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Implementation of a Critical Incident Stress Management Program for Nurse Anesthetists.

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Implementation of a Critical Incident Stress Management Program for Nurse Anesthetists.

Abstract

BACKGROUND: Healthcare is a stressful profession where in addition to routine stressors, there are critical incident (CI) events which are occurrences capable of overwhelming an individual's normal coping mechanisms. The purpose of this quality improvement project was to improve the process by which certified registered nurse anesthetists (CRNAs) exposed to critical incident events are provided post-critical incident support thus mitigating the potential for CI stress

METHODS: We created a CI stress management pilot program for nurse anesthetists employed by an academic hospital located in the Southeastern United States. The program was based upon concepts introduced by Medically Induced Trauma Support Services and the Scott Three-Tiered Interventional Model of Second Victim Support. The program goal was to offer 100% of CRNAs exposed to a CI event supportive measures prior to assuming care for a patient other than the patient involved in the CI event. The program was piloted for five months as data was collected regarding the number and type of critical incident occurrences as well as the percentage of individuals offered said support post-critical incident. The National Institute for Healthcare Improvement's Plan-Do-Study-Act methodology was utilized throughout the pilot period to evaluate for any changes needed to the program as issues arose.

RESULTS: Over the five month period, three CI events occurred. Two of the three individuals involved in the events received support as prescribed. Failure of the third individual to receive timely support was due to facility and staff limitations. Nevertheless, the initial receptivity to the program was positive. Future improvement of the program's processes are intended to yield support offered to 100% of individuals involved in a critical incident in a more timely manner.

Keywords

critical incident, critical incident stress management, second victim

Introduction

Healthcare providers are exposed to routine job stressors that may negatively affect their mental and physical health (Fiabane, Giorgi, Sguazzino, & Argentero, 2013). Compounding these routine stressors is the critical incident (CI) event defined as an adverse patient event, a medical error, or a patient injury (American Association of Nurse Anesthetists (AANA), 2013a). Up to 43.3% of all healthcare providers have been exposed to a CI (Seys et al., 2013). Critical incident stress (CIS) occurs when normal coping mechanisms fail to shield individuals from the negative personal consequences of the CI event. These deleterious consequences occur along psychological, physical, and/or behavioral dimensions resulting in, but not limited to, guilt, anger, depression, and alcohol and/or drug abuse (Seys et al. 2013). When such issues are not addressed, CIS has the potential for long-term consequences such as post-traumatic stress disorder (Everly, Flannery, & Eyler, 2002; Flannery, 1999; Mitchell, 1988). CIS may not only negatively affect the healthcare provider, but compromise patient care as well (Gazoni, Amato, Malik, & Durieux, ., 2012). Critical incident stress management (CISM) programs developed to mitigate the negative consequences associated with CI event exposure, have been shown to be effective for mental health workers, military personnel, bank personnel subjected to a robbery, and after a multiple-mortality natural disaster (Everly et al., 2002). Unfortunately, few healthcare facilities in which critical events occur provide CISM programs (AANA, 2013b; Healy & Tyrell, 2013).

Although Seys et al. (2013) reported that approximately 43.3% of all healthcare providers have been involved in a CI event, certain members of the healthcare community experienced higher rates of CI event exposure given their respective type of practice setting. Certified registered nurse anesthetists (CRNAs) represent one of the high-risk groups as evidenced by a national survey of CRNAs indicating 88% of respondents were involved in a CI event at some point in their career with 58% reporting being unprepared to cope with CIS (AANA, 2013b).

This paper describes the implementation of a CISM program to offer support to CRNAs who experience a critical incident while delivering anesthesia.

Problem

We identified that a tertiary academic facility employing over 100 CRNAs had an informal and non-standardized recourse process in the event of CI exposure. The approach to CRNAs who experienced an anesthesia related CI was (see Appendix A). Although there was no data describing the occurrence of anesthesia related CI events at the facility, the potential for these events was high considering the approximate 25,000 anesthetics delivered to patients on a yearly basis.

Purpose Statement

The purpose of implementing a CISM program was to provide a structured process by which CRNAs who experienced CI events could address the professional and emotional issues that arise secondary to the event, thereby mitigating the risk of developing any untoward long-term consequences.

Smart AIM Statement

The implementation of a CISM program will increase the number of CRNAs offered support after a CI event.

The expectation is for 100% of CRNAs exposed to a CI event to be offered Tier One support prior to assuming care for a patient other than the patient involved in the CI event. Given the lack of an existing formal program, no data are available to describe what percentage of individuals are offered support post CI event.

Available knowledge

The term CI allows for a certain degree of subjectivity thereby creating a degree of difficulty in determining when to deploy supportive measures. Scott et al. (2010) provided guidance for the determination of what may constitute a CI as these authors describe their results regarding the

implementation of an institution wide CISM program. Their results suggest certain events are more likely to trigger a need for high levels of support and may indicate these events could precipitate CIS. Events considered to potentiate CIS, and therefore initiators of support for this CISM program, consisted of patient death, patient cardiac arrest with return of spontaneous circulation (ROSC), preventable harm to a patient by a clinician, medication error, and any unanticipated harm to a pediatric patient. In addition, an event somewhat specific to the realm of anesthesia and included as CI event was patient awareness during surgery.

Rationale

The framework for the conceived CISM program was based upon principles delineated by two sources. The first, Medically Induced Trauma Support Services (MITSS) (Pratt, Kenney, Scott, & Wu, 2012), is composed of a diverse group of experts and laypeople whose purpose is to “support healing and restore hope” to patients, families, and clinicians affected by CI events. MITSS developed a support toolkit for healthcare intended to assist in the development of CISM programs (MITSS, 2010). This toolkit consists of 10 modules delineating concepts inherent to a CISM program. The Scott Three-Tiered Interventional Model of Second Victim Support (SIMSVS) was the second source used (Scott et al., 2010). This model consists of three tiers of graduated support proffered upon the occurrence of a CI. For the purposes of the implemented program, only tiers one and three were utilized. Tier One is termed “local support” and consists of support provided by the affected individual’s colleagues. The utilization of colleagues as the first line of support is based upon evidence indicating the most common source of effective support for those exposed to CIs is the support of a colleague (Gazoni et al., 2012; Newman, 1996; Rassin, Kanti, & Silner, 2005; Engel, Rosenthal, & Sutcliffe, 2006; Schelbred, & Nord, 2007). Tier Three, henceforth referred to as Tier Two, is initiated when an individual’s CIS is not assuaged by the efforts of Tier One support and consists of supportive measures provided by professionally trained individuals such as social workers, psychologists, and psychiatrists.

Methods

Context

The initial impetus for the creation of the CISM program originated with the facility’s Chief CRNA. Given this level of support the only difficulties in launching the program were in its conception as well as recruiting individuals to participate. In formulating the program, we established six interrelated program components: CI support operations, CRNA peer supporter selection, CRNA peer supporter training, Tier Two personnel enlistment, CRNA staff education, and dissemination/communication.

The setting for this CISM program was located at a large academic facility located in the Southeastern United States. Over 100 CRNAs practice within the facility and are overseen by a Chief Nurse Anesthetist and an additional five managers. Based upon formal and informal discussions, the administrative staff and staff CRNAs expressed a clear desire for recourse upon the occurrence of a CI event

CI Support Operations

CI support operations is the series of events initiated to provide Tier One and Tier Two support to individuals subsequent to a CI event. The provision of support begins with the recognition of CI events. Central to the facility’s anesthesia operations is the anesthesia control room (ASC), through which all information regarding the daily operations and occurrences in the facility’s operating rooms (OR) and off-site locations flows. The ASC is staffed throughout the day by a CRNA administrator, and the ASC and CRNA administrator serve as the nexus of CI event recognition and support deployment. Upon knowledge of a CI event, the ASC initiates CI supportive measures by contacting an available peer supporter. When feasible, the peer supporter approaches the affected CRNA to offer Tier One support, which has a specific focus and structure. There is no time allotment for Tier One support which may ensue over the following days and weeks. In addition to the initial contact, a follow-up meeting should

occur between the same two individuals one week after the CI event in order to discuss any relevant lingering effects.

Tier Two support is initiated at the request of any individual and referrals could be made to either the employee assistance program (EAP) or the chaplaincy program (CP), whomever the individual prefers. Tier Two support is provided by the professionally trained EAP or CP individuals in a manner consistent with their education and practice. Affected CRNAs are informed of the availability of Tier Two support during Tier One efforts.

Recognition by the ASC of a CI event is not the only route to obtain CI support. There is some subjectivity to what exactly defines a CI event and events may go unrecognized for a variety of reasons. Therefore, any CRNA at any time may self-refer to Tier One or Tier Two support. Collectively, these machinations are termed the Support Algorithm (SA). Appendix B provides a visual description of the SA.

CRNA Peer Supporter Selection

The selection of peer supporters from among the CRNAs began by determining the number of individuals required to ensure availability to staff CRNAs in the event of a CI event, and then selected by a focus group employing a nominative and elective process based upon a set of criteria proposed by MITSS (n.d.a). As some selected individuals may have no interest in being a peer supporter, it was necessary to elect more individuals than required. While a surplus of peer supporters is not a detriment, one must consider the logistics of training a large number of peer supporters.

CRNA Peer Supporter Training

Individuals agreeing to serve as peer supporters received instruction based upon the Training Peer Supporters MITSS module (Pratt, Kenney, Scott, & Wu, 2012). The role of the peer supporter is to function as a sounding board and a shoulder to lean on thereby allowing individuals to process the event all the while feeling supported. Instruction consists of an introduction to relevant CI nomenclature, the sharing of personal CI experiences, discussion of literature based evidence describing phenomena related to CI exposure and management, explanation of CI support operations, and finally an introduction to and practice of peer support skills. The skills recommended by MITSS (MITSS, n.d.b), are essentially listening techniques which consist of active listening, open-ended questions, clarifying questions, encouraging statements, feedback, reframing, and normalizing. Although these skills are the core of support offered to CRNAs during Tier One support, they are not be considered therapy, nor are peer supporters considered to be therapists

Tier Two Personnel Enlistment

Tier Two support consists of professionally trained individuals providing counsel to CRNAs who experienced a CI event and want a higher level of support to address their concerns. The facility offers two pre-existing avenues to these professionals in the form of the EAP and CP. Enlistment involved meeting with representatives of the EAP and CP in order to introduce the aims and operations of the CISM program. These representatives assist in the identification of specific individuals who will be available to provide Tier Two support. An additional purpose of this step is to establish clear lines of communication between the CISM program, EAP, and CP in order to provide unencumbered access to Tier Two support.

CRNA Staff CI Program Education

The Staff CI Program Education serves the purpose of introducing CRNA staff to aspects of CI exposure and to policy, procedures, and operations of the CISM program. Proactive preparation and communication is an important first step in any process meant to address CIS prior to an event occurring (Conway, Federico, Stewart, & Campbell, 2011). Education of staff occurs during a departmental meeting and entails a PowerPoint presentation covering CI event associated nomenclature, literature review delineating the personal and chronological consequences of CI exposure as well as the routes of CIS mitigation, purposes of the CISM program, an explanation of CI support operations as well as the SA, and an introduction of peer support members. Questions, concerns and relevant input should be

addressed at this time and CRNA staff provided with any supporting materials. This CISM program utilizes badge inserts of important information so that it may be readily available. The information inserts contain the list of peer supporters with their contact information, and contact information for individuals providing Tier Two support also appears on the badge insert.

Dissemination and Communication

We provided access to the presented information for later reference and alternative routes of dissemination and communication via other media given that not all CRNAs could be in attendance for the educational session. The PowerPoint presentation and a printable copy of the badge inserts were provided to all CRNAs via internal email. Information regarding the CISM program was available to CRNAs via an internal server and CRNA webpage. Flyers that delineated the two levels of support and peer supporters were posted in areas in which CRNA congregate.

Data Collection and Analysis

Phase 1 of the program was piloted for a period of five months. Data collection entailed the ASC and/or peer supporters informing the CISM project manager of a CI event occurrence, whether Tier One support was offered, and the type of CI event. Data analysis considered the total number of CI events, percentage of individuals exposed to a CI event subsequently offered Tier One support, and frequency of CI event type. During implementation of the CISM program and during the program's runtime the National Institute for Healthcare Improvement's Plan-Do-Study-Act methodology (2017) was utilized to evaluate a need for changes to the program as issues arise.

Two actions were taken to ensure accuracy and completeness of data. First, each verbal report provided by peer supporters and/or the ASC regarding CIs was recorded on a hard copy and verified with the relative individuals. Second, every two weeks peer supporters received an email querying if any Tier One support was offered. No personally identifying data was recorded. No data regarding Tier Two interactions was collected given the sensitive nature of CI events and to protect involved parties.

Implementation and Modifications

Development of peer support initiative.

Creation of the CISM program consisted of the six components previously described. Certain facility based contextual elements required modifications of several of the components. A description of each component follows.

CRNA peer supporter selection.

A focus group consisting of the CISM project manager, three CRNA administrators, and the Chief CRNA convened to determine the needed number of peer supporters and their selection. We decided that 10 staff CRNAs were required to serve as peer supporters to allow for the consideration of vacations, varying shifts, and call-ins. We developed a nomination and election process whereby CRNAs recommended peers whom they selected to be the peer supporters. In the end, peer vote resulted in 14 potential peer supporters. All but one individual agreed to serve as a peer supporter, resulting in a total number of 13 peer supporters.

CRNA peer supporter training.

We developed a Peer support training process that morphed in structure due to facility and staff based limitations. Peer supporters were divided into four groups with each attending a one-hour session in which they were introduced to CI nomenclature, relevant CI literature, an explanation of the CI support operations, and the previously described listening techniques. Omitted from the training session was a discussion of personal CI events and the practice of listening techniques. All peer supporters were provided with a printed form of the topics discussed.

CRNA staff CI program education.

CRNA education occurred via a 40-minute PowerPoint presentation during the weekly staff meeting. The initial intent was to conclude the presentation with a question and answer session conducted by the CISM program manager. A modification was made whereby EAP representatives attended the presentation, introduced themselves, and participated in the question and answer session.

Dissemination and Communication

The EAP representative suggested and provided a more comprehensive list of physical, cognitive, emotional, and behavioral signs and symptoms of CIS. Also supplied were activities to overcome stress within the first 24 hours and how to interact with friends and family members in regards to the CI event. This information was subsequently sent to all CRNAs via internal email and posted on the CRNA webpage.

Results

Table 1 lists all collected data. A total of three CI events occurred during the five month pilot of the CISM program. No CRNAs self-referred. Two of the CI events were patient death with the other being patient circulatory arrest with ROSC. Tier One support was offered to two of the three individuals prior to assuming care for a patient other than the patient involved in the CI. Therefore, the goal of 100% of CRNAs exposed to a CI event offered Tier One support prior to assuming care for a

CI Occurrence Number	Tier One Support Offered?	Type of CI
1	No	Patient death
2	Yes	Patient cardiac arrest with ROSC
3	Yes	Patient death

patient other than the patient involved in the CI was not realized as only 66% received said support in the first 5 months of the initiative. Reasons for this outcome will be discussed later. Analysis of this limited data set reveals an average of 0.66 CI events occurred each month. Consistent with anecdotal information, patient death and patient cardiac arrest with ROSC were the most

common CI events. Data regarding individuals utilizing Tier Two support was not formally collected due to the sensitive nature of these events when individuals seek out professional help. Nevertheless, an informal conversation between the CISM program manager and an affected CRNA revealed utilization of Tier Two support in one instance.

Discussion

The successful establishment of any initiative is dependent upon the locale's culture. As such, the organizational culture into which this CISM program was introduced allowed for a positive implementation process and accounted for many of the program's strengths. Program strengths included the willingness and capabilities of the peer supporters, the assistance of administrators in executing the CI Support Operations as well as troubleshooting problems as they arose, and the wealth of information provided by the experienced EAP staff. Additional data collected and not discussed in detail here indicate the program was well received and should be continued. Indeed, the CRNAs involved in CIs two and three informally expressed their satisfaction with the program to their peer supporters.

The program went through a number of revisions during the development and implementation phases. Quality improvement requires an examination of data and processes in order to better achieve desired outcomes. As such, an examination of why the CRNA involved in the first CI did not receive

Tier One support is crucial to understanding the program's deficiencies in order to achieve the stated goal of 100% of CRNAs exposed to a CI event offered Tier One support prior to assuming care for a patient other than the patient involved in the CI event. There are two reasons for this lapse. First, one event occurred late in the evening after normal operating hours when only a skeleton crew was available for emergencies. Therefore, the ASC was not staffed and the process for providing Tier One support could not be initiated. Second, even if the ASC was staffed peer supporters are not available at this time to provide Tier One support. This particular event highlighted gaps in peer supporter coverage as the program's major weakness.

Presumably, correcting this deficiency would require an on-call peer supporter. However, given the facility's operating rooms function on a 24-hour basis and there are only 13 peer supporters, providing on-call coverage was not feasible. The EAP and the CP also did not operate on a 24-hour basis and therefore did not offer a solution. Overcoming this deficit would require the full weight of facility resources as opposed to only those provided by CRNA administration and staff. These identified needs to strengthen the program would need to be implemented at a later time when there is greater institutional support for providing for the financial and staff needs of the program.

Lessons Learned

Important lessons learned during the conception and implementation of this program involved the need to address the legal ambiguity as to whether the conversations between the peer supporter and the affected individual would be protected if legal action were taken against the individual involved in the CI event. A search for an answer rewarded no definitive conclusion. Such conversations may require some sort of protection considering the efficacy of a CISM program is largely based upon the willingness of the affected individual to talk.

A second lesson was the need to look beyond the healthcare literature when conceiving the CISM program, as programs are relatively new within the field of healthcare. A final lesson was recognizing the need to conduct a larger discussion as to what constitutes a CI event. Several individuals noted that certain events not included in the support algorithm were also thought of as CI events. The allowance of self-referral into the program somewhat ameliorated the ambiguity.

Sustainability

Sustainability of this CISM program initially appeared to be strong given CRNA administrator and staff desire for the program to continue as well as all the peer supporters wishing to continue in their respective roles. Nevertheless, considerations warranted in order to harness the momentum included the need to collect additional data long-over an extended time period regarding the percentage of effected CRNAs offered Tier One support, as well as a determination of the number and type of CI events. Such data may allow the program to be more fine-tuned to the needs of staff and may justify efforts to fill in peer supporter coverage gaps when only limited personnel are available. Opening a dialogue with facilities operating a small scale CISM program may yield ideas to enhance and sustain the program. Finally, efforts should be made to query CRNA staff as to their recommendations for improving the program. CRNA staff participation in improving the program is vital given these are the individuals any CISM program is intended to serve.

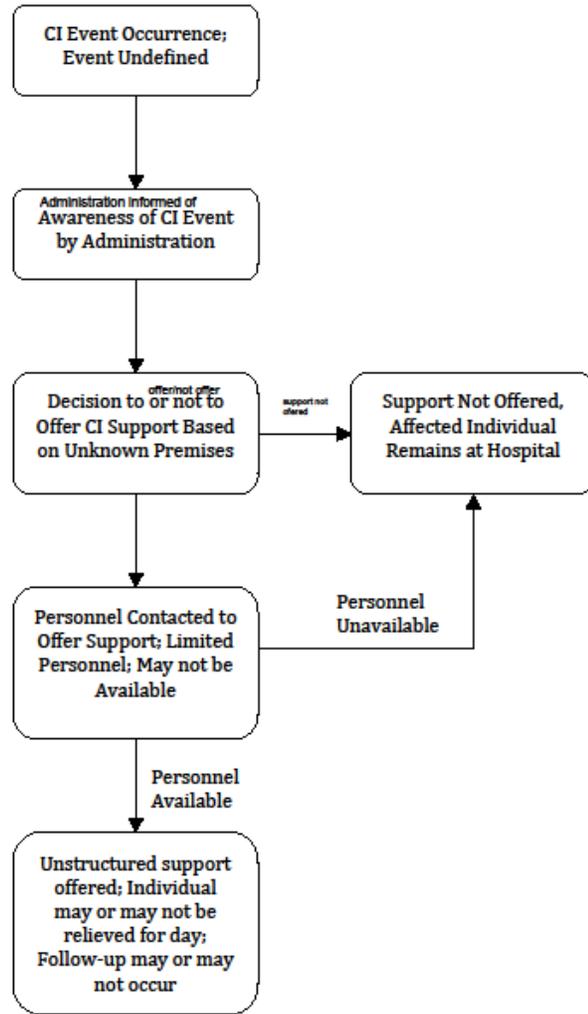
Conclusion

The identification of the lack of a formal and non-standardized recourse process in the event of CI exposure in a tertiary academic facility with over 100 CRNAs led to the development and implementation of a quality improvement CISM initiative to provide a structured process by which CRNAs who experienced CI events could address the professional and emotional issues that arise secondary to the event, thereby mitigating the risk of CRNAs developing any untoward long-term consequences. The implementation of the CISM program over the 5-month period identified that the complexity of starting a peer support program in the institution was valuable in laying the groundwork for providing support to CRNAs who experienced a CI event. Although the numbers of peer support interactions were low, the new support program showed that the CISM program was of value to the CRNAs within the organization.

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Appendix A: Institution's (CRNAs) original/usual approach to CI events



Appendix B: Support Algorithm (SA)

