ACCP COMMENTARY





Burnout among clinical pharmacists: Causes, interventions, and a call to action

Tracy M. Hagemann Pharm.D., FCCP | Brent N. Reed Pharm.D., FCCP | Bridget A. Bradley Pharm.D. | Jennifer N. Clements Pharm.D., FCCP | Lawrence J. Cohen Pharm.D., FCCP | Scott A. Coon Pharm.D. | Catherine G. Derington Pharm.D., M.S. | Sandra L. DiScala Pharm.D. | Shareen El-Ibiary Pharm.D. | Kelly C. Lee Pharm.D., MAS, FCCP | Alisyn May Pharm.D. | Song Oh Pharm.D. | Jennifer A. Phillips Pharm.D., FCCP | Kimberly M. Rogers Pharm.D.

American College of Clinical Pharmacy, Lenexa, Kansas

Correspondence

American College of Clinical Pharmacy, 13000 W. 87th St. Parkway, Suite 100, Lenexa, KS 66215-4530. Email: accp@accp.com

Numerous studies have suggested that health-care professionals are at an increased risk of burnout, with rates exceeding those in other occupations as well as those in the general population.¹ Although burnout has received more attention in recent years, it is not a new phenomenon. The concept of burnout in health care has existed since at least the late 1960s, when the term was first used to describe the emotional and psychological stress experienced by clinicians.

Since then, a more detailed framework for burnout has emerged.² Burnout is a multidimensional construct consisting of (a) emotional exhaustion, (b) depersonalization (or cynicism), and (c) reduced personal accomplishment (or inefficacy), all of which result from the relationship people have with their work. Using this definition, around 66% of clinical pharmacists and up to 80% of physicians have experienced burnout according to some studies.^{3,4}

The consequences of burnout are wide-ranging, affecting clinicians and patients alike. Clinicians suffering from burnout experience reduced job satisfaction, which in turn affects productivity and interprofessional teamwork.¹ More alarmingly, increased rates of depression, anxiety, sleep disorders, substance use disorders, and suicidal ideation have been observed among clinicians experiencing burnout.^{1,5} In recognition of the

effects of burnout on well-being, the World Health Organization declared it an official medical diagnosis in 2019. 6

The impact of burnout is not limited to clinicians. Burnout also affects patients, as increased levels of stress and emotional exhaustion have been associated with medication errors, malpractice lawsuits, health-care-associated infections, and patient mortality. In addition, depersonalization has been associated with lower patient satisfaction and adherence to medical advice.

Altogether, these consequences suggest that urgent action is needed. However, consensus is lacking regarding how health-care leaders and clinicians can reduce burnout and work-related distress. This paper will address burnout among clinical pharmacists and its effects, discuss the origins of these problems, and offer recommendations for clinicians, institutions, and professional organizations.

1 | DEFINITION AND MEASUREMENT OF BURNOUT

Estimates of the prevalence of burnout are often based on emotional exhaustion—feeling emotionally depleted by one's work. However, emotional exhaustion alone is not sufficient for burnout, as it does not account for the individual's response to work stressors.² Cynicism resulting from emotional exhaustion causes an individual to depersonalize work, psychologically transforming it into a more manageable, impersonal experience. In addition, reduced personal accomplishment, the feeling that one's contributions are not effective or meaningful, is

This document was prepared by the 2019 Member Relations Committee: Tracy M. Hagemann, Pharm.D., FCCP, FPPA (Chair); Brent N. Reed, Pharm.D., FCCP, BCPS, BCCP (Vice Chair); Bridget A. Bradley, Pharm.D., BCPP; Jennifer N. Clements, Pharm.D., FCCP, BCPS, BCACP, CDCES; Lawrence J. Cohen, Pharm.D., FCCP, FASHP, FCP, FNAP, BCPP; Scott A. Coon, Pharm.D., BCPS, BCACP; Catherine G. Derington, Pharm.D., M.S., BCACP, ASH-CHC; Sandra L. DiScala, Pharm.D., BCPS; Shareen El-Ibiary, Pharm.D., BCPS; Kelly C. Lee, Pharm.D., MAS, FCCP, BCPP; Alisyn May, Pharm.D., BCACP, CDE; Song Oh, Pharm.D., BCCCP; Jennifer A. Phillips, Pharm.D., FCCP, FASHP, BCPS; and Kimberly M. Rogers, Pharm.D.

posited to occur as a function of exhaustion, cynicism, or a combination of the two.

Research is conflicting regarding whether the three dimensions of burnout develop simultaneously or sequentially, but their role in the phenomenon is supported by other frameworks of the person-work experience, including the job demands-resources model^{12,13} and others. ^{14,15} Although burnout and job dissatisfaction are related, they represent distinct psychological phenomena, and research has yet to fully elucidate the direction of the relationship or the effects of potential confounders (eg, poor working conditions). Burnout is perhaps more accurately described as the opposite of work engagement, which is itself a multidimensional construct consisting of vigor (high levels of energy), dedication (feelings of significance or meaning), and absorption (being engrossed in work). ¹⁶ In this regard, burnout is considered a job-specific phenomenon, though it may contribute to disorders that permeate other aspects of one's life (eg, anxiety, depression). ¹⁷⁻¹⁹

The Maslach Burnout Inventory (MBI) is the most commonly used instrument to assess burnout among health-care professionals to date. Within this tool, the three dimensions of burnout are measured using separate subscales. Other instruments include the Oldenburg Burnout Inventory (OLBI), the Copenhagen Burnout Inventory (CBI), and the Professional Fulfillment Index (PFI). The OLBI assesses emotional exhaustion and general disengagement from work and has been validated in health-care professionals. The CBI measures personal burnout, work-related burnout, and client-related burnout and has been used to characterize burnout among human services employees. Finally, the PFI assesses well-being by evaluating both burnout (defined as work exhaustion and interpersonal disengagement) and professional fulfillment. He MBI is proprietary and available for a fee, whereas the other tools can be used at no cost.

Recently, the American Pharmacists Association (APhA) began offering pharmacists the opportunity to take the Well-Being Index (WBI), a tool developed by Mayo Clinic to assess and track well-being. Originally validated in physicians, the WBI has since been validated as a tool to predict distress (defined as high fatigue and burnout, low quality of life, and suicidal ideation) across many different occupations.²⁴

2 | CAUSES OF AND CONTRIBUTORS TO BURNOUT

Because burnout results from a maladaptive relationship between individuals and their work, its causes and contributors can be divided into individual (or person-related) factors, organizational (or work-related) factors, and a mismatch between the two (sometimes called situational or contextual factors).

2.1 | Individual or person-related factors

Individual factors such as demographics and personality traits may affect one's risk of developing burnout. The most consistent

demographic characteristic associated with burnout is age. Burnout appears to be more prevalent in those 30 to 40 years of age and those early in their careers. These findings have been corroborated in pharmacists. Those who experience burnout early are more likely to leave their jobs, which may create survival bias, suggesting that current estimates of the prevalence of burnout actually underestimate its pervasiveness.

Sex is not a strong predictor of burnout; however, some studies have found a higher prevalence of burnout among women. ^{2,3,26,28} Similar findings have been observed in pharmacy; for example, in a survey of pharmacy faculty, women were at a higher risk of emotional exhaustion. ²⁶ Marital status has also been linked to burnout, with studies suggesting that single individuals are at a higher risk of burnout than those who are married or divorced. ² A higher level of education has also been associated with higher burnout rates, another feature common to pharmacy professionals. ² Personality traits linked to burnout include lower self-esteem, lower level of hardiness, external locus of control, and type A behaviors (eg, competitiveness, time-pressured lifestyle, hostility). ² To date, the association between burnout and certain personality traits among clinical pharmacists has received little attention in the literature.

2.2 | Organizational or work-related factors

Burnout is traditionally related to job overload and quantitatively increasing job demands relative to job resources.²⁹ Additional job characteristics linked to increased burnout include time pressure, lack of feedback, lack of autonomy, lack of social support, role conflict, and role ambiguity. Role conflict refers to inconsistencies in the information received about one's job (eg, expectations that differ from the job description), whereas role ambiguity refers to any situation in which an individual is uncertain about his or her role responsibilities.^{2,30}

Compared with nonhealth professionals, clinical pharmacists face unique challenges that increase their risk of burnout. Clinical pharmacists are often placed in high-stress environments, where they are faced with decisions that have a low tolerance for error. In addition, clinical pharmacists interact with patients on an emotional level (ie, emotional labor), often with inadequate periods of recovery. The demands that result from this helping relationship can extend to one's personal life, increasing the risk of work-family conflict. In date, no studies have suggested differences in the rates of burnout between clinical pharmacists and pharmacists without direct patient care responsibilities or pharmacists practicing in certain areas of specialization.

2.3 | Person-job mismatch

Although the previously mentioned factors have independently been associated with burnout, a growing body of evidence suggests that the main driver of burnout is the degree of motivational mismatch between individuals and their work. Conversely, the degree of person-job fit is associated with work engagement, suggesting that

burnout and engagement exist as opposite poles on the same continuum.² A framework consisting of six areas of worklife has been developed to describe the relative fit between individuals and their job: workload, control, reward, community, fairness, and values.²⁹

A mismatch in workload is especially problematic when recovery time is inadequate. In the 2014 National Pharmacist Workforce Survey, 66% of respondents experienced high or excessively high workload and 45% reported that their workload negatively affected their emotional and mental health.³² Mismatch can also occur with regard to the type of work performed. Clinical pharmacists are often involved in a variety of duties beyond patient care, such as teaching and administrative responsibilities. Indeed, having too many nonclinical duties is a strong predictor of burnout among clinical pharmacists, as is having inadequate time for teaching and administrative responsibilities.³ Individuals with a high level of commitment and dedication, such as those who see their work as a calling, are more likely to experience frustration and discontentment when they fail to meet expectations.³³

A mismatch in control may result from excessive workload relative to available resources, as well as when one's input is not considered in organizational decision-making. As a consequence, individuals are less likely to exercise initiative in work activities. ³³ Clinical pharmacists may experience a mismatch in control in a variety of ways, such as the inability to practice in a manner consistent with their expertise and training (eg, states with limited opportunities for collaborative practice) or the inability to exert leadership on the interprofessional team. Although the latter has not explicitly been studied in pharmacy, role conflict may occur when roles have not been defined by organizational leadership or when disagreements occur between team members.³⁴

Although work-related rewards take many forms (eg, financial, social, intrinsic), reward mismatch increases one's sense of inefficacy and vulnerability to burnout.^{2,33} For example, a salary that is not commensurate with one's contributions, as well as underappreciation from patients, colleagues, or organizational leaders, can diminish an individual's sense of accomplishment. Indeed, among clinical pharmacists, low salary has been identified as a work-related stressor, and underappreciation is an independent risk factor for burnout.³

Community refers to social interactions in the job, which can include teamwork, conflict management, trust, mutual support, civility, and closeness between peers.^{29,33} Clinical pharmacists interact with a variety of individuals at work (eg, patients, peers, supervisors), making them particularly susceptible to the effects of community. Trust is a critical component of a strong workplace community, and high levels of trust enhance creativity and lead to greater job performance.35 Support from individuals in the workplace (eg, positive interactions, a sense of belonging) can enhance engagement at work, thereby decreasing the risk of burnout.³⁶ For example, supervisor support may reduce perceived workload and increase flexibility, influencing productivity and stress levels; coworker support may affect one's sense of accomplishment.³⁶ Conversely, incivility in the workplace can negatively affect engagement and provoke anxiety and distress in certain individuals.35 Lack of positive interaction and sense of community may also increase work stress, ultimately leading to burnout. 33,35

Fairness often overlaps with mismatches in rewards and community.²⁹ Perceptions of unfairness are often related to effort-reward imbalance, which can cause individuals to become emotionally and physically distanced from the workplace, decreasing engagement and ultimately affecting the overall workplace community.³³ Conversely, individuals who perceive their supervisors as fair and supportive are less likely to burn out and more open to organizational change.³⁷ This is particularly important for clinical pharmacists, given their rapidly evolving role in health care.

Finally, values refer to the personal expectations of the job and the ideals that originally attracted the person to the job.²⁹ Often, these values are related to one's motivations for the work rather than to extrinsic rewards such as salary and promotion opportunities.³⁶ If a mismatch in values arises, individuals are forced to choose between their own ideals and what can actually be done, which may lead to frustration and stress. Sources of mismatch in values for clinical pharmacists include constraints in the current health-care model, role in the workplace hierarchy, time constraints preventing them from achieving their desired goals, and financial objectives that may compromise patient care. Such conflicts affect all three areas of burnout, though they have not specifically been studied in clinical pharmacists.^{36,37}

3 | EXISTING INTERVENTIONS AIMED AT ADDRESSING BURNOUT

Given that burnout is thought to arise from a chronic mismatch between individuals and their work, interventions designed to address burnout can broadly be categorized into individual- and organization-focused strategies. Individual-focused interventions generally involve changing how individuals cope with job stressors or how they perceive the work, whereas organization-focused strategies tend to address the work itself, particularly the stressors thought to be contributing to burnout.²

3.1 | Individual-focused interventions

Most literature on combating burnout has focused on individual strategies, though some strategies have been coupled with organization-focused interventions. Among physicians, individual-focused strategies such as mindfulness techniques and stress-management training have been associated with small but meaningful decreases in burnout. 38-43 However, most of these studies were short term (ie, weeks to months), primarily addressed emotional exhaustion, and assessed outcomes immediately after the intervention. 41 Of importance, lower levels of resilience have been reported among physicians who were expected to deal with burnout by themselves than among those who received support from organizations. 40,44 Consequently, combining individual- and organization-focused interventions would likely achieve longer-lasting positive effects. 41

Physical interventions to address burnout have included exercise and sleep. Many studies have shown the positive effects of physical

activity on burnout.⁴⁵⁻⁴⁷ Exercise modalities have ranged from aerobic activity (including both low-intensity aerobic exercise such as walking and high-intensity activities like running, cycling, and swimming) to strength training and mindful movement such as qigong and tai chi. Exercise reduces symptoms of anxiety and depression, which are often markers of burnout,⁴⁸ and can also improve fatigue, absenteeism, and social relationships.⁴⁹ Insufficient sleep can erode resilience in the face of stressful situations and, in one study, was shown to predict burnout.⁵⁰ Lack of sleep affects cognitive performance in the areas of memory and executive function, which can exacerbate stressors in high-demand jobs such as those in clinical pharmacy.⁵¹

Practicing mindfulness techniques has been associated with significant reductions in stress-related symptoms of burnout among health-care professionals. 38,52-54 Mindfulness focuses on awareness rather than relaxation and can help individuals become more attuned to the early signs of burnout such as emotional changes, physical symptoms (eg, headaches, muscle tension), and negative thoughts (eg, blame) before they become unmanageable. Most studies on such techniques have used an 8-weekmindfulness-based stress reduction program performed in a group setting. However, individual mindfulness techniques such as meditation and personal reflection are also common among highly resilient individuals, making it unclear whether the observed effects are intervention related. 56

3.2 | Organization-focused interventions

Although efforts to reduce burnout often focus on how individuals cope with stress and balance their work and personal life, both individual and organizational interventions are required to combat burnout effectively. The Examples of organization-focused strategies include alterations in workload or workflow, improvements in work-life integration (eg, scheduling, leave policies), and positive changes in organizational culture and values. Changing the organizational culture may be particularly challenging, given that it often requires a reevaluation of the organization's mission, training of senior leadership, or hiring an individual focused on clinician well-being. Nevertheless, leadership effectiveness has been associated with increased professional satisfaction and a decreased likelihood of burnout.

Compared with individual-focused interventions, fewer studies have assessed the effects of organizational strategies. In a meta-analysis assessing both individual- and organization-focused interventions to reduce burnout among physicians, both strategies improved emotional exhaustion, depersonalization, and burnout overall, though no specific intervention prevailed. As with individual-focused interventions, many of the studies assessing organization-focused interventions were short in duration, with limited follow-up analyses.

In another meta-analysis of studies among physicians, organization-focused interventions were associated with a 2-fold greater reduction in burnout than individual-focused interventions, particularly when multiple elements were combined.⁵⁹ Although interventions varied in scope and duration, one study stood out because of its large contribution to the overall effect size (48.7% weight).^{59,60}

The intervention of interest was a reduction in inpatient attending physician rotations from 4 weeks to 2 weeks. Despite the simplicity of the intervention, the effects of burnout, perceived stress, and emotional exhaustion were reduced by more than 50%.⁶⁰ Results like these indicate the potential for organizations to implement sustained and meaningful interventions to reduce burnout without needing to completely restructure existing systems.

Of importance, existing meta-analyses have focused on physicians, and it is unknown whether similar interventions would reduce burnout among clinical pharmacists. However, clinical pharmacists face similar stressors in their day-to-day roles (eg, long hours of cognitively intensive work) and work in the same environment as physicians, suggesting that the effects observed in these studies could be extended to clinical pharmacists. Accordingly, implementation of similar organization-focused strategies could ameliorate the growing rate of burnout among clinical pharmacists while we await more evidence from studies tailored to this population.

4 | CALL TO ACTION

4.1 | Making well-being an organizational priority

Organizations must make clinician well-being a priority and address burnout as a systemic and chronic problem rather than only performing isolated interventions after a specific event (eg, a retreat after a clinician suicide or major medical error). Without significant structural changes implemented by organizational leadership, burnout will likely persist.

Mayo Clinic has been a pioneer in promoting clinician engagement and reducing burnout.⁶¹ After surveying the entire organization, a task force composed of senior leaders, health-care providers, and scientists was formed to redefine the shared commitment between clinicians and the organization and to influence the drivers of burnout and engagement. The task force identified seven such factors: workload, efficiency, flexibility/control over work, work-life integration, alignment of individual and organizational values, social support/community at work, and the degree of meaning derived from work.⁶²⁻⁶⁴ Corresponding strategies were planned to address each of these drivers, including implementing new policies (eg. changes to medical/ sick leave, vacation, flexible scheduling) and making changes to infrastructure (eg, implementing more efficient electronic health record systems, adjusting productivity targets). The resulting guidance document was subsequently endorsed by more than 95% of the 2000 clinician and scientist respondents at Mayo Clinic and helped shift its culture toward improved well-being

Although the strategy used by Mayo Clinic is not a one-size-fitsall solution, it provides a model that can be adapted by other organizations, including pharmacy departments. Key elements of this approach include taking responsibility for well-being as an entire organization (rather than delegating it to a specific department [e.g., human resources]), routinely assessing engagement and burnout among clinicians, obtaining buy-in from a variety of stakeholders (eg, leaders, clinician representatives), and transparently sharing results and planned strategies across the organization. A variety of standardized metrics have thus been made available to assess burnout among clinical pharmacists at baseline and over time and to report on the progress of efforts to address the issue.⁶⁵

Recently, a national consensus conference was held with representatives from several pharmacy organizations and employers, as well as individual pharmacists. This group met to develop 50 actionable recommendations, which were recently published. ⁶⁶ These broad recommendations for the pharmacist workforce will provide opportunities for action by individuals or organizations within the profession.

4.2 | Engaging other health-care professionals

Most drivers of burnout are experienced by every member of the health-care team (eg, job stressors) or at the interfaces between team members (eg, interpersonal conflict), suggesting that efforts to improve burnout should be collaborative and interprofessional. In a recent discussion paper, a panel convened by the National Academy of Medicine (NAM) recommended that, as an initial step, organizations create opportunities for health-care professionals to share experiences related to environmental, shared, and profession-specific stressors affecting members of the team.⁶⁷ Although these perspectives are crucial for identifying both unique and shared stressors, interventions should focus on benefiting the team as a whole by promoting team function and culture. In fact, some of the most effective organization-focused interventions for reducing burnout have included improving communication between team members and promoting a sense of teamwork.⁵⁹

Subsequent NAM publications have proposed use of a design thinking, systems approach to fully understand the stressors affecting healthcare professionals.⁶⁸ Design thinking involves defining and analyzing a problem, exploring and testing a variety of potential approaches, and implementing the optimal solution. With respect to clinician well-being, the design thinking approach requires shared perspectives directly from those experiencing work stressors. Although organizational leadership should be involved, diverse interprofessional teams are well equipped to identify needs across the system and work with leaders to determine the feasibility and viability of the proposed solutions.⁶⁷ A related approach involves forming a team composed of two or three clinicians and administrators with expertise in burnout who meet with unit leaders, conduct work-unit focus groups, and identify priority areas; this information is then returned to the unit leaders for implementation.⁶¹ Regardless of the exact mechanism used, organizations that support and promote team culture are more likely to cultivate health-care professionals who are resilient to burnout.69

4.3 | Redesigning work and improving workflow

Health care is complex, and many work-related stressors experienced by clinicians are a consequence of suboptimal workflow. Some of the challenges in existing workflows have resulted from traditions that slowly evolved over time, rather than steps emerging from thoughtful analyses of work and how to make it more effective and efficient.

Perhaps one of the greatest contributors to frustration among clinicians in the modern era is the electronic medical record (EMR), which has become an integral aspect of patient care. Greater than 95% of hospitals and more than 50% of office-based physician practices have adopted EMRs, and physicians spend up to 6 hours per day performing EMR-based activities such as documentation, order entry, billing, and reading and responding to inbox messages. ^{70,71} As their documentation responsibilities grow, clinical pharmacists are spending more time in the EMR, and those with operational responsibilities (eg, order verification) may already approach or exceed the number of hours documented by physicians. Given the detrimental effects of EMRs on work-related outcomes (eg, increased rates of burnout, decreased clinician satisfaction and productivity, negative interactions between clinicians and patients), redesigning the EMR should be a priority for all health-care organizations. ^{70,72}

Major criticisms of EMRs are that they are labor-intensive (eg, documentation as required for regulatory compliance) and detract from patient care, contributing to what some have called a "moral injury." 73,74 Organization-focused efforts to streamline the EMR can address a variety of factors that contribute to burnout, including work overload, autonomy, and control. Pecific interventions to improve the EMR have included off-loading nonessential tasks to nonclinician staff (eg, medical scribes), streamlining the medication reconciliation process, standardizing prescription renewal, using workflow mapping, managing e-mail inboxes, and using verbal messaging. 74,75

In one randomized controlled trial, the use of medical scribes to improve the efficiency of EMR documentation was associated with improved physician satisfaction, chart quality, and accuracy and a decrease in charting time. In another study, medical scribes increased the average number of daily patient visits and revenue, thereby offsetting the cost of an additional medical assistant or nurse. Hathough the documentation requirements for clinical pharmacists are generally less onerous than those for physicians, improved chart quality and accuracy will be beneficial for clinical decision-making, and improved efficiency will mean less time waiting for documentation to be completed.

Enhanced EMR usability is another area of opportunity for improvement. Examples include improving the interoperability of different EMRs and sharing data across organizations in a way that does not compromise the security of patient health information. For clinical pharmacists, having access to data from community pharmacies and insurance plans would assist in performing medication reconciliation and evaluating medication adherence. The use of artificial intelligence for clinical decision support has also been proposed to improve EMR usability, thereby providing clinicians of all disciplines with more time to interact with patients. As with other organization-based interventions, a systems-based approach should be used to align the concerns of frontline EMR users with potential solutions. 61,72

Similar to the growing use of medical scribes to redesign workflow for physicians, leveraging the knowledge and skills of

pharmacy technicians could improve workplace outcomes among clinical pharmacists. Opportunities for integrating pharmacy technicians into the process of care were recently reviewed in an ACCP white paper, and a growing number of training programs have been developed to help technicians embrace these new roles. The use of pharmacy technicians has so far primarily been limited to operational roles, but increasingly, studies have investigated their potential to assist with clinical duties such as anticoagulation management and immunizations. Specific areas of support include medication history-taking and reconciliation, patient interviews (eg, screening for preventive health services), data entry, and coordinating medication coverage and payment (eg, completing prior authorization requests).

As with medical scribes, empowering pharmacy technicians with greater responsibility would likely improve the cost-effectiveness and efficiency of care. Furthermore, enabling pharmacy technicians to assume some of the clinical tasks that do not involve clinical expertise and judgment could decrease pharmacist burnout by reducing exhaustion and extending care (ie, improved personal efficacy), similar to the way in which the sharing clinical duties with pharmacists reduces physician burnout.⁷⁸ The potential effects of such clinical pharmacist-technician models should serve as the subject of future research.

Compared with physicians and nurses, less is known about the effects of workload on pharmacist well-being, which may partly be a result of the profession's evolution to focus less on dispensing services and more on patient-centered medication management. Much of the work performed by clinical pharmacists is now cognitive and emotional in nature, making it more difficult to quantify and track. Patient census is commonly used as a surrogate for workload, but this is a crude measure that fails to account for differences in the acuity and complexity of patients' medical needs and the knowledge and skills necessary to care for them.

Patient census also fails to account for the time necessary to perform nonclinical duties, which remain a major driver of burnout among clinical pharmacists. Activities such as research and teaching are also difficult to quantify. For example, the number of students or residents assigned to a given preceptor fails to account for the variability in trainee needs, such as the differences in support required for learners on their first vs their last rotation. The level of research involvement also varies considerably, given that some pharmacists may independently perform research or significantly influence the design and implementation of trainee research projects, whereas others may only provide input as a content expert. Teaching duties also vary, with some pharmacists having heavy administrative responsibilities (eg, course coordinators and residency program directors) and others perhaps providing only an occasional lecture or elective rotation as a content expert (eg, adjunct instructors and preceptors).

To address burnout resulting from workload mismatch, more comprehensive metrics are needed to quantify the work performed by clinical pharmacists. Existing metrics commonly rely on self-report (eg, timesheets) or other forms of documentation (eg, number of interventions made) and therefore represent a form of work themselves. They may also fail to capture the full scope of work performed. One promising attempt was recently made to characterize workload in order to

improve the allocation of full-time clinical pharmacist positions.⁷⁹ This tool was intended to account for patient acuity and teaching responsibilities in addition to overall patient census; however, its use of medication cost may have inflated the need in certain areas (eg, oncology), and it could not account for emotional labor, which may not correlate with patient acuity. Nonetheless, it represents a paradigm upon which improved metrics can be built and used to improve workflow.

4.4 | Responding to emotional crises

Individual-focused interventions should not exist in a silo but should instead be incorporated into holistic organizational well-being programs. Although most organizations have employee assistance programs, clinicians may still face barriers such as knowing how and when to access these programs, dealing with the costs of services provided, and experiencing uncertainty regarding the confidentiality of their records. In addition, many employees may be uncomfortable accessing providers within the same organization as their employment.

To address these issues, a variety of alternative options may be provided. On-site counselors may be made available, increasing access and convenience for employees.⁸⁰ When tragic events occur (eg. suicide), swift action is needed from the organization, which may include debriefing, providing on-site counselors, and permitting grief-related leaves of absence. For example, a pilot program known as Code Lavender was implemented at the University of California Health San Diego to address stressful events in the workplace and provide coworker comfort.81 Aspects of the program included words of comfort, chocolate, lavender essential oil, and employee health referral information. The pilot study showed that all participants found it helpful and that 84% would recommend it to others. The study was then expanded to include the creation of a caregiver support team, which consisted of supporters who received 8 hours of training by a psychologist and were trusted by their peers to provide emotional first aid. 82 Of the 40% of employees who reported symptomatic stress in the workplace, all found the peer support helpful and would recommend the program to others.

4.5 | Role-modeling resilient behaviors

Clinical pharmacists must serve as positive role models for students and residents, who will face multiple stressors as they begin their career, such as ongoing training and certification requirements, work conflict and other types of job strain (eg, fear of failure), and pressures outside work (eg, family, student loans). As role models and mentors, clinical pharmacists have traditionally been expected to demonstrate professionalism and the knowledge and skills necessary to be an effective interprofessional team member. However, similar expectations should extend to role-modeling resilience and other behaviors that emphasize well-being. Mentors should engage in a continuous dialogue with trainees about burnout and inculcate a culture of well-being. ⁸³

4.6 | Improving person-job fit/match

Because burnout is thought to emerge primarily as a result of chronic motivational mismatch between individuals and their work, improving person-organization and person-job fit should be prioritized for individuals and organizations alike. Indeed, studies have demonstrated associations between the degree of person-job fit and the degree of burnout in health care and beyond, resulting in significant downstream consequences for organizations (eg, absenteeism, turnover). 84,85

One strategy for improving person-job fit is to more clearly articulate job responsibilities and other expectations (eg, needs, demands), given that clinical pharmacist jobs can vary considerably (eg, practice setting, teaching and research requirements, management responsibilities). Although a discrepancy between perceived and actual person-job fit has not specifically been investigated among health-care professionals, its importance has been the subject of research in other areas. According to these studies, minimizing this discrepancy among prospective applicants to clinical pharmacist positions should therefore increase the likelihood of engagement and reduce the risk of burnout.

One way to minimize the discrepancy between perceived and actual person-job fit is to conduct a formal job analysis. Job analysis can aid in creating job descriptions that accurately portray the roles and responsibilities of the job, and a variety of methods exist for analyzing professional jobs (eg. combination job analysis, cognitive task analysis).87 The benefit of performing a job analysis is that it usually involves perspectives from current jobholders (ie, not just supervisors or human resources personnel), thereby reducing the risk of discrepancies between the job description and the actual experience in the job. Consequently, new employees are more likely to meet the needs and demands of the organization. In addition to further clarifying the job description, a job analysis can aid in recruitment and selection by identifying the knowledge, skills, abilities, and other characteristics desired of prospective employees. Given the dearth of studies in this area, research should be conducted to assess the effects of personjob fit among clinical pharmacists, with specific attention to the role of job demands, workload, reward systems, and job security.

An area related to job expectations involves the types of relationships individuals have with their supervisors and other leaders in the organization. Perceived support is an important aspect of person-job fit, suggesting that the expectations set by organizational leaders play an important role in reducing the risk of burnout. 88 Executive officers, directors, supervisors, and department chairs should be aware of their behavior as leaders and whether their employees' support needs are being met. Leadership training may be needed to ensure that the expectations placed on employees (eg, workload, control) are realistic, fair, and consistent with the organization's values.

Providing career guidance is another potential strategy for mitigating burnout among clinical pharmacists. Mentorship should be provided to students and residents as they evaluate potential career pathways, increasing the likelihood that they will pursue a career in pharmacy that brings long-term satisfaction. One strategy to facilitate this is to encourage trainees to self-reflect and align career decisions

with their strengths and weaknesses. As an example, the APhA Career Pathway Evaluation Program is a free online assessment tool (https://www.pharmacist.com/apha-career-pathway-evaluation-program-pharmacy-professionals) in which career options are suggested to respondents on the basis of their interests and values.

Another strategy is to provide trainees with realistic previews of potential jobs in pharmacy. Although data exclusive to the profession are lacking, realistic job previews in other industries have been associated with a variety of positive organizational outcomes, including improved accuracy of expectations, higher performance, and lower turnover.⁸⁹ Although advanced pharmacy practice experiences (APPEs) reflect some aspects of the job, students may not be exposed to the full scope of a clinical pharmacist's career, particularly the activities outside day-to-day patient care. In addition, many students have already selected a career path by the time they encounter APPEs.

Career guidance can also be provided to employees who are already in the job. This may begin as early as orientation, given that organizational socialization can help new employees adjust their expectations to the realities of the job. 90 However, career counseling should not be a one-time intervention; rather, it should be performed on a continuous basis to increase the employee's self-awareness and ensure that personal and professional values are aligned. 91 Career coaching and counseling should be offered by organizations, and employees should be encouraged to use these services without penalty from their schedules.

4.7 | Supporting burnout research

As highlighted earlier, most research on burnout in health care has focused on other professionals. Although efforts have been made to characterize the prevalence of burnout among clinical pharmacists and some of its associated factors, much remains unknown. Consequently, a research agenda should be created to eliminate these gaps in our understanding.

As the awareness of burnout has grown, so has use of the terms used to denote conceptually related but different psychological constructs, such as work-related stress, strain, and dissatisfaction. Because burnout is grounded in several decades of empiric research, efforts to identify, assess, and address it should be consistent, using established frameworks and validated instruments, when possible. Research efforts will likely further be strengthened by involving industrial/organizational psychologists and other experts whose research focuses on work-related outcomes.

The antecedents and consequences of burnout are often assumed to be shared across health professions. However, most research on burnout has focused on disciplines outside pharmacy; thus, it is relatively unknown whether certain aspects of burnout are unique to clinical pharmacists. In addition, some causes of burnout may occur uniquely at the interface between disciplines, which may be particularly problematic, given the growing emphasis on interprofessional team-based care. Consequently, research into the antecedents and

consequences of burnout should include studies of clinical pharmacists as well as interprofessional health-care teams.

Although a variety of individual-focused interventions have been studied in health-care professionals (eg, coping strategies, resiliency training), few have involved clinical pharmacists. Similarly lacking are studies demonstrating whether such interventions are effective long term (ie, beyond 6-12 months) because they primarily affect the symptoms of emotional exhaustion, not the underlying causes of burnout. The lack of evidence connecting burnout to organizational consequences in pharmacy (eg, absenteeism, turnover, increased cost) may partly explain leaders' reluctance to invest in organization-focused strategies that address the contextual factors thought to most contribute to burnout. More research is also needed to determine whether organization-focused interventions aimed at these underlying causes are feasible and effective.

Lack of available funding represents another barrier to burnout research. Although several professional pharmacy organizations have made public their commitment to addressing burnout and promoting pharmacist well-being, efforts so far have primarily consisted of educational programming and not accompanied by explicit commitments to fund burnout-related research. ^{66,92} Professional organizations can also encourage greater funding from nonprofit organizations and government agencies, particularly given the harmful effects of burnout on patient care and safety.

5 | CONCLUSIONS

A key aspect of ACCP's mission is to enable clinical pharmacists to achieve excellence in practice, research, and education. ACCP should be cognizant of all issues facing clinical pharmacists in the workplace, including the aspects that may lead to burnout. As an organization, ACCP should create access to resources for members that can be used by individuals and institutions to improve clinical pharmacist well-being. These should include dedicated support for research into pharmacist resiliency and well-being, development of new metrics that can be used by employers of clinical pharmacists to evaluate workload and workflow, and identification of best practices for adoption by both individuals and organizations/institutions to improve clinical pharmacist well-being.

Clinical pharmacists are at risk of burnout because of work-related stressors that may affect their ability to function both at work and at home. Much attention has recently focused on the causes of burnout among health-care professionals, but many of the proposed solutions have primarily targeted individuals rather than the underlying organizational and contextual causes of burnout. Professional organizations have developed programming to promote clinician well-being but could also highlight best practices and fund research efforts that explore strategies for addressing burnout. Indeed, implementing solutions to combat burnout will require a strategic commitment from health-care organizations, and the recommendations provided herein should be considered a call to action. Although allocating resources to address the well-being of clinical pharmacists may be costly upfront,

these efforts will be overshadowed by the costs of absenteeism, turnover, and decreased quality of care. Clinical pharmacist well-being cannot adequately be addressed by any one pharmacist, organization, or institution. All parties will have to work together to create a culture of well-being that can be sustained as our profession grows.

Call to Action

- Make clinician well-being an organizational priority and an integral part of strategic planning; dedicate financial resources to addressing burnout at the individual and organizational levels.
- Convene professionals from across health-care disciplines to develop strategies that prevent burnout and promote clinician well-being.
- Thoughtfully analyze and design work to prevent excess workload and improve workflow; prioritize areas such as improving the EMR, empowering pharmacy technicians and other support personnel, and identifying improved workload metrics to align resources appropriately.
- Develop strategies for responding to emotional crises (eg, suicide) while providing clinicians with support for long-term mental health and well-being.
- Ensure that clinicians model resilient behaviors to promote a culture of well-being to trainees.
- Improve person-organization and person-job fit; these include providing greater transparency in recruitment and selection, enhancing the clarity of job descriptions and other expectations, training organizational leadership to provide improved support, and providing career counseling and coaching for trainees and individuals in the job.
- Ensure that burnout research is grounded in theory and supported financially by health-care organizations and professional societies, with specific emphasis on the antecedents and consequences of burnout and individual- and organization-focused interventions to address it; also, encourage collaboration with other health-care professionals and burnout experts.

ACKNOWLEDGMENT

This work was approved by the American College of Clinical Pharmacy Board of Regents, 9 July 2019.

CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

ORCID

Tracy M. Hagemann https://orcid.org/0000-0002-5715-9173

Brent N. Reed https://orcid.org/0000-0002-3867-070X

Bridget A. Bradley https://orcid.org/0000-0003-2571-8142

Jennifer N. Clements https://orcid.org/0000-0003-2431-6651

Lawrence J. Cohen https://orcid.org/0000-0003-2207-0598

Scott A. Coon https://orcid.org/0000-0002-1534-6114

Catherine G. Derington https://orcid.org/0000-0001-7382-4607

Sandra L. DiScala https://orcid.org/0000-0002-8264-2431

Kelly C. Lee https://orcid.org/0000-0002-1674-4210

Alisyn May https://orcid.org/0000-0001-7873-343X

Song Oh https://orcid.org/0000-0002-0623-3978

Jennifer A. Phillips https://orcid.org/0000-0002-3251-2823

REFERENCES

- Dyrbye LN, Shanafelt TD, Sinsky CA, Cipirano PF, Bhatt J, Ommaya A, et al. Burnout among health care professionals: A call to explore and address this underrecognized threat to safe, high-quality care. Nat Acad Med, 2017. [cited 2020 April 20]. Available from: https://nam.edu/burnout-among-health-care-professionals-a-call-toexplore-and-address-this-underrecognized-threat-to-safe-highquality-care/.
- Maslach C, Schaufeli WB, Leiter MP. Job burnout. Annu Rev Psychol. 2001;52:397-422.
- Jones GM, Roe NA, Louden L, Tubbs CR. Factors associated with burnout among US hospital clinical pharmacy practitioners: Results of a nationwide pilot survey. Hosp Pharm. 2017;52:742–751.
- De Oliveira GS, Ahmad S, Stock MC, et al. High incidence of burnout in academic chairpersons of anesthesiology: Should we be taking better care of our leaders? *Anesthesiology*. 2011;114:181–193.
- Balayssac D, Pereira B, Virot J, et al. Burnout, associated comorbidities and coping strategies in French community pharmacies-BOP study: A nationwide cross-sectional study. PLoS One. 2017;12: e0182956.
- QD85 burn-out. ICD-11 for mortality and morbidity statistics. 2019 [cited 2020 April 20]. Available from: https://icd.who.int/browse11/l-m/en#/http://id.who.int/icd/entity/129180281.
- West CP, Tan AD, Habermann TM, Sloan JA, Shanafelt TD. Association of resident fatigue and distress with perceived medical errors. JAMA. 2009;302:1294–1300.
- 8. Jones JW, Barge BN, Steffy BD, Fay LM, Kunz LK, Wuebker LJ. Stress and medical malpractice: Organizational risk assessment and intervention. *J Appl Psychol.* 1988;73:727–735.
- Cimiotti JP, Aiken LH, Sloane DM, Wu ES. Nurse staffing, burnout, and health care-associated infection. Am J Infect Control. 2012;40: 486–490.
- Welp A, Meier LL, Manser T. Emotional exhaustion and workload predict clinician-rated and objective patient safety. Front Psychol. 2014; 5:1573
- Halbesleben JRB, Rathert C. Linking physician burnout and patient outcomes: Exploring the dyadic relationship between physicians and patients. Health Care Manage Rev. 2008;33:29–39.
- Bakker AB, Demerouti E. Job demands-resources theory. In: Chen PY, Cooper CL, editors. Wellbeing: A complete reference guide, work and wellbeing. Chichester: Wiley-Blackwell, 2014; p. 37–64.
- Demerouti E, Bakker AB, Nachreiner F, Schaufeli WB. The job demandsresources model of burnout. J Appl Psychol. 2001;86:499–512.
- Swider BW, Zimmerman RD. Born to burnout: A meta-analytic path model of personality, job burnout, and work outcomes. J Vocat Behav. 2010;76:487–506.
- Lammerts MA. Causes of burnout: Toward a philosophical and theoretical framework. Soc Thought. 1982;8:22–37.
- Maslach C, Leiter MP. The truth about burnout: How organizations cause personal stress and what to do about it. San Francisco, CA: Jossey-Bass, 1997.
- Bakker AB, Schaufeli WB, Demerouti E, Janssen PPM, Van Der Hulst R. Using equity theory to examine the difference between burnout and depression. *Anxiety Stress Coping*. 2000;13:247–268.
- Glass DC, McKnight JD. Perceived control, depressive symptomatology, and professional burnout: A review of the evidence. Psychol Health. 1996;11:23-48.
- Leiter MP, Durup J. The discriminant validity of burnout and depression: A confirmatory factor analytic study. Anxiety Stress Coping. 1994;7:357–373.
- Maslach C, Jackson SE, Leiter MP. Maslach burnout inventory manual.
 3rd ed.Palo Alto, CA: Consulting Psychologists Press, 1996.
- Demerouti E, Bakker AB. The Oldenburg burnout inventory: A good alternative to measure burnout and engagement. Handbook of stress and burnout in health care. Nova Science: Hauppauge, NY, 2008.

- Kristensen TS, Borritz M, Villadsen E, Christensen KB. The Copenhagen burnout inventory: A new tool for the assessment of burnout. Work Stress. 2005:19:192–207.
- Trockel M, Bohman B, Lesure E, et al. A brief instrument to assess both burnout and professional fulfillment in physicians: Reliability and validity, including correlation with self-reported medical errors, in a sample of resident and practicing physicians. Acad Psychiatry. 2018;42:11–24.
- Dyrbye LN, Satele D, Shanafelt T. Ability of a 9-itemwell-being index to identify distress and stratify quality of life in US workers. J Occup Environ Med. 2016;58:810–817.
- Dyrbye LN, Varkey P, Boone SL, Satele DV, Sloan JA, Shanafelt TD. Physician satisfaction and burnout at different career stages. *Mayo Clin Proc.* 2013;88:1358–1367.
- El-Ibiary SY, Yam L, Lee KC. Assessment of burnout and associated risk factors among pharmacy practice faculty in the United States. Am J Pharm Educ. 2017;81:75.
- 27. Durham M, Bush P, Ball A. Evidence of burnout in health-system pharmacists. 2018;75(Suppl. 4):S93–S100.
- Dyrbye LN, Shanafelt TD, Balch CM, Satele D, Sloan J, Freischlag J. Relationship between work-home conflicts and burnout among American surgeons: A comparison by sex. Arch Surg. 2011;146: 211–217.
- 29. Leiter MP, Maslach C. Six areas of worklife: A model of the organizational context of burnout. *J Health Hum Serv Adm.* 1999:21:472–489.
- 30. Cordes CL, Dougherty TW. A review and an integration of research on job burnout. *Acad Manage Rev.* 1993;18:621–656.
- 31. Radde PO. Recognizing, reversing, and preventing hospital pharmacist burnout. *Am J Hosp Pharm*. 1982;39:1161–1169.
- Gaither CA, Nadkarni A. Interpersonal interactions, job demands and work-related outcomes in pharmacy. Int J Pharm Pract. 2012;20:80–89.
- Maslach C, Leiter MP. New insights into burnout and health care: Strategies for improving civility and alleviating burnout. *Med Teach*. 2017;39:160–163.
- 34. Bridgeman PJ, Bridgeman MB, Barone J. Burnout syndrome among healthcare professionals. *Am J Health Syst Pharm*. 2018;75:147–152.
- Leiter MP, Day A, Price L. Attachment styles at work: Measurement, collegial relationships, and burnout. Burn Res. 2015;2:25–35.
- Maslach C, Leiter MP. Early predictors of job burnout and engagement. J Appl Psychol. 2008;93:498–512.
- 37. Leiter MP, Harvie P. Correspondence of supervisor and subordinate perspectives during major organizational change. *J Occup Health Psychol*. 1997;2:343–352.
- 38. Asuero AM, Queraltó JM, Pujol-Ribera E, Berenguera A, Rodriguez-Blanco T, Epstein RM. Effectiveness of a mindfulness education program in primary health care professionals: A pragmatic controlled trial. *J Contin Educ Health Prof.* 2014;34:4–12.
- Bragard I, Etienne AM, Merckaert I, Libert Y, Razavi D. Efficacy of a communication and stress management training on medical residents' self-efficacy, stress to communicate and burnout: A randomized controlled study. J Health Psychol. 2010;15:1075–1081.
- West CP, Dyrbye LN, Rabatin JT, et al. Intervention to promote physician well-being, job satisfaction, and professionalism: A randomized clinical trial. JAMA Intern Med. 2014;174:527–533.
- West CP, Dyrbye LN, Erwin PJ, Shanafelt TD. Interventions to prevent and reduce physician burnout: A systematic review and metaanalysis. *Lancet*. 2016;388:2272–2281.
- 42. Gunasingam N, Burns K, Edwards J, Dinh M, Walton M. Reducing stress and burnout in junior doctors: The impact of debriefing sessions. *Postgrad Med J.* 2015;91:182–187.
- 43. Verweij H, Waumans RC, Smeijers D, et al. Mindfulness-based stress reduction for GPs: Results of a controlled mixed methods pilot study in Dutch primary care. *Br J Gen Pract*. 2016;66:e99–e105.
- Ruotsalainen JH, Verbeek JH, Mariné A, Serra C. Preventing occupational stress in healthcare workers. *Cochrane Database Syst Rev.* 2015;4:CD002892.

- Bretland RJ, Thorsteinsson EB. Reducing workplace burnout: The relative benefits of cardiovascular and resistance exercise. *PeerJ.* 2015; 3:e891.
- Mealer M, Conrad D, Evans J, et al. Feasibility and acceptability of a resilience training program for intensive care unit nurses. Am J Crit Care. 2014;23:e97-e105.
- Stenlund T, Birgander LS, Lindahl B, Nilsson L, Ahlgren C. Effects of Qigong in patients with burnout: A randomized controlled trial. J Rehabil Med. 2009;41:761–767.
- 48. Toker S, Biron M. Job burnout and depression: Unraveling their temporal relationship and considering the role of physical activity. *J Appl Psychol.* 2012;97:699–710.
- Laskowski ER. Walking throughout your day keeps depression (and a host of other health problems) away. Mayo Clin Proc. 2016;91: 981–983
- Söderström M, Jeding K, Ekstedt M, Perski A, Akerstedt T. Insufficient sleep predicts clinical burnout. J Occup Health Psychol. 2012;17: 175–183.
- Grossi G, Perski A, Osika W, Savic I. Stress-related exhaustion disorder—Clinical manifestation of burnout? A review of assessment methods, sleep impairments, cognitive disturbances, and neurobiological and physiological changes in clinical burnout. Scand J Psychol. 2015;56:626–636.
- Galantino ML, Baime M, Maguire M, Szapary PO, Farrar JT. Association of psychological and physiological measures of stress in health-care professionals during an 8-week mindfulness meditation program: Mindfulness in practice. Stress Health. 2005;21:255–261.
- Irving JA, Dobkin PL, Park J. Cultivating mindfulness in health care professionals: A review of empirical studies of mindfulness-based stress reduction (MBSR). Complement Ther Clin Pract. 2009;15: 61–66.
- Cohen-Katz J, Wiley S, Capuano T, Baker DM, Deitrick L, Shapiro S. The effects of mindfulness-based stress reduction on nurse stress and burnout: A qualitative and quantitative study, part III. Holist Nurs Pract. 2005;19:78–86.
- Krasner MS, Epstein RM, Beckman H, et al. Association of an educational program in mindful communication with burnout, empathy, and attitudes among primary care physicians. JAMA. 2009;302: 1284–1293.
- Zwack J, Schweitzer J. If every fifth physician is affected by burnout, what about the other four? Resilience strategies of experienced physicians. Acad Med. 2013;88:382–389.
- 57. Wallace JE, Lemaire JB, Ghali WA. Physician wellness: A missing quality indicator. *Lancet*. 2009;374:1714–1721.
- Shanafelt TD, Gorringe G, Menaker R, et al. Impact of organizational leadership on physician burnout and satisfaction. *Mayo Clin Proc.* 2015;90:432–440.
- Panagioti M, Panagopoulou E, Bower P, et al. Controlled interventions to reduce burnout in physicians: A systematic review and meta-analysis. JAMA Intern Med. 2017;177:195–205.
- Lucas BP, Trick WE, Evans AT, et al. Effects of 2- vs 4-week attending physician inpatient rotations on unplanned patient revisits, evaluations by trainees, and attending physician burnout: A randomized trial. JAMA. 2012;308:2199–2207.
- Shanafelt TD, Noseworthy JH. Executive leadership and physician well-being: Nine organizational strategies to promote engagement and reduce burnout. Mayo Clin Proc. 2017;92:129–146.
- Shanafelt TD, Mungo M, Schmitgen J, et al. Longitudinal study evaluating the association between physician burnout and changes in professional work effort. Mayo Clin Proc. 2016;91:422–431.
- Shanafelt TD. Enhancing meaning in work: A prescription for preventing physician burnout and promoting patient-centered care. JAMA. 2009;302:1338–1340.
- 64. Konrad TR, Williams ES, Linzer M, et al. Measuring physician job satisfaction in a changing workplace and a challenging environment. SGIM

- Career Satisfaction Study Group. Society of General Internal Medicine. *Med Care*. 1999;37:1174–1182.
- Dyrbye LN, Trockel M, Frank E, et al. Development of a research agenda to identify evidence-based strategies to improve physician wellness and reduce burnout. Ann Intern Med. 2017;166:743-744.
- 66. Enhancing well-being and resilience among the pharmacist workforce: a national consensus conference [cited 2020 April 20]. Available from: https://www.pharmacist.com/sites/default/files/audience/ APhA_Well_Being_Resilience_Report_%200719.pdf.
- 67. Coffey DS, Eliot K, Goldblatt E, Grus C, Kishore SP, Mancini ME, et al. A multifaceted systems approach to addressing stress within health professions education and beyond. NAM perspectives, Washington, DC: National Academy of Medicine Discussion paper. [cited 2020 April 2017. 20]. Available from: https://nam.edu/a-multifaceted-systems-approach-to-addressing-stress-within-health-professions-education-and-beyond/.
- 68. National Academies of Sciences Engineering Medicine. A design thinking, systems approach to well-being within education and practice: Proceedings of a workshop. 2018 [cited 2020 April 20]. Available from: https://www.nap.edu/catalog/25151/a-design-thinking-systems-approach-to-well-being-within-education-and-practice.
- Matheson C, Robertson HD, Elliott AM, Iversen L, Murchie P. Resilience of primary healthcare professionals working in challenging environments: A focus group study. Br J Gen Pract. 2016;66:e507–e515.
- Gidwani R, Nguyen C, Kofoed A, et al. Impact of scribes on physician satisfaction, patient satisfaction, and charting efficiency: A randomized controlled trial. Ann Fam Med. 2017;15:427–433.
- Arndt BG, Beasley JW, Watkinson MD, et al. Tethered to the EHR: Primary care physician workload assessment using EHR event log data and time-motion observations. Ann Fam Med. 2017;15:419–426.
- 72. Card AJ. Physician burnout: Resilience training is only part of the solution. *Ann Fam Med*. 2018;16:267–270.
- Awa WL, Plaumann M, Walter U. Burnout prevention: A review of intervention programs. Patient Educ Couns. 2010;78:184–190.
- Sinsky CA, Willard-Grace R, Schutzbank AM, Sinsky TA, Margolius D, Bodenheimer T. In search of joy in practice: A report of 23 highfunctioning primary care practices. Ann Fam Med. 2013;11:272–278.
- Linzer M, Poplau S, Grossman E, et al. A cluster randomized trial of interventions to improve work conditions and clinician burnout in primary care: Results from the Healthy Work Place (HWP) study. J Gen Intern Med. 2015;30:1105–1111.
- NEJM Catalyst. The critical role of clinical leaders: Transforming care today and tomorrow. San Francisco, CA: Scribd; 2018. [cited 2020 April 24]. Available from: https://www.scribd.com/document/374050383/ The-Critical-Role-of-Clinical-Leaders-Transforming-Care-Today-and-Tomorrow.
- Borchert JS, Phillips J, Bastin MLT, et al. Best practices: Incorporating pharmacy technicians and other support personnel into the clinical pharmacist's process of care. JACCP J Am Coll Clin Pharm. 2019;2: 74–81.
- Marchis ED, Knox M, Hessler D, et al. Physician burnout and higher clinic capacity to address patients' social needs. J Am Board Fam Med. 2019;32:69–78.
- Granko RP, Poppe LB, Savage SW, Daniels R, Smith EA, Leese P. Method to determine allocation of clinical pharmacist resources. Am J Health Syst Pharm. 2012;69:1398–1404.
- Norcross WA, Moutier C, Tiamson-Kassab M, et al. Update on the UC San Diego Healer Education Assessment and Referral (HEAR) program. J Med Regul. 2018;104:17–26.
- 81. Davidson JE, Graham P, Montross-Thomas L, Norcross W, Zerbi G. Code lavender: Cultivating intentional acts of kindness in response to stressful work situations. *Explore (NY)*. 2017;13:181–185.
- Graham P, Zerbi G, Norcross W, Montross-Thomas L, Lobbestael L, Davidson J. Testing of a caregiver support team. *Explore (NY)*. 2019; 15:19–26.

- 83. Abaza MM, Nelson KG. Leading by example: Role modeling resilience helps our learners and ourselves. *Acad Med.* 2018;93:157–158.
- 84. Hinami K, Whelan CT, Miller JA, Wolosin RJ, Wetterneck TB. Personjob fit: an exploratory cross-sectional analysis of hospitalists. *J Hosp Med*. 2013;8:96–101.
- Brandstätter V, Job V, Schulze B. Motivational incongruence and well-being at the workplace: Person-job fit, job burnout, and physical symptoms. Front Psychol. 2016;7:1153.
- Kristof-Brown AL, Zimmerman RD, Johnson EC. Consequences of individual's fit at work: A meta-analysis of person-job, person-organization, person-group, and person-supervisor fit. *Pers Psychol*. 2005; 58:281–342.
- 87. Brannick MT, Levine EL, Morgeson FP. Job and work analysis: Methods, research, and applications for human resource management. 2nd ed.Thousand Oaks, CA: Sage Publications, 2007.
- Cai D, Cai Y, Sun Y, Ma J. Linking empowering leadership and employee work engagement: The effects of person-job fit, persongroup fit, and proactive personality. Front Psychol. 2018;9:1304.

- 89. Phillips JM. Effects of realistic job previews on multiple organizational outcomes: A meta-analysis. *Acad Manage J.* 1998;41:673.
- Buckley MR, Veres JG, Fedor DB, Wiese DS, Carraher SM. Investigating newcomer expectations and job-related outcomes. *J Appl Psychol*. 1998;83:452–461.
- 91. Gazelle G, Liebschutz JM, Riess H. Physician burnout: Coaching a way out. J Gen Intern Med. 2015;30:508–513.
- 92. Abramowitz P. ASHP, well-being, and you. ASHP Connect. 2019. [cited 2020 April 20]. Available from: https://connect.ashp.org/blogs/paul-abramowitz/2019/07/08/ashp-well-being-and-you.

How to cite this article: Hagemann TM , Reed BN , Bradley BA , et al. Burnout among clinical pharmacists: Causes, interventions, and a call to action. *J Am Coll Clin Pharm.* 2020; 3:832–842. https://doi.org/10.1002/jac5.1256