Provider Burnout and Resilience of the Healthcare Team

DesCamp R\textsuperscript{1,2,*} and Ernest Talarico\textsuperscript{1}

\textsuperscript{1}School of Medicine, Indiana University, USA
\textsuperscript{2}Richard M. Fairbanks School of Public Health, Indiana University, USA

Abstract

For many years, burnout has been a concern across multiple disciplines. Provider burnout (PB) in the healthcare team (HCT) can have detrimental effects on both the providers’ well-being and the level of care patients receive. Risk factors for PB are numerous and fall into three general categories: personal, situational, and organizational. In the face of widespread changes in the healthcare industry, healthcare provider (HP) resilience has emerged as a strategy to combat PB before it occurs and to ensure the sustainability of the HCT. Resilience can be built through various methods and can allow HPs to manage stresses in and out of the workplace. Resilience training has been shown to be effective in reducing stress and PB in student doctors, U.S. military HPs, and even patients. Increased HP resilience can lead to increased job satisfaction, better patient care, increased patient satisfaction with their HPs, as well as active involvement of patients in the maintenance of their own health. However, there remains a lack of resilience training programs for practicing HPs who did not receive training during their educational years. This paper will provide a brief review of current thoughts and research regarding PB and resilience.

ABBREVIATIONS

PB: Provider Burnout; HCT: Healthcare Team; HP/HPs: Healthcare Provider/Healthcare Providers; WHCs: Work-Home Conflicts

INTRODUCTION

The cutting-edge healthcare industry focuses on the “total patient” and requires large teams of healthcare providers (HPs) from multiple disciplines, each working to address patient needs by providing the best possible care, while at the same time dealing with stressors that are within, related to, and outside of the medical profession. The fact that medicine has evolved to focus on total patient care means that HPs not only focus on signs, symptoms, and chief concerns of patients. They must also direct their attention to patient education, psychological, social, and economic factors, family-patient interactions, and all other agents and elements involved in the lifestyle and healthcare of each patient. Even more so, each patient presents as a different and unique case composed of many of the factors described above, and more. Frequent environmental stress associated with human pain, distress, and the complexity of each patient can impact the physical and mental well-being of HPs, resulting in provider burnout (PB) and, in some cases, traumatic stress-like symptoms [1]. All of these factors are stressors for HPs along with non-work stresses that accompany daily life. These negative stressors can impact not only the well-being of HPs but also their ability to care effectively for others [2].

Increasing stress and PB are now becoming recognized as factors compromising the healthcare team’s (HCT) ability to provide safe, appropriate patient-centered care as well as self-care [3]. Healthcare organizations and training institutions are realizing that PB is a widespread problem across all levels of the HCT from students to seasoned veterans with PB currently increasing in incidence [4]. Additionally, the role of resilience in combating PB is in now being recognized [5–9]. Don Berwick, et al., (2008) have introduced the idea of a triple aim approach to improving health system performance consisting of: improving the health of populations, enhancing the patient’s experience of care, and reducing the per capita cost of healthcare [10,11]. However, HPs have cited that stressful work conditions are hindering their efforts at instituting this triple aim system improvement leading some authors to suggest the need for a quadruple aim, adding improved work conditions and resilient HPs to the equation [11]. Implementation of programs to increase resilience and decrease PB appear to be lacking in many settings, though, requiring thoughtful and meaningful evaluation of improving support for HPs and all members of the HCT.

Provider Burnout (PB)

PB is a universal problem affecting all members of the HCT including physicians, residents, student doctors, nurses, technicians, and patients, as well as therapists, dietary workers, social service workers, environmental workers and more. PB appears to be related to medical specialty, with highest rates of PB being reported in the specialties of emergency medicine,
general internal medicine, neurology, and family medicine [12]. In a 2014 study in the United States, less than 50% of the 24,075 physicians surveyed in these specialties would choose the same specialty again [13]. Seventy-eight percent of internal medicine specialists reported they would choose a different specialty if they could, likely due to demanding work environment with inadequate compensation [13]. Critically, 48% of HPs reported that they would not choose medicine as a career if they had to do it all over again citing declining reimbursement, increasing debt, delayed gratification, loss of prestige, diminished enthusiasm, not having enough time to spend with patients because of increased paper work, and loss of professional ideals [13,14]. Even further, more than 50% of respondents to the survey reported spending more than 40 hours per week seeing patients, with 15% seeing patients more than 60 hours per week [13,14]. A survey of the literature reveals that the reported rates of PB vary with rates as low as 21% but as high as 87.5%, however studies document that overall the rate of PB is increasing [4,5,8,15]. Perhaps most alarming is that physicians are up to 5.7 times more likely to commit suicide than the general population and that a major suicide risk factor is PB [9]. It might be suggested that HPs are suffering from a “collective malaise”.

Maslach, a pioneer in the field of burnout research, characterizes burnout as “a prolonged response to chronic emotional and interpersonal stressors on the job, [which is] defined by the three dimensions of exhaustion, cynicism, and inefficiency” [16]. Based on these three characteristics, Maslach developed The Maslach Burnout Inventory Manual, which is still used today by many healthcare organizations to assess the levels of burnout in HPs. This inventory assesses: (1) low personal accomplishment, such as evaluation of oneself negatively or feeling dissatisfied with one’s job accomplishments; (2) emotional exhaustion, such as depletion of emotional resources and the feeling of not being able to give of oneself at a psychological level; and (3) depersonalization, resulting in negative, cynical attitudes towards patients and a dehumanized perception of others [17]. Unfortunately, there is heterogeneity in the literature regarding how PB is defined. Many studies use Maslach’s three hallmarks of PB but others use broader indicators such as levels of perceived stress, depression, or anxiety.

Risk factors for PB in literature are widely varied, but can be organized into personal, situational, and organizational factors (Table 1). First, personal factors such as personality characteristics have been widely cited as risk factors for PB. Agreeableness, extraversion, conscientiousness, and commitment have all shown to be protective while compulsiveness, neuroticism, and psychologically unhealthy childhood and early adulthood predispose HPs to PB [4,18,19]. Female gender has also been studied as a risk factor for PB with some suggesting that the etiology of PB in men and women is different in part because of the presence of gender discrimination in the workplace [9,19,20]. Situational variables include medical specialty and being a resident physicians with PB among resident physician specialties ranging from 27% in family medicine to 75% in obstetrics and gynecology [4,7,8,12]. All HPs in the early stages of their careers are at a higher risk for PB than veteran HPs with one study citing the rates of PB dropping from 65% in HPs with less than 5 years’ experience to 15% in HPs with 16 or more years of practice [19, 21]. Finally, patient population served can predict PB. HPs seeing sicker patient populations, such as those found in intensive care units or oncology units are at higher risk for PB [19]. Organizational variables include: too many bureaucratic or administrative tasks, too many hours spent at work, annual income, academic rank, structure of shift work, and number of night shifts per week [18,21,22].

The consequences of PB are just as varied as the risk factors. PB is positively correlated with adverse health behaviors including higher fast food consumption, infrequent exercise, higher alcohol consumption, more frequent use of painkillers and other substances, and lower career satisfaction [21,23,24]. Patients are also affected by the high rates of PB. Increased feelings of PB among nurses in critical care units have been correlated with increased incidence of surgical site infections and urinary tract infections in patients with Foley catheters [25]. Authors suggest that this might result from inadequate hand washing and adherence to infection control guidelines secondary to cognitive detachment associated with PB [25]. Physician burnout is also positively correlated with self-reported suboptimal patient care [21,26]. The American College of Surgeons reports that of 7905 practicing surgeons, almost 10% reported making errors over a 3 month period and each attributed this error to decreased quality of life and all three domains of burnout [27]. Even further, among internal medicine residents, higher levels of fatigue and distress are independently associated with medical errors [28].

There are some causes and consequences of PB that fall into a gray area where it is not clear which is a cause and which is a consequence. For example, it is often not clear if decreased career satisfaction is a risk factor for PB or if PB causes decreased career satisfaction [21]. Similarly, work-home conflicts (WHCs) are commonly experienced by physicians and their partners with rates as high as 55.7% of physicians with employed partners [29]. However, it is incompletely understood if PB drives WHCs or if WHCs cause more PB. More likely, it is probably a mix of both. Regardless, physicians who experience WHCs are more likely to have symptoms of PB compared to those without WHCs (47.1% vs. 26.6%) [29]. Overall, PB is an epidemic that is affecting HPs with its effects trickling all the way down to patients, leading to suboptimal care and worse patient outcomes.

**Resilience**

With increasing levels of PB, resilience has come into the spotlight as a protective measure for HPs and all members of the medical enterprise.
HCT aimed at stopping PB before it happens [4,5-9]. Resilience has been defined as “good adjustment across different domains in the face of significant adversity” and “capacity of a dynamic system to withstand challenges to its stability, viability, or development” [30,31]. Many think of resilience in terms of energy dynamics, as in reducing energy expenditure and building a reserve to be utilized in the face of adversity or stress. Dunn, et al., (2008) equated HP resilience to a reserve fuel tank with negative inputs including stress, internal conflict, time management problems, and energy demands and positive inputs including psychosocial support, social activities, healthy lifestyle practices, mentorship to/from others, and intellectual stimulation [32]. Overabundance of negative inputs compared to positive inputs leaves an individual unable to maintain resilience in the face of stress, and results in PB. Conversely, resilience is maintained when the positive inputs outweigh the negative inputs [32]. The study of resilience has many historical roots including the groundbreaking work of Dr. Herbert Benson, who was the first to recognize that practitioners of meditation in the form of yoga had reduced blood pressures, heart rates, and metabolic rates compared to normal controls [33]. This phenomenon was termed the “relaxation response” as it was the opposite of the body’s natural sympathetic “stress response.” Dr. Benson’s research jump started the field of mind body medicine and the inquiry into the interaction between physical environment and psychological well-being.

Building Resilience

Work environment exerts a large impact on HP job satisfaction [38]. Karasek and Theorell [34] developed a work stress theory emphasizing the importance of active psychological demands paired with decision making latitude including perceived control and resilience (Figure 1) [9,33]. Strategies to reduce PB at the institutional level include reduced duty hours, HP retreats, screening/education about PB, employee assistance program (EAP) counseling, and new wellness curricula in the formative years [8,9]. Additionally, sound business management, good staff, and effective practice arrangements have been cited as both decreasing PB and assisting HPs in the development of resilience [35,36]. Further, HPs have some responsibility for seeking employment in environments that match this paradigm [9]. HPs also have the responsibility to be advocates for optimal work conditions benefiting the entire HCT [9]. While HPs often cite the work environment of today’s healthcare system as a main source of their PB, many fail to recognize their own lack of resilience. Epstein and Krasner (2013) addressed this disconnect in saying,

"It is not enough to recognize that stresses exist, that they are unavoidable, and that they can result in cognitive errors, strong feelings and moral distress. [Providers] also need to realize the degree to which they have choices about how to address those stresses and self-regulate their own cognitive, emotional, and somatic reactions [37]."

Healthcare is a field in which ideal working conditions are not always possible, and this is where the HP becomes responsible for personal resilience development. Through a systematic literature review, Zander, et al., (2010) investigated coping and its relationship with resilience in pediatric oncology nurses because the high psychological toll of such a field requires a great degree of personal resilience [38]. The three themes were identified: (1) coping factors, (social, team, and organizational support, personal views, attitudes, circumstances, experience, and types

![Figure 1](https://via.placeholder.com/150)

*Figure 1* Interaction of perceived control and resilience with varying levels of psychological demand.
of stressors), (2) coping processes, (the contribution to effective adaptation), and (3) overcoming negative circumstances, (how effective adaptation and coping are combined when professionals are dealing with workplace stressors) [38]. Resilience can be increased by static components such as personality traits, and dynamic components such as the work environment and resilience training [39]. Research has generated a plethora of effective plans for building individual resilience [40-42]. Strategies for educating HPs on developing personal resilience include: resilience workshops, small group problem-solving, reflection, cognitive behavioral training, mindfulness and relaxation training, and mentoring [39]. Evidence is strongest for the use of resiliency workshops, cognitive behavioral training or a combination of strategies to best educate HPs, most likely because of their focus on team interaction and lasting behavior change [39]. Still further, organizations such as the American Medical Association and the American Association of Medical Colleges offer online workshops for building resilience [43,44]. Finally, some institutions are beginning to develop specific wellness courses that are offered to HPs at no cost such as The Ohio State University’s Mind-Body, Skills Training for Resilience, Effectiveness, and Mindfulness (MBST) [9].

**Effects of Resilience and Decreased Provider Burnout (PB)**

Cultivation of resilience among HPs has been proven beneficial at multiple levels. St. Louis School of Medicine (St. Louis, MO, USA) documented a substantial decrease in depression and anxiety of first-year student doctors with the implementation of a 3 hour mindfulness and resilience training curriculum [45]. The Ohio State University’s MBST showed statistically significant decreases in stress and increases in mindfulness, empathy, and resilience, in 513 participants studied [9]. The U.S. Army Master Resilience Training (MRT) teaches military leaders both how to build personal resilience and how to teach resilience to subordinates. The MRT course teaches self-awareness and strategies to effectively mitigate stressors both internal and external, and it is a cornerstone in the Comprehensive Soldier Fitness (CSF) program [46]. Not surprisingly, resilience has a positive correlation with compassion satisfaction and an inverse correlation with PB and compassion fatigue among military HPs [47].

In another study by Goldhagen, et al., (2015), resident physicians from the Departments of Family Medicine, Psychiatry, and Anesthesia at Duke University (Durham, NC, USA) participated in mindfulness-based resilience activities, which introduced mindful-awareness and included practical exercises for nurturing resilience [48]. PB scores on the initial (baseline) survey were in the abnormal range for most residents, both with respect to exhaustion (38/47 residents) and disengagement (37/47 residents). The mindfulness-based intervention did not affect stress and PB in the short-term; however, there was a trend at later time points toward lower scores in stress and PB, suggesting that mindfulness-based intervention may be more effective in the long-term. Resilience training can also be extended to patients. Mind-body medicine programs focusing on reducing stress and building resilience through yoga, meditation, mindfulness, and physical exercise have the potential to substantially decrease healthcare utilization among many patient populations, specifically by reducing the number of clinical encounters, procedures, laboratory tests, and Emergency department visits [49].

Systematic implementation of programs that boost resilience are appearing in training institutions such as medical schools and residency training programs, along with the U.S. Army [9,45,46,48]. However, in the current literature, there is a lack of evidence and research related to resilience training programs and their effects for established HPs without training in their formative years. Such research is important in structured development and implementation of novel resilience training programs so that HPs at all levels of healthcare can prevent PB or lessen its impact while giving the best possible care to patients and enjoying highly satisfying professional careers and personal lives.

**CONCLUSION**

Almost all HPs participate in some sort of ceremony or oath taking at the beginning of their training that is symbolic of a life-long contract with, and a commitment to, society that places patient interests and needs above one’s own interests and needs. However, along with this commitment in the dynamic and fast-paced healthcare industry, comes the risk of PB and its consequences affecting HPs and all members of the HCT, as well as patient-centered care. The rates of PB are increasing, and therefore an understanding of the risk factors for PB across the years of medical training and practice is essential for successful intervention. Risk factors for PB are multifactorial and include personal, situational and organization components. Consequences, of PB can include dissatisfaction with career,
Central research studies that address cause-and-effect relationships, and range of HPs and effects of burnout will only come through future resilience training programs that can accommodate the diverse members and industry administrators need to be self-aware of several areas of burnout. However, challenges do remain. HCT, hospital and clinical settings, and in new Medical Colleges.

REFERENCES


