ABSTRACT
The relationship between healthcare worker burnout and healthcare-associated infections has previously been reported. The work environment of today requires reconciling cost-efficiency and accountability with the desire to provide patient-centered care, often creating conflicting job demands. This type of conflict has been linked to increasing burnout and decreased performance affecting cost, quality, and safety. Stress and burnout for physicians, including dentists, and other healthcare providers have repercussions for patient care and the health and well-being of the professional community. Patient safety is at risk when providers are investing most of their time, effort and resources in dealing with stress. Studies have shown that programs that improve communications skills, staff empowerment and resiliency have positive outcomes including staff and patient satisfaction, patient safety, quality, decreased costs. This article discusses the need for investment in creating healthy work environments that support individuals and healthcare teams in an effort to improve infection control compliance and patient safety.
It was the best of times, it was the worst of times.¹ That statement could certainly describe dental care, today. It is easy to become distracted by the many responsibilities of providing care or to become exhausted and frustrated by the changes in regulations and legislation that affect care delivery. The work environment of today requires reconciling cost-efficiency and accountability with the desire to provide patient-centered care, often creating conflicting job demands. This type of conflict has been linked to increasing burnout and decreased performance affecting cost, quality, compliance with infection control strategies and safety.² This article will explore how stress can lead to burnout and affect patient safety and some strategies that can mitigate the effects of stress.

STRESS AND BURNOUT

Stress costs the American workforce about 300 billion dollars per year.³ What stress costs the dental community is more difficult to measure. Job stress is commonly defined as the harmful physical and emotional responses that occur when the demands of the job exceed the capabilities, needs or resources of the worker.³ Stressors in the workplace include low salaries, heavy workloads, lack of opportunity for growth and advancement, unrealistic job expectations and job insecurity.³ Additional on-the-job stressors include lack of participation in decision-making, ineffective management style, and unpleasant work environments or safety concerns.⁵ Working overtime, including having more than one part-time job, can result in poor mental performance, increased illness and workplace injuries.⁴ Salary cuts, and heavier workloads have added to the stress in workers’ personal lives, especially as they confront strained financial issues and compressed time allotment for family obligations.

According to a sentinel report by Michael Baime, Clinical Associate Professor of Medicine at the University of Pennsylvania School of Medicine and founder and Director of the Penn Program for Stress Management, “Stress flows both ways. Stress is accumulated over time and additive between different domains. The stress that someone has at home, relating to their health or financial situation, comes with them into the workplace. And when they leave work at the end of the day, the stress from their job also goes home with them.”⁶ Studies bear this out. Many employers report that stress due to work/life balance creates stress in the following ways: job demands have interfered with their ability to fulfill family or home responsibilities, difficulty in balancing work and family life, and work interfering with their personal time.³, ⁴, ⁵, ⁶

Stress and burnout for physicians, including dentists, and other healthcare providers have repercussions for patient care and the health and well-being of the professional community. Sources of professional stress include: situational (workload, sleep deprivation, and poor working environment); personal (finances, family, and isolation); and professional (information overload and overwhelming patient responsibility).⁷ The nature of providing compassionate care, in a setting where there can be perceived or actual limited physical and or emotional support resources and chronic exposure to human suffering,
can lead to burnout. Burnout results from stressors in the work environment and has three primary characteristics: emotional exhaustion, alienation from job-related activities and reduced performance.\textsuperscript{6} The syndrome of burnout (i.e., emotional exhaustion, depersonalization, and reduced personal accomplishment) can lead to negative outcomes for the individual experiencing the burnout, the people receiving the care provided and the community at large.\textsuperscript{8} Emotional exhaustion is the feeling of being depleted of one’s emotional resources. Depersonalization may manifest as negative, callous or detached responses to persons receiving service or care and reduced personal accomplishment and may manifest as feelings of inadequacy or lack of competence.\textsuperscript{9} The prevalence of burnout has been studied in dentists and studies show that greater than 26 percent of dental staff are at severe risk of burnout.\textsuperscript{10}

**BURNOUT AND PATIENT SAFETY**

Burnout is associated with lower career satisfaction, reduced job commitment, decreased job performance and stress-related problems.\textsuperscript{11} A workplace culture of self-sacrifice may seemingly be admirable, but it may compromise the quality of the care provided. When professionals experience the symptoms of burnout more errors are likely and these errors can, in turn, contribute to worsening burnout that can be compounded by the professional not wanting to be perceived as weak, vulnerable or ineffective.\textsuperscript{12} This workplace culture fosters an inability to seek help when needed, and blocks the willingness and ability to participate in self-reflection and apply compassionate self-care.\textsuperscript{13} Burnout is viewed as a threat to patient safety because emotional exhaustion, depersonalization, and reduced personal accomplishment are linked to poorer interactions with patients.\textsuperscript{11} Clinicians with burnout are more likely to admit to mistakes or delivering substandard care.\textsuperscript{11} The connection between burnout and safety is set into motion by fatigue or lack of motivation and impaired cognitive function (i.e., attention, memory and executive function) that can diminish recall and attention to detail such as lapses in safe injection practices or basic hand hygiene.\textsuperscript{14} Burned-out clinicians can become progressively more detached from their work, develop negative attitudes towards patients promoting a lack of investment in the patient-provider relationship, and lose pertinent information necessary for decision making. This, in turn, places them at higher risk for errors.\textsuperscript{13} An important measure of the
work environment is the perceived effort-reward imbalance (ERI), characterized by a state of failed reciprocity, (i.e., high effort spent but low rewards received). This imbalance can lead to anger, frustration and perceived unfairness with resultant sustained autonomic nervous system activation contributing to physical disease (e.g. cardiovascular disease and mental disorders)\textsuperscript{15}.

The relationship between healthcare worker burnout and healthcare-associated infections has previously been reported\textsuperscript{15}. The evidence for burnout as a negative unique incremental predictor of healthcare workers, including dentists, self-reported compliance with infection control measures suggests that burnout, by predisposing to non-compliance with infection control measures, could lead to an increase in transmissible occupational infections in addition to failure to notice and intervene to prevent infection control lapses.

WHAT CAN BE DONE?

Developing positive self-care strategies is important for prevention of burnout. Commitment to self-care includes adequate hydration, nutrition, sleep, and exercise. Other self-care approaches such as yoga, massage, meditation or journaling may be considered.\textsuperscript{16} A promising program aimed at developing a culturally acceptable mental health program to help clinicians cope with excessive stress is mindfulness-based training.\textsuperscript{17} Mindfulness is defined as “paying attention in a particular way; on purpose, in the present moment and non-judgementally”.\textsuperscript{17} Mindfulness is a form of self-reflection and involves developing the ability to be aware of our current thoughts, feelings, and bodily sensations with kindness and understanding. It creates a psychological space between one’s perceptions (e.g., stressful stimulus) and response (e.g., thoughts, speech, actions) allowing a thoughtful wise response rather than reacting impulsively with negative emotions.\textsuperscript{17}

Promotion of wellness for healthcare professionals may be the best way to prevent burnout not only during their training but throughout their careers. With the understanding that responsibility lies with both the provider and the organization, there are several ways organizations can promote wellness:

- Provider health committees (with equal stature as other key committees)
- Mentor programs
- Confidential support groups facilitated by an outside professional
  - Sabbatical programs
  - Continuing education programs relating to wellness
  - Involvement of providers in the design of their own practice environments
  - Flexible scheduling allowing time for personal and family needs
  - Availability of leaves of absence to pursue personal interests\textsuperscript{18}
Studies have shown that programs that improve communications skills, staff empowerment and resiliency have positive outcomes including staff and patient satisfaction, patient safety, quality, decreased costs and recruitment and retention of engaged workers. Resilience is defined as “the capacity to keep functioning physically and psychologically in the face of stress, adversity, trauma, or tragedy”. Learning resiliency skills can improve self-awareness, enhance supportive relationships, improve communication and teamwork, and decrease stress.

Failure to communicate effectively increases the risk of error and can be a source of frustration and stress. Courses such as Team STEPPS® can improve individual and team communications skills.

CONCLUSION
It is important that clinicians and leaders gain competence in identifying burnout and implementing intervention strategies. Research clearly documents a link between healthy work environments and improved infection control and patient safety. Equally important, is the need for investment in creating healthy work environments that support individuals and healthcare teams. This article described burnout as one result of the changing landscape of healthcare and suggested a variety of interventions aimed at improving self-care and the work environment. Creating such a work culture may help individuals reconnect to their personal mission and ultimately the altruistic goal of safe patient care.

Additional Information Resources:
- Enhancing Caregiver Resilience: Available at: http://www.dukepatientsafetycenter.com/
TeamSTEPPS (Team Strategies and Tools to Enhance Performance and Patient Safety): is an evidence-based set of teamwork tools, aimed at optimizing patient outcomes by improving communication and teamwork skills among health care professionals. Available at: http://www.ahrq.gov/professionals/education/curriculum-tools/teamstepps/index.html

Making Just Culture a Reality. Available at: https://psnet.ahrq.gov/perspectives/perspective/50/making-just-culture-a-reality-one-organizations-approach

Mindfulness Meditation: Getting Started. Available at: http://www.mindful.org/meditation/mindfulness-getting-started/
References


