

SPECIAL ISSUE

Critical Decisions, Trauma, and Burnout in Medicine: A Stress Management Challenge to Physician Well-Being

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Keywords: physician stress, burnout, stress management, locus of control

Critical decisions and heavy responsibility commonly reported among physicians (especially surgeons) are associated with stress, burnout, and emotional exhaustion. There are risk factors and early warning signs leading to the development of serious medical conditions. Physicians often fail to recognize these signs in themselves as well as in their patients who are experiencing similar challenges. The balance between personal and professional life is particularly difficult for physicians who are inculcated with dedication in their medical and residency training, which includes long hours, hierarchical decision making, and a general sense of responsibility that often feels overwhelming. Correspondingly, it is notable that some physicians become overly immersed in their work such that they may become irritable with staff members and distant from family needs. Family disagreements over work commitments are not uncommon and should be viewed as one of many early warning signs of burnout and emotional exhaustion. Practicing physicians inevitably face major stress-related problems on a daily basis. What other profession faces potential life-and-death consequences with nearly every routine, seemingly innocuous workplace decision? In addition, physicians rank high on scales of internal locus of control and thus generally feel responsible (sometimes overly so) for their failures in practice and bring upon themselves a higher level of stress by ignoring or denying their own symptoms and exaggerating their corrective yet deprecating self-statements.

Research on the Culture of Physicians Under Stress

There is epidemiological evidence that burnout is present and widespread within the medical profession; the evidence especially notes that most American physicians are overworked (Rosch, 2005). In addition, the evidence suggests that stress and burnout are at epidemic proportions in the medical field and especially among surgeons. Physicians who are dealing with many professional demands and strains may exhibit widely

diverse reactions ranging from exhibiting excessively ambitious efforts to overcome workload problems to the other extreme: a resigned, accepting attitude leading to burnout (Muszalska & Buczkowski, 2006). We have researched the complicated lives of orthopedic surgeons to rate satisfaction about family life and work and to assess how individuals deal with stress in light of measures of self-efficacy, emotional exhaustion, depersonalization, and personal accomplishments (Saleh et al., 2007). The highest stressors were excessive workload, increasing overhead, and night and weekend work. Some 70% reported being moderate to extreme in emotional exhaustion, and 25% reported frequent irritable behavior with their spouses, significant others, and family members when they are preoccupied with work matters. Other negative outcomes of excessive workload were sleep disturbance (17%), withdrawal (15%), overworking (10%), procrastination (7%), alcohol use (7%), and overeating (5%). Ironically, among physicians specializing in emergency medicine, those who handle life-threatening pressures on a daily basis fare better than others; they were found to be very optimistic individuals who have a sense of mastery and lower levels of anxiety and depression (Taylor, Piliant, Crook, & Cameron, 2004). Not surprisingly, those who did not handle the pressure as well tended to slip into maladaptive practices such as denial, disengagement, substance abuse, and/or aggressive angry responses (Sotile & Sotile, 1996).

Critical Incidents in Medicine and Posttraumatic Stress Disorder

There are reports of a high incidence of posttraumatic stress disorder (PTSD) among patients in the primary care setting (up to 40% prevalence in some populations), and many of these cases go undocumented (Lecrubier, 2004). This may occur readily because patients sometimes

do not mention traumatic experiences to their physician because they don't recognize experiences to be related to their current physical or psychological symptoms. One example is the reluctance of patients to acknowledge domestic violence in their relationships. The identification of PTSD in the primary care setting would be improved if physicians pursued the interview surrounding trauma with more suspicion, especially when there are reports of depression, anxiety, suicidal thoughts, substance abuse, or simple overuse of health care services. In addition, it should be noted that many primary care physicians who also provide emergency room coverage are not well trained in dealing with multiple casualty incidents, especially those with fatalities (Morrow, 2001).

Aside from the patients who exhibit major or minor symptoms of PTSD, we think it is important to acknowledge the spillover effect of being exposed to trauma, which is quite simply a part of the job description in medicine. PTSD is not limited to just the victims of traumatic injury or medical crisis. It is relevant for the physician who (a) loses a patient who seemingly could have been saved, (b) deals with the untimely death of a child, and (c) feels helpless in dealing with nonfatal but devastating loss of function (e.g., stroke patients who are exceedingly despondent over their plight). Thus, amid all of the exposure to major and minor trauma in medicine, physicians and, of course, all of their staff have empathy for their patients as they are regularly dealing with the aftereffects of medical crises and the occasional failure. The skill of being empathetic to the patient and family without getting caught up personally in the feelings is not well addressed in medical training.

Predicting PTSD Incidence Among All Health Care Professionals

It is often taken for granted that first responders to accidents (police and rescue units) that involve fatalities are at high risk for PTSD. Thus, the concept of critical incident stress management (CISM) has become prominent at the community level in some states for all first responders. It consists of an organized debriefing (1 to 2 days after a disastrous event) that is designed to (a) review and compare individual experiences, (b) share candidly with other confidants the individual emotional reactions (nightmares, insomnia, irritability, etc.), and (c) provide collegial support in the interest of getting back to normal operations as quickly as possible. Although CISM has a popular following, the movement has been criticized because of the lack of emphasis on follow-up intervention beyond the organized debriefing. In one

study, 322 first responders were followed for 2 to 4 years after a major earthquake disaster, and all responders were at greater risk for chronic distress after critical incident exposure (Marmar et al., 1999).

Peritraumatic dissociation was the single most prominent symptom that differentiated exposure to a catastrophic incident and the prospect for chronic symptomatic distress. Peritraumatic dissociation involves having flashbacks and distortions of the events and/or specific details in the days and weeks following a disaster as media coverage creates repeated exposure to a traumatic event. These symptoms are commonly associated with the early stages of a PTSD experience, and when they are identified, the health care provider should have access to long-term follow-up (i.e., CISM consultation with an experienced behavioral health specialist). It should be noted that many health care providers have a macho or machismo attitude and thus try to deny symptoms or simply block them out, which then means the symptoms slip by as unidentified risk factors for future emotional health problems. In essence, this makes it essential that first responders and other emergency health care professionals (especially physicians) establish a close collaboration with behavioral health specialists to screen for stress management indicators (i.e., symptoms that are predictors for major or minor PTSD). This screening fits for both the victimized patients (in traumatic events) and the health care providers to counter the insidious accumulation of spillover aftereffects of repeated traumatic incidents (D'Andrea & Waters, 2000).

Potential PTSD Effects Among Physicians and Nursing Staff

It should be noted that once trauma patients have been transported to the emergency room and beyond for possible surgery, there has been very little attention given to the need for CISM among hospital staff members and medical personnel in general despite documented workers compensation records of lost work time (Lim, Childs, & Gonsalves, 2000). We strongly suggest that first responders are not the only ones who deal with the highly emotional demands of the accident scene who need immediate assistance to deal with the trauma aftereffects. It should be noted that very little concern has been shown for the emotional well-being of physicians and nursing professionals who are attendant to the long-term care of serious trauma incidents. Perhaps this has occurred, in part, because of the assumption that physicians are fully prepared by their extensive medical training for mental

mobilization (i.e., enhanced sensory awareness, focused attention, rapid information processing, and temporary deactivation of emotional processing) in the face of daily trauma work and that they do not suffer any adverse aftereffects of their work in trauma cases (Dyregrov, Solomon, & Bassoce, 2000). We have addressed the issue of physicians who ignore their personal sentiments and stress reactions to the effects of trauma work, thus absorbing the stressful burden of responsibility silently and denying their own stress symptoms. At the other extreme, some physicians may protect themselves from the spillover effects of trauma by being cool and aloof to patients and their families. We feel this may be a basic survival instinct but not a healthy strategy, and creating distance and apparent indifference may be offensive to some patients.

Early Warning Signs for Burnout and the Medical Risk of Ignoring It

We have determined that burnout is common in caregiving and goal-oriented professions such as medicine. Prolonged exposure to critical decision making and patient complaints often leads to disillusionment, dissatisfaction, cynicism, irritability, and family problems, as these are just some of the early warning signs of emotional exhaustion and burnout (Quick et al., 2006). The irony is that zealous efforts in medicine create risks for the provider by way of entrapment into the stress and burnout syndromes.

We have noted other research showing that negative relationships between physicians' satisfaction in their personal and professional lives and the emotional exhaustion component of burnout are clearly associated with increased risk of cardiovascular disease and cardiovascular-related events (Melamed, Shirom, Toker, Berliner, & Shapira, 2006). The impact of stress and burnout (as linked to heart disease, stroke, injury, suicide, and homicide; World Health Organization, 1994) demonstrates that no one is immune to the possible adverse health risks of distress, even physicians. Among all of the medical consequences (e.g., coronary vascular disease), behavioral outcomes (e.g., substance abuse), or psychological effects (e.g., burnout), some individuals are more resistant to stress than others are. This is known as the Achilles heel or organ inferiority hypothesis, which states that stress causes the individual to experience illness, disease, or health problems at their weakest and most vulnerable point (Wolff, 1953). Investigations on the mechanisms by which burnout may be related to disease have identified several factors, including

dysregulation of the hypothalamic-pituitary-adrenal axis along with sympathetic nervous system activation, sleep disturbance, systemic inflammation, impaired immunity functions, blood coagulation and fibrinolysis, and poor health behaviors (Melamed et al., 2006).

Thus, amid all of the exposure to major and minor trauma in medicine, physicians might benefit from access to behavioral health specialists who have extensive stress management training (Saleh et al., 2007). Such consultation appears to be compelling for those physicians and all attendant staff who are regularly dealing with the aftereffects of trauma and life-threatening crises. Some attention has been devoted to the needs of nurses in a perioperative role who have been identified as high risk for PTSD based on the cumulative effect of traumatic events (Gillespie & Kermod, 2004). Responses among nurses are uniformly negative as they report feelings of frustration and self-doubt. Our concern is to bring more attention to the need for stress management among all health care providers either via established CISM procedures or by initiatives provided through the leadership of physicians who have the major de facto responsibility in the trauma setting (Quick et al., 2006).

Preventive Stress Management Approaches

Our work in preventive stress management (Quick & Tetrick, 2003) has focused on (a) a primary intervention for those who are at risk, (b) a secondary intervention for those with health decrements as a result of the disease, and (c) a tertiary intervention for those who are symptomatic due to intense outcomes of stress, such as those found in headaches, irritable bowel, and hypertension in association with high job demands. Educational stress management is particularly appropriate for the stages of primary and secondary prevention, whereas clinical biofeedback is highly efficacious for both secondary and tertiary prevention (VandenBos, 2004).

Prevention is always the preferred mode of intervention for disorders among select, high-risk populations (Quick, Quick, Nelson, & Hurrell, 1997). Overall prevention aims to alter the individual's response to stress, with cognitive restructuring, biofeedback, relaxation, or exercise. However, to conserve time and energy for the busy physician, it is important to first capitalize on what he or she already does on a regular basis to cope with stress. That is, in our research with surgeons (Saleh et al., 2007), the most frequently reported stress-coping strategies were preventive in nature, that is, physical

activity and exercise (42%), family support (18%), leisure activity (15%), and hobbies (9%). In keeping with our previous research, it is clear that family relationships (spouse, family, social support systems, and positive communication attachments) can be among the most powerful antidotes to burnout and emotional exhaustion (Quick, Henley, & Quick, 2004). We begin by choosing the most powerful and the most accessible intervention (i.e., to develop programs that serve to enhance family support systems).

Enhancing the Power of Family Support Buffers

The spouse of a high-performance physician who is available and willing to listen during periods of emotional exhaustion is a great preventive resource and buffer to burnout and emotional exhaustion (Quick et al., 2004). The same is true of spouses' understanding of the extra hours leaders may have to work in their jobs. If a physician fails to nurture attachment to their strong social support systems, he or she may find that the spouse and family begin to pull away rather than rush to the aid of the sinking and missing-in-action family member (physician). If the spouse of the physician feels continuously let down and disappointed by the overworked physician, a divide between the stressed-out, workaholic physician and his or her best support system can develop. He or she may then feel a burden of guilt followed by the inclination to deal with it by trying to work harder and longer to make up for the absence with greater monetary rewards. Ultimately, it comes down to an issue of managing energy as well as an issue of managing time (Loehr & Schwartz, 2003). Many overstressed or workaholic health care providers tend to deny there is a problem. If examined closely, one can definitely make an argument for the fact that denial of the workaholic syndrome is similar to other types of addictions. In this analysis, we consider excessive work to be an addiction that creates serious relationship problems, as evidenced by the fact that divorce rates per 1,000 climbed from 2.6 in the 1950s to nearly 5.0 more recently (Quick et al., 2004).

Lessons About Burnout From Other High-Profile, High-Pressure Professionals

At the outset, we feel it is important to direct the physician's attention toward issues of personal well-being by sharing insight from prominent, respected, high-visibility professionals who have been willing to acknowledge their own vulnerability to the pressures of

critical decision making and the risk of burnout. In our experience, there are two examples wherein physicians might find parallels to their work. These include air traffic controllers (ATCs), who make life-and-death decisions every hour of every work day (Averty, Collet, Dittmar, Athenes, & Vernet-Maury, 2004). One simple mistake may lead to tragedy. Second, astronauts are part of a high-stress team who must function with near-perfect precision in very dangerous conditions for long periods of time (Zhang & Bai, 1999). Isolation and confinement further complicate their adjustment to spacecraft conditions.

ATCs are highly visible stress carriers. ATCs have very critical job outcomes; they deal with uncertainty, and there is a constant threat of the unknown (e.g., pilot human error, disturbance in weather conditions). About 10% to 15% of ATCs report burnout and stress symptoms from work (Zeier, 1994). In addition, cardiovascular problems, endocrine disorders (Rose & Frogg, 1993), and hypertension have been linked to the stresses experienced by the members of this profession (Ming et al., 2004). As a result, the work environment for ATCs has been dramatically changed to allow for brief respite periods between intense bouts of controller activity in a structured design of a healthy and safe workload. ATCs plan ahead for stressful time periods and accommodate when they occur.

Astronauts in training for space travel deal with stress as teams. The consequences of a mistake onboard a spacecraft can result in catastrophic mission failure and death (Palinkas, 2001). Isolation and confinement put a strain on emotions and cognitive performance. Known stressors include problems with sleep, interpersonal tension, anger displacement, and asthenia (loss of muscle strength; Zhang & Bai, 1999). Conflicted group dynamics are common on space missions (Kass & Kass, 1995), and strong leadership is needed to maintain emotional support for preflight operations (Manzey, Schiewe, & Fassbender, 1995). In addition, cohesiveness is required among widely diverse and multicultural space crews where task performance depends on interpersonal skills and teamwork (Kanas & Ritsher, 2005). For the physician, this translates into strong leadership of a competent health care team that communicates exceptionally well to provide the best patient care and to develop a great bedside manner, which is not easy in this busy, sometimes frustrating, era of paperwork and precautions.

It is hoped that these examples provide a precedent for the process of reducing stress in the medical workplace. Most importantly, it should be noted that the astronauts and ATCs have also found that spouses and families are a key source of

strength to buffer against the potential problems of burnout and emotional exhaustion.

Recommendations for Leadership Steps to Develop Physician Well-Being Programs

We recommend building on the natural strength of marital and family bonds. This could be done through a workshop on high performance stress and the marriage bond. The purpose would be to enlighten physicians and spouses regarding the fact that stress symptoms are very common and that to acknowledge them is a positive quality. A second purpose would be to enhance communication between partners and among family members, even children, who can be co-opted into good behavior if they feel they have been heard.

We recommend outings for physicians and spouses that include a message of cohesiveness to help identify stressors at work and to explore innovative coping strategies. This might include tickets to a play that has a message about communication and cohesiveness, whereby the director of physician well-being takes a few minutes before the play begins to meet with the group to introduce the purpose of the event and to alert all parties to potential learning concepts that might come forth from the experience.

We recommend grand rounds cases that enlighten the physician about the underlying basis of stress management skills and self-regulation by illustrating the impact of stress on the autonomic nervous system and the immune system as it relates to various disease processes that appear as stress-related disorders. The purpose would be to use specific case studies to illustrate complex disease patterns that might respond to a treatment of self-regulation and stress coping that has applicability for both the patient and the physician. Physicians may learn best from demonstrations that first apply to their patients, the focus of their primary and often selfless concern.

We recommend Web-based healthy computing seminars that can be viewed any time. Physicians like the idea of getting more things done with less expense and effort. That is, improving efficiency and productivity in a stress-free format is an enticing concept. These Web-based seminars are aimed at mastering workflow and achieving productivity with fewer resources. This is achieved by learning, mastering, adapting to medical correspondence, and practicing a set of work performance skills with ergonomic efficiency as a priority.

There are numerous other strategies that could be incorporated into a physician well-being program. Enlisting the support and insight of a select group of informed practitioners to garner best ideas and newest innovations will be the ultimate goal of this program.

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