



# Burnout Continuum, Recognizing Burnout in the Trauma Provider, Staging It, Intervening Early: Applying ATLS Principles to the Trauma Provider

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Accepted: 25 November 2022 / Published online: 10 January 2023  
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## Abstract

**Purpose of Review** To craft an approach to thwart early triggers of symptoms on the burnout continuum for trauma surgeons based on an understanding of drivers of burnout, second victim syndrome, peer-to-peer support, and trauma-informed care. **Recent Findings** Trauma surgeons are particularly vulnerable to risk factors of burnout such as work–life imbalance, higher risk of adverse events, and more exposure to emotionally distressing work events such as witnessing abuse, neglect, and high rates of death among younger patients. Evidence supports the benefit of peer support for the personality style of physicians who often feel unable to show vulnerability as leaders of medical teams. Trauma-informed care allows for optimizing interventions by minimizing triggers from prior distressing events.

**Summary** An ABCDE (Acknowledge; Bear Witness; Offer Coping Support; Debrief; Enlighten, Engage, and Educate) algorithm for surgeons is an early first step in ameliorating the triggers on the continuum of burnout.

**Keywords** Trauma · Burnout · Second victim syndrome · Trauma-informed care · Peer support

## Introduction

Burnout continues to be a major issue affecting 37 to 53% of practicing physicians across all medical subspecialties, and is on the rise [1]. Surgeons appear particularly vulnerable compared to their peers in non-surgical specialties. A landmark survey performed by the American College of Surgeons (ACS) in 2008 found that 40% of responding surgeons exhibited symptoms of burnout [2]. A more recent Medscape survey across multiple specialties found that general surgeons topped the list of burned out physicians at 50% of the workforce [1].

Even more alarming is the potential risk of suicidal ideation among surgeons. The ACS survey of nearly 8000 surgeons found that 6.4% had suicidal ideation in the year prior to the survey [3]. The prevalence of suicidal ideation in younger surgeons less than 45 years of age was similar to that of the general population. However, in older age groups, suicidal ideation was 1.5 to 3 times more common than in the age-matched general population. This would suggest that over time surgeons become less resilient in the face of the mental and emotional stress of their job. There is a pressing need to develop effective interventions to make the professional sustainable for one another.

## Trauma Surgery and Burnout Risk

The reason for this high rate of burnout, and its end stage of suicidal ideation, is multifactorial. However, several studies have concluded that the unattainable myth of work–life balance is the biggest contributor to burnout [4]. Among cancer surgeons, the inability to cope with patient suffering and death is another factor that is associated with an increased

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This article is part of the Topical collection on *Wellness for the Trauma Surgeon*

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risk of burnout [5]. In addition, a sub-analysis of the ACS survey found that rates of burnout were far higher among the 8.9% of responding surgeons who self-reported responsibility for a medical error in the three months prior to the survey [6]. It appears that trauma surgeons are particularly vulnerable to burnout due to these kinds of factors. After considering associated lifestyle factors such as having a spouse, having a children, quality of marriage, or spouse's profession, the ACS survey demonstrated that the subspecialty of trauma was associated with the highest risk of burnout [2].

Trauma surgeons often work long hours including night call and weekend/holiday coverage in excess of their surgical peers. This grueling schedule and incompatibility with more typical school and work schedules of family members and loved ones can affect a surgeon's ability to maintain work–life balance, as was demonstrated in a 2021 survey of 291 members of the American Association for the Surgery of Trauma that found 57% of trauma surgeons were dissatisfied by their so-called work–life balance [7••]. Longer hours, more time in the operating room, and more night calls per week do not just interfere with work–life balance. They have been associated with higher rates of medical errors [6]. It is possible that the trauma surgery schedule may in and of itself predispose to medical errors which is a key exposure on the continuum of burnout.

## Trauma Surgery's Second Victim

The “second victim” syndrome (SVS) is typically described as a phenomenon where physicians experience symptoms of psychological distress such as fear, grief, guilt, and/or anger in the aftermath of a medical error for which they felt responsible [8]. However, it can also be caused by other distressing occurrences such as being named in a frivolous lawsuit, experiencing the death of a colleague, or responding to a mass casualty event. Peer support programs have been proposed as a method to support physicians experiencing psychologic or emotional strain adverse or otherwise distressing events as a means to intervene in the burnout continuum [9]. Shapiro and colleagues at the Brigham and Women's Hospital in Boston, MA, USA, redesigned their approach to peer support for physicians experiencing SVS based on an understanding of the psychological traits of physicians (e.g., striving for perfection, imperative to stay emotionally neutral as a leader, difficulty showing vulnerability) compared to other team members [9]. These traits made group debriefs for physicians less effective for treating psychological distress after an adverse event or other distressing events and a one-on-one peer support program was born.

The one-on-one peer supporter has been proposed as a person of equal standing and shared experience of difficult situations who bears burdens, advocates, assists, corroborates,

maintains, and comforts their colleague who has experienced a traumatizing event [10•]. While not originally conceptualized to ameliorate SVS, trauma-informed care—a paradigm that considers the psychologic and biologic manifestations of past emotional or physical trauma (often in childhood and thus referred to as adverse childhood experiences) that may be triggered by medical encounter [10•]—is likely also a powerful approach to peer support in particular for trauma surgeons who routinely bear witness to cruelties such as abuse, neglect, and interpersonal violence, extremes of patient suffering, and high mortality rates. These deaths, while not medically preventable after the time of presentation, are often preventable from a mechanistic perspective (e.g., reduced access to firearms, higher use of seatbelts, not performing risky activities while intoxicated) adding to the existential burden of bearing witness to the loss of life, often times in a young population.

## A Proposed Early Intervention for Trauma Surgeons

We posit that the unique and repeated exposure of trauma surgeons to horrific mechanisms of injury (e.g., intimate partner violence, child abuse, gun violence) or gruesome anatomic findings (e.g., traumatic amputations, scalping, partial decapitation) represent adverse professional events (even if an actual adverse medical event—i.e., medical error—has not occurred) that predispose trauma surgeons, more so than their colleagues in other surgical subspecialties, to repeated triggers of SVS that will accumulate trauma activation after trauma activation and inevitably contribute to other drivers of burnout. To combat this, we propose an early peer support intervention, rooted in the work of our physician colleagues who have pioneered peer support and trauma-informed care, targeting psychological distressed experienced in the trauma bay.

The ABCDE algorithm for trauma resuscitation ensures timely life saving care for injured patients who, if they survive, must have ongoing treatment such as surgery and critical care to continue to render the best outcomes [8]. Our proposed algorithm is a similar early intervention for surgeons participating in particularly gruesome activations or fatalities in the trauma bay. Provided in conjunction with a continuum coping resources over time, such an immediate effort to support trauma surgeons may ameliorate the impact of second victim syndrome. Our hope is that the ABCDEs of peer support for trauma surgeons after a distressing trauma activation will curtail on key exposure on the burnout trajectory.

**A: Acknowledge** Communicate briefly with the surgeon to express empathy for what they are experiencing after a hard case, a horrific mechanism of injury, etc.

Like the process of reaching out described by Shapiro [9], we recommend reaching out by a secure text message

or email within 24 h of the event to ensure the surgeon that their well-being is a top priority, that feeling emotional distress is a normal and expected aspect of our work that we all experience, and that you are available for a meeting at their convenience.

**B: Bear Witness** Offer space and time one-on-one to allow the provider to be silent in a space of support or to communicate what they are going through.

Stereotypically, surgeons are not prized for “being emotional”; rather surgeons are often expected to have a “stoic demeanor.” Trauma-informed care research has shown the benefits of emotional availability and flexibility [11]. To bear witness in this case means to validate the peer’s experience and the distress it has caused. It is important for the peer responder to be emotionally present with their body language—sitting in silence with a comforting stance or making eye contact while deeply listening—and their use of words—asking the peer to reflect on the event, how it made them feel, and what their personal coping strategies are. The peer responder needs to be cautious on not allowing the discussion to digress into a dissection of events in the way that a morbidity and mortality or sentinel event peer review might proceed. The purpose of this time together is for the peer responder and the peer to converse about the peer’s experience and emotions and not adjudicate the event.

**C: Offer Coping Support** Provide information on services that can enhance the peer’s inherent coping mechanisms.

Even if a peer seems to be coping well, information should be provided for available resources. All healthcare organizations have Employee Assistance Programs. To pro-actively avoid progression of exposure to symptoms of burnout or PTSD, referring a short-term therapeutic intervention may be beneficial. Additional institutional (i.e., those mid- to long-term institutional coping resources described in Seys’ review)[8] and external resources, for example, a list of therapists without affiliation to one’s health system with experience counseling physicians, to support coping can be offered at this time as well. The role and extent of EAP and other resources along with informational material can be provided but should not be required of the peer.

**D: Debrief** Bring the surgeon back into the big room after their one-on-one peer counseling for a facilitated team debrief.

Although the utility of the group debrief as the initial source of support for physicians has not been found to be especially effective [9], it is important for us to normalize the adverse professional experience that occurred. Whether or not a formal sentinel event review is warranted, a formal

team debrief to review both what happened and what people’s reactions/emotional responses were is extraordinarily important. This is akin to group therapy—mitigating the feeling of being alone that most experience a distressing event feel. We recommend the format of Critical Incident Stress Debriefing originally tested for first responders with whom trauma surgeons share many exposures [12•].

**E: Enlighten, Engage, and Educate** Create an institutional culture that puts identifying and preventing burnout as a top priority and do this all the time whether or not a bad/triggering event has happened.

As with the first four steps in the trauma resuscitation algorithm, exposure comes only after immediately stabilizing airway, breathing, circulation, and life-threatening disability. Here the same is true. The final step is unrelated to the surgeon experience distress in any given moment in time. It is reading and sharing articles like this one. It is creating short-, mid-, and long-term coping resources. It is about normalizing the experience of distress after participating in the care of a badly injured patient and terrible episodes of violence in various formats accessible to those with different learning styles, different inherent resiliency, and different amounts of self-efficacy in the face of a very stressful profession.

## Conclusion

While our proposed algorithm would benefit from rigorous testing with pre- and post-implementation surveys and randomized interventions across similar institutions, based on the evidence in support of both peer support programs in medical professional and trauma-informed care for patients during medical encounters, we believe our algorithm has potential to affect change early in the continuum of burnout. So much of what trauma surgeons witness and must address in the trauma bay, no matter how horrific the underlying circumstance, is ultimately outside the health systems control; investments in early interventions may go a long way in sustaining a vital component of the acute care workforce.

## Declarations

**Conflict of Interest** Dr. Santry is a paid employee of NBBJ, an architecture and design firm that offers professional services to plan, renovate, and design the health system built environment.

**Disclaimer** The contents of the manuscript represent the thoughts of Dr. Santry and her colleagues only and do not represent the thoughts of her employer.

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