies indicate that at least 50 percent of U.S. physicians experience burnout. While this may sound “alarmist,” with health care executives downplaying the magnitude of the problem, the next three to five years will manifest the problem even more, forcing the nay-sayers

to finally confront the issue.

There is both an ethical and an economic imperative to address the issue of burnout. Given the negative connotation associated with the concept of “burnout,” there has been a push to give it a positive spin and highlight the need for “wellness” instead.

Wellness initiatives have started to spring up in multiple fora all over the country. Professional societies, academic organizations and many other entities that depend on physician membership have heard the universal plea for strategies around wellness, both on individual and systems levels. Further, organizations are being asked to promote wellness in its physician employees or members in an attempt to decrease the erosion of the current workforce and, more importantly, encourage recruitment of new members to the workforce.

Incorporation of personal wellness has started right at the trainee and student level. Incorporating exercise, time for personal reflection, group reflection, etc. – all seem to help develop the positive energy that is necessary to counteract stress. Other suggestions include strategies around modifying work schedules to meet family demands, which helps maintain a positive family life.

On a systems level, making the electronic health records more user-friendly, patient encounters less rushed (increasing the time for each visit), the use of scribes to document, using a couple of appointment slots in the day to “catch-up” with returning phone calls, responding to messages, etc., and the use of other office staff, such as medical office assistants, to do some of the pre- and post-visit work have all helped dispel the notion that the physician needs to be the “hamster on the treadmill.”

While no success can be claimed by anyone, yet, at having conquered this problem, clearly, continued conversation and shining the spotlight is necessary to develop new, innovative solutions. Professional organizations, medical societies, health care systems and medical insurance providers have yet to find that common platform where they can all sit at the table and develop ideas around making wellness a shared initiative to accomplish a better health care workplace for all.

There is already a wealth of literature reviewing various initiatives that have been successful and that can be incorporated without huge financial investments. While employers dread rising costs, physicians dread the loss of autonomy and patients dread the loss of an established relationship and loss of choice with a shrinking workforce. Even the lay press, such as *The New York Times*, has featured articles on wellness, attempting to educate the consumer, whose voice can be often more powerful than the provider. Thus, everyone stands to gain if wellness initiatives are incorporated into the daily workplace.

Henry Wadsworth Longfellow summed it up best when he wrote, “It is not joy and not sorrow, that is our destined end or way; but to find that each tomorrow brings us further than today.”

Eliminating burnout and incorporating wellness should not be a dream, but an everyday facet of life. I applaud *Worcester Medicine* for doing its part in highlighting this problem.

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Dr. George Abraham is associate chief of Medicine at Saint Vincent Hospital, professor of Medicine at the University of Massachusetts Medical School, chair-elect of the Board of Governors and regent at the American College of Physicians and a member of the Board of Registration, Commonwealth of Massachusetts. He is an internist and infectious disease physician and maintains an independent practice in Worcester.

A Question for Our Readers

The articles in this issue of *Worcester Medicine* have been authored by individuals with a variety of backgrounds, but each of our contributors has focused on the topic of burnout – a state of spiritual, mental and physical exhaustion that can engulf both professionals and laypersons providing health care.

The members of the Editorial Board are anxious to engage you, our readers, and to learn if you have experienced oppressive stress and the end product of burnout in your professional lives. Equally important, the board would like to learn what you have found to be effective measures to mitigate stress in your work life. In short, what do you do to maintain your energy, focus and humanity in your professional lives?

And if you experienced burnout, where did you turn or what did you do?

PLEASE SEND COMMENTS VIA EMAIL TO WDMS@MASSMED.ORG OR A LETTER TO THE EDITORIAL BOARD, WORCESTER DISTRICT MEDICAL SOCIETY, MECHANICS HALL, 321 MAIN ST., WORCESTER, MA 01608.

Your comments or suggestions may be published anonymously as a resource to your peers in a future issue of *Worcester Medicine*.

– Anthony Esposito, MD

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Berlin Award-Winning Article: *Citrus medica* var. *sarcodactylis*

Laurel Dezieck, MD, PGY2



Laurel Dezieck, MD, PGY2

She had been awake for 30 hours, the medical examiner's number was written on her hand, it was 4 degrees outside, and she needed a bag of Miracle Grow.

Even though the car was warming up, she felt chilled in that kind of impermeable way that sets in and aches, a cocktail of fatigue, uncertainty and true cold. The night had been interminable, with a roster of patients who had been manipulative, pathetic or dying, with impossible expectations and demanding families. It had started with a department on fire during a week when it had been constantly smoldering, with angry invalids

crammed into every corner. There was the family patriarch, whose head was more blood than brain, with children who believed firmly that persistence and prayer would do what mannitol and neurosurgery could not. They spoke to her in the same voice she imagined they used at the airline counter when Jet Blue bungled their last connection: quiet, patient and determined to get their way.

Her mind was rough with cynicism. "You're wasting your time and our resources," she thought loudly at them, her face studiously blank as she reassured them that surgery was not an option, no matter what WebMD said. *"You have a funeral to plan, and I have 10 patients who need this room."*

She always thought that people had a finite tolerance for magic and miracles. That everyone had a small supply of the capability to suspend logic and indulge in faith or fantasy or the defiance of the most probable outcome. Some people spent it on God, some on soulmates or nine lives. Children possessed the most abundant supply, and they disbursed it frivolously on imaginary friends and Santa Claus.

Adults were more cautious, counting their stash, dolling it out in whispered prayers and matrimonial vows. But sooner or later, they'd find that what they bought and paid for in magic beans and faerie dust turned to bitterness, loss and disappointment like so much fool's gold. And she was the unhappy jeweler, pointing out the worthless pyrite and watching the toothless prospector cry.

And yet they refused to budge; they whispered prayers and held hands and cried and held vigil. She watched as the ache of pity turned to impatience that felt cold and tasted metallic; underneath it all was the dull nausea of shame at her own indifference.

A 22-year-old with a nasty narcotics addiction lounged in the hallway, overseeing the proceedings. On her way out the door, he accosted her.

"Did they find me rehab?"

"There aren't any beds tonight. You can call yourself to check in the morning."

"I can't; I don't have a phone."

"There are phones at the shelter." She looked right through him.

"I can't go to the shelter. I can't walk."

"Yes, you can. I saw you walk outside to smoke five minutes ago."

"I can't walk now. I need to be admitted."

"The social worker is calling you a cab."

"I won't go; I can't walk."

She left that morning with the retained feeling that she was perpetually scrabbling her fingers against a wet concrete wall of uncertainty and frustration, struggling to hold on as she slid down and wondering what it would feel like to hit the ground.

But now, finally, she was one preposterous errand away from home and bed. It was an absurd quest, but the normalcy of the task was soothing and she was determined not to return until she had acquired the requested plant food.

Snaking through the back roads towards home, the girl squinted as she concentrated on finding the nursery she swore she'd passed weeks ago. At last, the elusive establishment appeared around a bend. The place didn't look like much – a rickety wooden building with a faded sign, perched above a dirty window, announcing "Greenhouse." The owner's name may have at some point also been present, but the sign was so weathered that it was no longer legible.

The dim interior was the same: Piles of terra cotta pots in various sizes were stacked in a tilted pile in one corner. Two other walls were fitted with rough wooden shelves piled with ceramic dishes, trowels and something called "orchid spray." Next to the shelves was a door with another crude sign that read "hothouse." The last wall boasted a sales counter and behind it, a middle-aged woman with big owlsh glasses who smiled a greeting.

"How can I help you?"

"I need, um, Miracle Grow. For my husband."

"Of course. We don't have Miracle Grow, but we have, in a manner of speaking, some 'house blends.' What does he grow?"

"He has, ah, a Kaffir lime and a Meyer lemon tree."

"I have something that will work. Give me a few minutes to go get it. Take a look in the greenhouses if you like."

"That's ok." The woman blinked, accentuating her avian appearance.

She had been awake for 30 hours, the medical examiner's number was written on her hand, it was 4 degrees outside, and she needed a bag of Miracle Grow.

"Take a look. We have some new citrus cuttings, some usual species." At her client's frown, she added, "Maybe for your husband's collection."

"Oh, ok," the girl said, unconvinced, but she moved towards the greenhouse door anyway, uncomfortable under the other woman's pointed gaze.

The door creaked open to reveal narrow concrete stairs. She stepped over the threshold and was immediately struck by a wave of fragrant humid air that smelled of water and foliage, citrus and something spicy. It tasted tropical and faintly sweet.

Her eyes widened. The greenhouse was a sprawling, airy building, lined floor to ceiling with flora; enormous trees heavy with different-colored fruit brushed the high ceilings. Huge pots overflowing with lacy ferns spotted the isles, of which there were at least four, each narrow and obstructed by leaves, branches and enormous blooms, which leaned out, gawking at the new intruder.

She was so startled at first that she turned around quickly and pushed her palm against the wooden door she had just come through, half afraid it had disappeared and stranded her in this strange jungle. It creaked and gave way, allowing a stream of damp cool air to creep in. Comforted, she turned around again and then, taking a deep breath, descended the stairs.

Each counter was crammed with flowers of every color, tiny tree cuttings, vines on stakes and wooly bushes. A sign identified perfumed, white flowers shaped like tiny bells as Angel's Trumpet Marshmallow Sunset (*Brugmansia hybrid*). Next to it was a Giant Wax Plant (*Clerodendrum thomsoniae*), each yellow blossom larger than a dinner plate and splashed red. Above her head, Climbing Oleander (*Strophanthus preussii*) was strung across wooden support beams; each star-shaped petal crowned long red tendrils that slid across the back of her neck.

Life Saver Plant (*Huernia zebrina*) looked like a bush with three hundred eyes, each with thick maroon lids and dark recessed centers framed by crimson and yellow petals, like so many spiky lashes. There was a leafy potted bush in the corner with a sign identifying it as Miracle Fruit (*Synsepalum dulcificum*), which boasted that after consuming a single berry, everything you ate thereafter would taste sweet.

In the next row sat Persian Shield (*Strobilanthes dyerianus*), a vibrant purple leaf with jet-black stems that looked simultaneously

seductive and, she decided, a little malicious. Shying away from it, she breezed past a tree sprouting balls of spiky red hyphae that looked razor soft but felt silky against her cheek.

In the middle of the building, rising up and towering over the other plants, was an enormous gnarled tree, taller than all the rest, which split into a dozen thick, rough arms. Looking up, she noticed that it appeared that each of the winding branches was bearing fruits of different colors and sizes, from little orange orbs the size of a golf ball to huge, fleshy yellow citrus as big as her head.

Something rustled behind her and she whirled around quickly, half expecting to see an exotic bird emerge from the foliage, but instead, a man stepped out from behind the trunk of the impossible tree. He wore frayed jeans and boots covered with bits of soil and clippings.

"You look tired," he said.

"Thanks," she replied flatly.

"Not working today?"

"I work nights."

"Tough night, then," he said nodded sagely. It wasn't a question. "It's a good day to be in a greenhouse."

"Sure."

"You're not crazy."

"What?"

"There are six different fruits growing on this one tree here. You're not crazy."

"Seriously?"

"Yes, miss; they've been grafted on. Those there," he pointed to the giant yellow fruit, "those are ponderosas. The littler ones are cumquats and sunquats and oranges." He clambered up into a lower notch of the tree and reached up to expertly pluck two tiny orange fruits.

"Try this, it's the meiwa, it's sweeter." She looked at him dubiously but, intoxicated by the sultry air, abandoned her usual skepticism and popped the tiny fruit into her mouth. It burst with sweet, intense flavor that brought to mind remote beaches and salt-heavy air.

"This one is a nagami. It's a little tart, but I like it better...." She bit into it, and immediately her mouth was flooded with sour, bracing citrus. It took her a moment to realize that her new friend was four paces in front of her and had appointed himself her tour guide.

"This looks like an apple, but when you bite into it, it smells liked a rose. Rose Apple. *Syzygium malaccense*." He reached for a new tree that was about 5 feet tall with shiny, red fruits that rattled hollowly when he touched them. A tree cutting beside it immediately caught her eye, heavy with crumpled waxy fruits with appendages that looked like fingers.

"Citrus medica," he told her, as she reached out to touch the wrinkled, creased fruit, half expecting the fruit to come to life and return the embrace. "Buddha's Hand. Very rare. Hearty though."

She waded further into the maze of greenery. A aisle emanating a peppery greeting yielded cinnamon, oregano, allspice, blue rosemary, turmeric, black pepper, ginger root, thyme, four species of sage and tiny nutmeg trees. Delicate orchids crowded in a corner looking like so many ladies preening, each painted with yellows, pinks and purples. She couldn't help but pick up an odd flower from a remote corner with thick bulbous stems sprouting into soft, translucent creamy blooms edged with pink.

"Adenium obesum, the Desert Rose," the man told her. She peered down at the flower intently so that she could just see hazy pink and imagined dry, hot air and sand whipping around the hearty petals.

The spicy humidity was seductive, but she could tell through the glass above her that the sun was getting higher in the sky and her fatigue, which had been chased away by marvel, was creeping back up behind her eyes. Reluctantly, she made her way back towards the rickety exit.

"It's not about seeking out wonder, but being willing to know it.

Especially in small things," her guide called behind her. "Wonder nurtures possibility. It will not stave off sorrow, but it keeps it from consuming you. You see?" He smiled again at her.

For a moment, she saw lucent white orchids draped over the incandescent lights of the trauma bay, gardenias growing at the feet of a heroin addict as he lay in the hallway. A tree that grows six different fruits towers over the foot of the dying man's bed. As she turned to wave, she smiled back tentatively.

She handed the owlsh cashier her credit card and scooped up her purchases; somehow, along with the paper bag filled with earthy fertilizer and the adenium, she had also acquired the Citrus medica and a dainty white and purple Phalaenopsis orchid, which the sign called Magic Art.

"Come back soon," the older woman said, and the girl nodded. Then, she took one more long deep breath of the sultry, zesty air and hiked back outside into the snow.

Laurel Dezieck is in her last year of residency at UMass in the Emergency Medicine Program. She graduated from Wesleyan University in 2011 with degrees in English and French. Writing has been an important outlet for her throughout her medical training.

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Our mission is to provide high-quality, respectful and free medical care for the underserved population of Worcester County. The staff is all volunteers and is comprised of dedicated professionals and support staff, many of whom have been volunteering since the program started, and medical students and residents.

The program sees, on average, 50 patients per evening; many are pediatric patients who come to the clinic for physicals, vaccinations and minor health issues. We could really use the help of pediatricians and family medicine physicians, as we are losing our two family medicine physicians and we do not have a pediatrician.

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Worcester District Medical Society

Calendar of Events

2017

September 22
Friday
7:30 a.m.
Beechwood Hotel

26TH ANNUAL WOMEN IN MEDICINE BREAKFAST

"Navigating Your Career Path: The Value of Looking Forward"

Speaker: Luis Delis Cornell, Executive Vice President, Massachusetts Medical Society

Sponsored by Physicians Insurance Agency of Massachusetts (PIAM)

October 18
Wednesday
5:30 p.m.
Beechwood Hotel

12TH ANNUAL LOUIS A. COTTE LECTURE

"Safe Injection Sites: Heresy or Creativity?"

Speaker: TBD

November 1
Wednesday
5:30 p.m.
Beechwood Hotel

FALL DISTRICT MEETING AND AWARDS CEREMONY

The dinner meeting includes the Dr. A. Jane Fitzpatrick Community Service Award, the WDMS Career Achievement Award, and Scholarship Award Presentations.

December 1 & 2
Friday and Saturday
9:00 a.m.
MMS headquarters and the Westin Hotel Hotel, Waltham, MA

2017 INTERIM MEETING AND MEETING OF THE MMS HOUSE OF DELEGATES

All WDMS members are invited to attend as guests and may submit a resolution to the Massachusetts Medical Society.

December 6
Wednesday
5:30 p.m.
Washburn Hall, Mechanics Hall

A NIGHT AT THE MOVIES

Still Alice

Alice Howland (Julianne Moore), happily married with three grown children, is a renowned linguistics professor who starts to forget words. When she receives a diagnosis of Early-Onset Alzheimer's disease, Alice and her family find their bonds thoroughly tested. Her struggle to stay connected to who she once was is frightening, heartbreaking, and inspiring.



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2018

February 7
Wednesday
5:30 p.m.
Beechwood Hotel

222ND ANNUAL ORATION

Orator: Marianne E. Fellee, MD

Professor of Pediatrics and OB/GYN, former chair, Department of Pediatrics, UMass Medical School/UMass Memorial Health Care

March 1
Thursday
6:30 p.m.
reception,
Boyden Salon;
7:30 p.m.
program,
Mechanics Hall

WEIMAR SYMPHONY ORCHESTRA PERFORMING BEETHOVEN'S SYMPHONY NO. 5

Kirill Karabits, conductor, Valery Sokolov, violin

Program also includes Richard Strauss' *Die Erlenkönig* and Brahms' Violin Concerto

March 14
Wednesday
5:30 p.m.
Beechwood Hotel

WOMEN IN MEDICINE LEADERSHIP FORUM

Speaker: TBD

March 30

DOCTORS' DAY

Event to be announced

March 30 is National Doctors' Day when patients, friends, family, and colleagues honor physicians and express their gratitude for physicians' continuing commitment to patients and exceptional medical care.

Sponsored by the Worcester District Medical Society Alliance

April 11
Wednesday
5:30 p.m.
Beechwood Hotel

ANNUAL BUSINESS MEETING

Meeting includes presentation of the 2018 Community Clinician of the Year Award.

April 26 & 28
Thursday and Saturday
9:00 a.m.
the Seaport Hotel and World Trade Center, Boston

2018 MMS ANNUAL MEETING AND HOUSE OF DELEGATES

All WDMS members are invited to attend as a guest and may submit a resolution to the Massachusetts Medical Society.

MEET THE AUTHOR SERIES

Date to be determined

Sponsored by WDMS and Humanities in Medicine Committee of the Lamar Soutter Library at the University of Massachusetts Medical School

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Addressing Physician Burnout: Individual Solutions Versus System and Workplace Fixes

Diane W. Shannon, MD, MPH

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Burnout in Pharmacy

Dinesh Yogarathnam, PharmD, BCPS, BCCCP; Amanda Nguyen, PharmD

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Physician Burnout: The Next Public Health Crisis?

Harvey Kowaloff, MD, MMM

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Burnout: A Pandemic Needing Emergent Attention

Dawn Carpenter, DNP, ACNP-BC, CCRN

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Addressing burnout and fostering resilience at UMass: Two initiatives

Raghu Appasani, MS4; Leah Shesler, MS4; Katarina Anderson, MS4; Preetam Cholli, MS4

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Combating burnout in surgical trainees

Jennifer LaFemina, MD, FACS; Michael Winton, MD

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Burned Out or Snuffed Out: The Imperative for Wellness

George M. Abraham, MD, MPH, FACP

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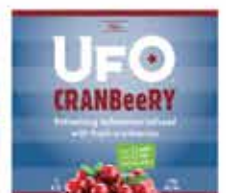
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