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Improving surgeon wellness: The second victim syndrome and quality of care

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ABSTRACT

Improving quality of care logically involves optimizing the duty-readiness and well-being of the healthcare provider. Medical errors and poor outcomes adversely impact the involved providers, especially surgeons, as well as the patients and their families. Unfortunately our current system does little to support these "second victims" who experience various degrees of emotional and psychological stresses including confusion, loss of confidence, and debilitating anxiety. These factors contribute to the alarmingly high rates of professional "burnout," substance abuse, and suicide of healthcare providers as well as increase the likelihood of subsequent medical errors. Mindful efforts to improve the healthcare culture and develop personal support systems can help surgeons become more resilient, provide higher quality patient care, and have longer productive professional lives. Institutional support systems are also necessary to assist "second victims" to recover from the impact of an adverse patient event.

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Introduction

> *These are the eternal duties of a Physician: First…to heal his mind and to give assistance to himself before giving it to anyone else…*
>
> Epitaph of an Athenian Physician, 2 AD.[1]

Surgery is a human endeavor whose outcomes are dependent in large part upon the skill and education of the practitioner. Seeking ways to optimizing each of these components while avoiding sleep deprivation and dangerously long work hours while assuring ongoing competence has resulted in myriad changes in surgical education as well as the current Maintenance of Certification (MOC) requirements.[2] But what has remained essentially ignored until recently is the surgeon's psychological status.

While sometimes unfairly characterized as unfeeling, surgeons often have deep emotional bonds to their patients.[3] The surgeon must distance themselves in some fashion from their patient or otherwise be unable to take a knife to flesh. However, the corporeal intimacy of surgery is combined with an appreciation of the psychosocial impact of the procedure that extends beyond mere physical healing.[4] Empathy is an integral aspect of medical decision making, which is based fundamentally upon the patient's and their family's overall best interests.[5] It also contributes greatly to a surgeon's job satisfaction while also affecting a patient's perception of outcome.[6]

In 2000, a landmark publication documented what physicians knew but rarely discussed; that the supposedly "uncaring" doctors were actually intensely affected when their patients did not do well, especially if the adverse outcome was a result of an error in diagnosis or treatment.[7] Unfortunately, medical errors occur all too frequently. In 2000, the Institute of Medicine determined that medical errors occur in as many as 5–18% of all hospital admissions and accounted for 98,000 deaths annually.[8] A more recent study found that medical errors are the third leading cause of death in the US accounting for 440,000 annual fatalities.[9] There are approximately 600,000 physicians in the US which means that there will be at least one death due to a medical error for each doctor nearly every year.

A healthcare provider involved in an unanticipated adverse patient occurrence who experiences psychological and emotional trauma related to the event is considered a "Second Victim."[7] This is in distinction to the patient and their family who are the primary wounded parties and the involved healthcare organizations that are considered "Third Victims."[10]

Second Victims often feel personally responsible for the unexpected patient outcomes, believe they failed their patients, and second-guess their clinical skills, knowledge base and career choice.[11] After a medical error, these caregivers report feelings

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Table 1
Surgeon's risk factors for the development of the "Second Victim Syndrome."

Residents
"Burned-out" physicians
Female surgeons
Less experienced surgeons
Those who feel unrewarded or overwhelmed
Those who perceive an imbalance between career, family and personal growth

such as fear, guilt, anger, embarrassment, and humiliation that persisted for months or years. In addition, there were concerns about professional reputation, reduced job satisfaction, overall loss of confidence, and worries that they will continue to make errors.[12–15] Thus Second Victims are affected both personally and professionally.[16,17] Collectively, these emotional and psychological effects experienced by physicians have been termed the "Second Victim Syndrome" (SVS).

Incidence and risk factors

According to available data, a significant number of healthcare providers will experience SVS sometime in their career. Scott et al.[18] found that 30% of medical students, physicians, and nurses reported personal problems related to an adverse patient event within the previous 12 months. Various studies have shown that the incidence of SVS ranges from 10.4% to 43.3% and it is estimated that nearly half of all healthcare professionals have experienced SVS during their career.[3,14,18,19] Residents are particularly vulnerable to the negative manifestations of SVS since they perceive greater responsibility and possible consequences.[20] Not surprisingly, 60% of residents that reported an error had a positive screen for depression (Table 1).[21]

The inability to address these issues while maintaining a sense of meaning at work and at home can increase a surgeon's susceptibility to "Burnout."[22] Other contributing factors include marital or family problems, medico-legal concerns, frequent night call obligations, poor personal health maintenance, and cumulative surgical complications. Burnout is characterized by emotional exhaustion and depersonalization that impairs professional performance. Survey data suggests that 30–40% of surgeons experience emotional exhaustion caused by excessive psychological and emotional demands that leave individuals feeling drained and depleted.[22] At greatest risk are female and younger surgeons, those who have found that their profession has become "overwhelming" and unrewarding as a career, along with those who perceived an imbalance between career, family and personal growth. Interestingly, burnout has not been found to be related to caseload, practice setting, or insurance mix.[22]

Burnout is a surgical quality problem, commonly associated with poor work performance and reduced quality of patient care. Those who experienced burnout or the emotional problems related to an adverse outcome have reported an increase in rates of errors in subsequent months.[23] Professional burnout contributes to the likelihood of developing SVS which in turn creates an emotional milieu that contributes to making medical errors.

The personal and professional consequences of burnout can be devastating. The belief that their quality of life has diminished compels many to leave medicine entirely by retiring early or changing professions.[24] The cost to replace a physician may be as high as $123,000 in recruiting fees and $2,000,000 in lost revenue.[25] More alarming is the association of burnout with a greater incidence of clinical depression, a substantial rate of substance abuse, high numbers of divorces, and increased incidence of suicide.[26,27]

Characteristics of the second victim syndrome

Scott et al.[11] have identified six dynamic stages that characterize the psychological and physiologic responses of the SVS which they further define as a "life altering experience that left a permanent imprint on the individual." The first stage, "Chaos and Accident Response," is characterized by confusion with internal and external turmoil. Distracting self-questioning may be occurring simultaneously while caring for an unstable, critically ill patient. The practitioner may digress from being involved and in control to becoming helpless and useless (Table 2).

In the second phase, "Intrusive Reflections," the provider is preoccupied by repetitive replays of the event and may have loss of confidence, feelings of isolation, and difficulty sleeping. Next is "Restoring Personal Integrity" where the practitioner re-integrates into their professional life, perhaps with the assistance of a trusted colleague or mentor.

Persistent concerns about their professional future may recur if there are no organizational systems in place to assist them.

"Enduring The Inquisition" is the realization that the institution will be investigating the event. The methodology is usually unknown and the intent unclear to most clinicians, which increases anxiety about licensure, malpractice suits and continuing in their chosen career. Stage 5 is "Obtaining Emotional First Aid" from family members, co-workers, and superiors. Patient privacy concerns limited many in their ability to find appropriate support. Institutionally established employee assistance programs are often considered to be inadequate by most physicians and are seldom used.

The final phase, "Moving On," has three distinct tracks. Some "dropped out" either by moving locations or leaving medical practice altogether while others "survived" but continued to carry significant emotional baggage. Those who "thrived" were able to derive something positive from the experience.

Luu et al.[28] interviewed surgeons following an adverse event and found that their reactions were markedly dissimilar to other physicians likely due to differences in professional context. A consistent four-phase pattern followed a surgical adverse event beginning with "The Kick," described as a "visceral blow to their core" in combination with physiologic signs of anxiety and stress including tachycardia as well as "feelings of failure and self-doubt." Next was "The Fall," a "feeling of spiraling out of control co-existent with a need to 'right themselves.'" Surgeons described being in this phase as if everything was enveloped in a dark cloak including their personal lives.

The third stage ("The Recovery") was characterized as a lifting of the cloud enveloping their lives as they began to develop coping mechanisms. As in Scott's latter phases, the surgeons expressed a need to discuss the event and to learn from the experience so that something favorable would result from this negative situation. The final phase, "Long-Term Impact" expresses "the cumulative effect these complications had on their sense of self throughout their careers."[28] This may be positive but frequently was not, with some surgeons self-restricting the scope of their practice or retiring completely.

Initially the involved healthcare organization responds to an adverse event by addressing the needs of the patient and their family members. As a "third victim," the organization will customarily also need time to evaluate and recover from the incident, make public disclosure to appropriate agencies, and to identify any root causes to understand what occurred and why it happened to improve quality of care and to prevent future harm. Many organizations do not have established response systems in place to address the emotional and psychological needs of the involved providers.[29]

Table 2
Stages of the "Second Victim Syndrome."

Stage		Characteristics
1	Chaos and accident response	Confusion, internal and external turmoil, self-questioning, and ineffective
2	Intrusive reflections	Preoccupation, loss of confidence, isolation, and insomnia
3	Restoring personal integrity	Re-integration into professional life
4	Enduring the inquisition	Anxiety re: license, medical-legal, professional relationships, and career choice
5	Obtaining emotional first aid	Seeking emotional help from trusted sources and privacy concerns
6	Moving on	Dropping out vs. surviving with scars vs. thriving

Management of second victim syndrome

In the classic training program, we have taught how to perform surgery, but we have not taught how to live as a surgeon.

Darrell Campbell[22]

The most obvious way to address SVS is to take steps to reduce the incidence of medical errors (Table 3). One method is to mirror High Reliability Organizations (HRO) since these entities perform in extremely hazardous situations but with much better safety records than those found in healthcare. HRO training emphasizes a flattened hierarchy and focuses on improved communication that includes challenges to confusing situations and "check backs" to ensure that unwarranted assumptions do not injure patients. This training ultimately results in cultural changes in the healthcare institution such that patient safety and improved quality become a primary organizational value.[30]

Strategies to promote physician's health have been demonstrated to increase resiliency to stress and to help prevent burnout. Mindfulness training reduces stress and increases empathy in healthcare students and physicians.[31,32] Exercise, meaningful activities such as service outside the organization, supportive family relationships, and regular attention to their own routine health needs can help a physician minimize the stress of professional activities.[33,34]

An important step to minimize the unfavorable emotional responses that characterize SVS is to change the nature of medical professional environment (including training), from a "Culture of Blame" to a "Just Culture." The principle is that medicine is conducted by humans and that humans are not perfect. The Agency for Quality Healthcare and Research defines a "Just Culture" as one that "focuses on identifying and addressing systems issues that lead individuals to engage in unsafe behaviors, while maintaining individual accountability by establishing zero tolerance for reckless behavior."[35] By classifying actions as errors (what was done instead of what should have been done), at-risk behavior (unsafe) and reckless (causing harm to a patient), this approach changes the focus to the causative behavior rather than the severity of the event. This encourages the reporting of errors and "near misses" by taking away the stigma of blame thereby creating more opportunities to learn from the errors and improve the organizational systems and processes. A non-confrontational learning environment reduces stress, promotes dialog and helps trainees develop appropriate coping skills for the inevitable bad outcomes that will accompany their future careers.[20]

Table 3
Management of the "Second Victim Syndrome."

Prevention	1. Reduce incidence of medical errors 2. Promote physician physical and emotional health 3. "Just Culture" professional and teaching environment
Mitigation	1. Institutional "acute response teams" 2. Immediate emotional "first aid" 3. Break from professional responsibilities
Support	1. "No Blame" institutional support programs 2. Customized long-term counseling 3. Strict confidentiality

This extends to the time-honored forum for discussing surgical complications. As currently structured, the morbidity and mortality conference (M&M) offers little in the way of emotional support.[36,37] And while the customary confrontational nature of M&M ("Why didn't you just shoot him?") may be waning, there is still an inherent tendency to assign responsibility for complications.[38] In fact, the traditional intimidating hierarchical nature of surgical training contributes to stereotypical behaviors that actually make surgeons more susceptible to burnout and can adversely impact patient safety.[39,40] Standardizing the M&M format to focus on learning from errors rather than assigning blame improves residents abilities to address core competencies.[41–43]

While it is clear that surgeons experience profound emotional and psychological stress following an adverse patient event, only a few healthcare organizations have established programs to assist healthcare providers as they navigate the associated emotional upheaval. One study found that 90% of physicians interviewed felt that healthcare organizations failed to provide sufficient assistance when dealing with medical error associated stress despite the fact that 82% desired that kind of support.[15] Doctors have reported that many organizational responses to medical errors are hostile, threatening, isolating, and fundamentally useless.[44,45] Combined with barriers such as a reluctance to take time away from their practice and concerns about confidentiality, licensure and litigation, it is not surprising that most second victims self-treat and achieve less than optimal outcomes.

It is important that healthcare organizations develop formal systems to provide support for providers emotionally traumatized by an adverse patient event. After a medical mistake, physicians need experienced colleagues who can understand the event and can validate their thought processes and self-worth.[12,44,46] Ideally, these counselors are non-judgmental peers (or others with whom the victim consistently works) who have been trained in listening and supportive skills and will focus on the victims' emotional response and not the details of the event.[18]

It is vital that there be a strong administrative commitment to the support program. This can occur in several fashions and may include (1) prevention and health maintenance, (2) acute response immediately following an adverse event, (3) ongoing support and counseling during the peer review process, and (4) continued support during disclosure to the family and continuing on through whatever settlement or compensation is required in the medical-legal context.

Several hospitals and other healthcare organizations have developed formal interventional systems that are an integral component of Medical Staff Services, which share several important characteristics. The most effective are staffed by trained peers or managers, are internally available 24/7 and provide a tiered approach of escalating support since victims will have diverse preferences and requirements.[47,48]

Strict confidentially is mandatory as is professional review of cases with feedback and opportunities to learn from the situation.

The initial goal of the intervention is to provide a brief break from responsibilities to allow reflection via a "rapid response team" that may include psychologists and clergy as well as peers. This "emotional first aid" initiates a recovery process that may take a considerable time to complete. Providing compassionate support in a "no blame" atmosphere to surgeons that experience emotional turmoil after a medical error will provide significant benefits to the clinician, patients, and healthcare organizations. This needs to become widely accepted and fully integrated into the very fabric of our healthcare system.

Conclusion

The high prevalence of surgeons as "second victims" within healthcare organizations is invisible to most healthcare leaders but has a profound effect upon patient outcomes and cost of care. Healthcare organizations need to establish and sustain appropriately designed intervention systems to facilitate recovery from SVS and promote physician well-being. This would improve outcomes and help control healthcare expenditures. Similarly, surgical education has to be conducted in a milieu that promotes communication and helps sustain provider wellness. The personal and professional pain experienced by most second victims may be unavoidable but need not be experienced in isolation. By ensuring the ongoing health of our colleagues, we can build professional resiliency and improve quality, while protecting the future of our patients and our profession.

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