Vicarious trauma for surgical residents

A structured program can improve and advocate wellness

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Trauma not only affects individuals exposed to a stressor or event, but also those with whom the experience is shared, including therapists and healthcare personnel. In the healthcare field, traumatic events, such as blunt force or penetrating trauma, may cause vicarious trauma among trauma surgeons through their exposure to victims of trauma and violence. Vicarious trauma, or secondhand trauma, can occur from a multitude of exposures. These include listening to individualized stories from victims of trauma, watching videos of traumatic incidents, reviewing case files or responding to the aftermath of violence and other traumatic incidents.

Anyone working with victims of trauma and violence can be affected by vicarious trauma, but certain risk factors predispose individuals to a heightened sense of vulnerability. For instance, prior traumatic experiences, a consistent exposure to trauma at work and a lack of an effective supportive process for discussing traumatic content in the work environment increase the chance of developing vicarious trauma. The work of general surgery residents rotating on the trauma service unavoidably immerses them into the outcomes of traumatic injuries. This raises a greater concern for potential mental health consequences compared to other specialties. Rarely, however, are general surgery residents working in high-trauma exposed fields offered mental health professional support, including time for reflection, training during residency about coping mechanisms after traumatic exposures or supervised debriefings. Supervised debriefings have been found to advance the psychological well-being of nurses while also improving their rates of burnout, thereby allowing them to access mental health resources sooner if needed.

General surgery programs recognize and even advocate for resident wellness, but few programs offer a structured, formal curriculum to surgical residents to improve the work environment and residency culture. Formal wellness programs that focus on debriefings, mindfulness training and coping strategies could prevent vicarious trauma among general surgery residents rotating on high-exposure rotations, such as the trauma service.

Traumatic event exposures among general surgery residents

General surgery residents rotating on the trauma service are immediately exposed to patients in critical conditions following a traumatic injury, directly witnessing the aftermath of trauma and violence firsthand before any medical intervention has begun. To be compliant with the American College of Surgeons guidelines, the presence of a trauma surgeon during trauma bay resuscitations in the Emergency Department is required. Often, the trauma surgeon and general surgery residents manage the care of multiple trauma patients simultaneously or consecutively within a short time span. Trauma surgeons are at greater risk of having lower levels of satisfaction, possibly due to the fast pace.
environment of the specialty with the continuous exposure to vicarious trauma. While no studies have reported the extent of vicarious trauma among trauma surgeons or general surgery residents, the concept of post-traumatic stress disorder among healthcare workers, including trauma attendees and residents, has been extensively reviewed. In attempts to reduce vicarious trauma, interventions aimed at promoting self-care and self-awareness should be introduced to general surgery residents.

Interestingly, past literature has reported that self-perceived limitations have deterred healthcare providers from accessing self-care resources, including staffing demands, patient acuity, lack of time off and difficult rotations. Moreover, a general sense of guilt has been associated with self-care, which may further deter surgical residents from accessing resources to reduce vicarious trauma during more demanding services. This shows the need not only for more readily accessible mental health resources, but also for structured debriefings for healthcare employees during work hours.

Although post-traumatic stress disorder (PTSD) among healthcare professionals has been well-documented, few studies have investigated the impact of vicarious trauma among general surgery residents, especially on trauma service rotations.

**Personal/professional risk factors**

By understanding triggers of vicarious trauma among surgical residents, better resources can be prepared to prevent worsening mental health issues. Among trauma surgeons, 40% have been identified with PTSD symptoms and 15% met diagnostic criteria for PTSD. The diagnosis of PTSD was more prevalent in trauma surgeons caring for more than five critical cases per call duty. Raising awareness of the potential to develop vicarious trauma symptoms among general surgery residents may encourage individuals to access mental health resources, if available. Recent literature has revealed that 22% of general surgery residents screened positive for PTSD symptoms. Interestingly, over 35% of surgical residents were reported as high-risk for developing physician burnout with a significant association between burnout symptoms and PTSD. Yet, appropriate well-being resources are still not being offered to surgical residents, despite the known increased risk for developing vicarious trauma.

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**Professional/interpersonal consequences and effects**

The impact of experiencing vicarious trauma among surgical residents can affect patient care as residents experience various degrees of psychological stresses such as debilitating anxiety, confusion and loss of confidence. Together, the after-effect of vicarious trauma can contribute to professional burnout, substance abuse and increasingly high rates of suicide among general surgery residents.

The idea of healthcare providers developing mental health ramifications after caring for trauma patients is not unique. Previous literature has reported that 30% of physicians, nurses and medical students identified an increase in psychological and emotional distress—the “second victim syndrome”—within 12 months of an adverse patient event. The effects of stress during trauma activations and emergency surgery impacts attending surgeons as well as surgical residents; attending surgeons, however, experience significantly lower overall stress compared to senior and junior residents during trauma activations. The level of stress was comparable between junior and senior residents during both trauma activations and emergency surgery. Trauma surgeons and surgical residents are rarely offered mental health services focused on preventing vicarious trauma due to the inherent expectation that they will know how to cope with the stress following traumatic events as this is an intrinsic part of their job.

**Solutions/psychoeducational resources**

Although surgical trainees report high levels of burnout, residents may only be offered informal coping strategies in the hospital environment. Understanding the potential to experience vicarious trauma is especially important for surgical residents because of the consistent exposure to patients in critical condition following major trauma. Moreover, it indicates the emerging need for proper support services to be offered to surgical residents exposed to vicarious trauma in attempts to remedy mental health concerns. For instance, to address secondary trauma among nurses, several hospitals have developed psychoeducational resources for nurses to access, including Code Lavender, Code Compassion and Code Pause. Each of these evidence-based programs are available to nurses to address their risk of secondary trauma by providing a post-event debriefing session during work hours. A similar program could be implemented specifically for surgical residents to reduce vicarious trauma and to enhance the detection of burnout.
A formal curriculum could provide general surgery residents with mindfulness training and institutional resources to help prevent vicarious trauma. Solutions might include stress-management models, sleep hygiene techniques, access to support groups, professional coaching and training on how to interact with difficult patients. Professional coaching with physicians after six months has been found to be an effective method of reducing emotional exhaustion and overall burnout while simultaneously improving quality of life and resilience. Similar professional coaching sessions could be incorporated into the general surgery residency curriculum to address physician burnout and vicarious trauma ramifications.

Certified nursing assistants were able to decrease burnout and secondary traumatic stress scores after an effective, yet low-cost, 90-minute evidence-based educational program, research shows. The study highlighted the necessity of providing healthcare workers with workplace educational programs and resources to not only improve retention, but also to reduce burnout and secondary trauma exposure.

**Recommendation**

Providing resources after traumatic exposures within the hospital or making proper referrals to professional mental health services would be greatly beneficial to surgical residents working with trauma victims. Implementing formal educational training and awareness about vicarious trauma for residents, along with hosting an on-site hospital support system, would help address the needs of those experiencing vicarious trauma symptoms. Residents within trauma surgery are likely to benefit from an organized, interventional system, such as psychological debriefing or time for reflection between trauma cases, to support their emotional wellbeing and mental health following exposure to traumatic events and critical patient encounters.

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