Second-victimhood Among Anesthesia Providers & the Effects on Patient Outcomes

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Introduction

Healthcare providers are inherently fearless during times of adversity for their patients. A stoic attitude often aids in the ability to finish tasks necessary for patient safety. Other times, emotional trauma prevails, and the healthcare provider becomes impaired (Vinson & Randel, 2018). During these times, the second victim is the healthcare provider. A second victim refers to a healthcare professional involved in an unexpected adverse event, medical error, or patient-related injury. The healthcare provider is considered a victim due to being traumatized by the event (Finney et al., 2021).

Background

All hospitals experience various types of patient-related tragedies. At Level I trauma centers, the rate of devastating patient injuries is more numerous compared to critical access hospitals. Common examples of these encounters include domestic violence, fetal demise, contagious diseases, gang violence, sexual abuse, and motor vehicle accidents. Stroke, medical errors, postoperative vision loss, intraoperative cardiac arrest, patient death, ethically compromising decision making, and near-miss cases are some anesthesia and intraoperative specific concerns (Finney et al., 2021). Burnout, anxiety, depression, and suicide in anesthesia providers are seen after caring for these types of situations if proper decompression protocols are not maintained (Vinson & Randel, 2018). Work environments with a supportive culture and strong peer support demonstrate better outcomes following adverse events (Vinson & Randel, 2018). Unfortunately, the programs are often underutilized (Finney et al., 2021).

At a tertiary care center in eastern Illinois, the anesthesia providers can become second victims after adverse perioperative events. These tragedies can result in future disruptions in patient care and patient safety. Developing a supportive network, including education and an

interventional protocol, has the potential to support the staff after such events. In addition, supportive culture and peer support have been shown to promote safe patient outcomes.

Aim

This review aims to examine if adverse patient outcomes affect the mental health of anesthesia providers and if the mental health status of anesthesia providers affects the quality of care given to patients. Furthermore, if mental stability affects the quality of care delivered, how does this change patient outcomes? This project's aim includes improving awareness and understanding about second victimhood while minimizing the stigma associated with this phenomenon. The project's goal is to indirectly augment patient outcomes by supporting anesthesia providers in delivering a higher quality of patient care. By August 2022, anesthesia providers at a tertiary care center in eastern Illinois will be introduced to the topic of second victimhood, and an evidence-based protocol will be presented. The protocol will address critical points of second victimhood. Anesthesia providers will evaluate the presentation and willingness to adopt the protocol. Implementation of this project will be the first step in developing a second victimhood peer support program at the host facility.

Search Strategy

A systematic search via Medline Complete, CINAHL, Cochrane Database of Systematic Reviews, and PubMed databases were utilized with a combination of search terms *second victim, second victimhood, PTSD, post-traumatic stress disorder, mental health, patient outcomes, nurse anesthetist, CRNA, anesthesia,* and *anesthetist* with Boolean "and" function. The search was limited to all sources written in English with publication dates between 2016-2021. For expanders, "apply equivalent subjects" was checked. Medline Complete, CINAHL, Cochrane Database of Systematic Reviews, and PubMed yielded 38, 35, 2, and 46 sources, respectively.

The American Association of Nurse Anesthesiology (AANA) website was also included in the search. The AANA recently published two beneficial articles regarding the impact of second victimhood and implementing peer support programs.

Results

A total of 121 publications written in English and published between 2016-2021 met inclusion criteria for this review. The purpose of the review is to examine how patient events affect the mental health of anesthesia providers and how mental health affects the quality of care delivered to patients. Furthermore, whether mental health affects the quality of care and potential patient outcomes were also examined, along with specific hardships encountered.

Second-Victimhood

Research suggests 1:20 patients suffer from an avoidable mistake, with rates being 2 and 4 times higher when looking at surgical and critical patients, respectively (Arnal-Velasco & Barach, 2021). Nursing professionals take the Nightingale pledge to “do no harm to” their patients (Miracle, 2009). When a medical error harms a patient, secondary harm can occur to the person responsible for the mistake (Mccay & Wu, 2012). Dr. Albert Wu first described the term “second victim” after witnessing the distress experienced by a young resident who made a medical error and was then subjected to ridicule by his peers (Jones & Treiber, 2018). Although first described by observing a resident, the term applies to anyone in the healthcare field. The person who performed the mistake may manifest symptoms of anxiety, depression, sweating, palpitations, guilt, self-doubt, loneliness, feeling numb, insomnia, restlessness, poor concentration, memory disturbances, and harboring a sense of fear regarding medicolegal complications (Mccay & Wu, 2012). This incessant fear of medicolegal repercussions serves as a potential pitfall for accurately quantifying an exact number of errors (Choy, 2006). However, we

do know that millions of medical errors occur every year. Despite this, very little support exists for those falling prey to the second victimhood phenomenon (Mccay & Wu, 2012).

CRNA

In 1956, the first Certified Nurse Anesthetist (CRNA) became credentialed as an advanced practice registered nurse providing anesthesia ("Certified registered nurse anesthetists fact sheet," 2021). CRNAs work primarily in operating room theaters to provide anesthesia to patients undergoing otherwise painful procedures and practice in dentist offices, ketamine clinics, pain management clinics, plastic surgeon offices, and the military (Callan et al., 2021). CRNAs provide anesthesia under the practice of nursing, whereas anesthesiologists provide anesthesia under the practice of medicine; regardless of the background, both entities provide anesthesia in similar fashions ("Certified registered nurse anesthetists fact sheet," 2021). CRNAs qualify to make independent judgments regarding all aspects of anesthesia care and practice with a high degree of autonomy and professionalism ("Certified registered nurse anesthetists fact sheet," 2021).

The degree of independence among CRNAs varies by state regulations but ranges from physician supervision to full autonomy (Callan et al., 2021). CRNAs in any state potentially struggle with lack of recognition, the high number of hours, inadequate work-life balance, and limited professional advancement, which all contribute to high levels of stress within the field (Andrade & Dantas, 2015). During the recent COIVD-19 pandemic, many CRNAs found themselves working outside of their standard job description to intubate and manage ventilators and insert central lines and arterial lines in intensive care units. Some were even laid off from work altogether (Callan et al., 2021).

Perioperative Events

Noise pollution, commonly found in operating suites, has been found to cause mood changes, interfere with communication, and cause concentration deficits; these factors all lead to an increased likelihood of errors (Andrade & Dantas, 2015). The addition of adverse events compounds the level of stress even further. Gautam and Shrestha (2020) analyzed a myriad of perioperative adverse events that include difficult intubation, airway trauma during intubation, esophageal intubation, airway obstruction, bronchospasm, laryngospasm, aspiration, bradycardia, tachycardia, hypotension, hypertension, failed spinal anesthesia, high spinal block, post-dural puncture headache, hypothermia, wrong drug, drug overdose, inadequate reversal of paralytic, seizure, and failure to turn on oxygen.

Beattie et al. (2018) also identified several perioperative adverse events, including myocardial ischemia/infarction, incorrect medication administration, blindness, stroke, peripheral nerve injuries, paralysis, seizure, cardiovascular collapse/arrest, anesthesia awareness, malignant hyperthermia, bronchospasm, pulmonary edema, aspiration, and laryngospasm. After these events, acute stress may be experienced (Chipas & McKenna, 2011). Repeated acute stress events lead to its devastating successor, chronic stress (Chipas & McKenna, 2011). Unfortunately, people generally ignore chronic stress until physical damage occurs in the body; examples are obesity, hypertension, heart attack, stroke, ulcers, depression, and substance abuse (Chipas & McKenna, 2011).

Consequences and Interventions

The media portrays healthcare providers as people who should be perfect and adverse complications should be “never events” in minor surgeries (Ozeke et al., 2019). Rebuilding trust from patients may play a role in shifting from a culture of shame and blame towards a just culture where staff does not have to hide in shame after their patient experiences an adverse

event (Ozeke et al., 2019). Second-victims of perioperative events subconsciously choose to survive, thrive, or drop out of the profession (Daniels & McCorkle, 2016). Sachs & Wheaton (2021) found that approximately 79% of healthcare providers experienced second victimhood symptoms; these individuals were twice as more likely to quit their jobs, miss work, and even consider suicide. Mccay & Wu (2012) recommend a 3-step process after experiencing second victimhood. These include fulfilling practical actions such as an incident report, seeking peer support, and finding professional support until your symptoms resolve (Mccay & Wu, 2012).

Sachs and Wheaton (2021) recommend automatic referrals to trained professionals for any provider involved in any case under quality review. A multidisciplinary team of legal and risk management departments and compassionate colleagues to support providers after events provided great success at a large teaching hospital (Lane et al., 2018). The program attributed its success to removing barriers most reported by staff, such as fear of privacy violations, lack of time, and mental health stigma; mental health stigma was the most reported at 70% of those surveyed (Lane et al., 2018). In addition, Bohnen et al. (2019) found that 82% of people who chose to speak with a supportive peer reported a sense of rejuvenation and personal resiliency instead of failure and vulnerability. Peer support programs allow providers a confidential option to reach out without fear of litigation and be reassured they are not alone in their experience (Bohnen et al., 2019).

Despite this, some providers still choose not to seek help, with 52% of sufferers reporting embarrassment (Sachs & Wheaton, 2021). In addition, health care providers have reported a feeling of loss of respect from co-workers after admitting a mistake (Sachs & Wheaton, 2021). To combat this, the health care workers and the public eye must reduce the punitive culture commonly found in healthcare systems (Busch et al., 2020). When a family member dies,

culture accepts rituals to grieve the loss (Bohnen et al., 2019). Efforts to develop peer support programs are needed to recognize when colleagues experience grief with a patient; supportive peers can counterbalance negative emotions associated with second victimhood (Bohnen et al., 2019). Institutions with supportive peers have cultures of learning, which allow for enhanced disclosure of errors and recovery from adverse events (Vinson & Randel, 2018).

Discussion

While peer support remains the most effective coping mechanism, Ozeke et al. (2019) state that culture change could ultimately have a more significant impact than any single intervention; blaming or punishing individuals for errors does not address the cause of the adverse event, nor does it prevent the error from occurring again (Ozeke et al., 2019). Without a culture shift, it is impossible to calculate how many events go unreported (Ozeke et al., 2019). Having leadership support staff via a *just culture* attitude surrounding patient safety event investigations could help minimize the shame associated with being involved in a medical error (Burlison et al., 2021). Often people cope by using avoidance, but this strategy proves futile for healthcare workers who must return to the same environment day after day (Mccay & Wu, 2012). The risk for anesthesia providers amasses due to a work environment that focuses on productivity; tremendous pressure is placed on the provider to get the next case going, regardless of any adverse event that may have occurred to the provider (Wands, 2021). Someone who has become a second victim may find themselves impaired when returning to similar patients and keeping the event secret may hinder the healing process (Mccay & Wu, 2012). A survey of anesthesia providers in the United States found that 84% of respondents experienced at least one serious event; 88% required time off for recovery, 19% never recovered, 67% felt their ability to

provide safe care was compromised, and 70% experienced guilt, anxiety, and reliving the event (Daniels & McCorkle, 2016).

Employee perception of support and respect from the organization plays a huge role in ameliorating symptoms of second victimhood (Sachs & Wheaton, 2021). Supporting anesthesia providers improves patient outcomes since this support results in less burnout and mental health disorders. Feeling an adverse reaction after causing a patient error shows that a person cares about their patients (Mccay & Wu, 2012). Ozeke et al. (2019) state that grief must be expressed and processed to move on emotionally and maintain healthy compassion. When a provider has only minutes in between taking full responsibility for the life of their next patient, there leaves no time for grief to be processed (Wands, 2021). Without identifying second victimhood or being able to cope, it seems likely that patient outcomes would be negatively affected. Daniels and McCorckle (2016) suggest mandating educational content on second victimhood be incorporated into nurse anesthesia training or continuing education programs. Doing so has the potential to increase awareness, compassion, empathy, and resilience and initiate peer support groups to help mitigate stress caused by adverse events (Daniels & McCorkle, 2016). Staff should feel safe to discuss adverse events and the emotions felt after experiencing an event to increase the odds of receiving the support needed (Ozeke et al., 2019). Underreporting adverse events remains a significant limitation in research regarding the impacts second victimhood has on measuring the effect on patient outcomes.

Conclusion

Nurse anesthetists frequently experience stress related to the workplace. Inadequately dealing with chronic stressors can have negative implications, such as leaving the career or even suicide. However, studies show that having supportive management and a trustworthy network

of peers improve the outcomes for healthcare providers experiencing second victimhood symptoms. Working under the influence of drugs and alcohol is never accepted; working under the influence of emotional trauma should also be never events now that data has identified options to alleviate repercussions of second victimhood successfully. Further research should focus on preventing second victimhood symptoms and how to mitigate the adverse effects associated with second victimhood. In addition, more research is needed regarding how these adverse effects on healthcare workers impact patient care outcomes.

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