Psychological Debriefing of Hospital Emergency Personnel: Review of Critical Incident Stress Debriefing

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ABSTRACT

Emergency department providers are subjected to cumulative exposure to critical incidents, which may predispose them to Post-Traumatic Stress Disorder (PTSD). Critical Incident Stress Debriefing (CISD) is aimed at remediating the effects of a critical incident. Defusing and CISD are two components of the Critical Incident Stress Debriefing (CISM) model. A literature review was performed to include published, peer-reviewed, English-language articles. Ten publications were identified and included in this review. Findings suggest hospital emergency personnel view psychological debriefing to be important and valuable; however, training and education in psychological debriefing is insufficient. There are mixed results regarding the efficacy of psychological debriefing in reducing PTSD on hospital emergency personnel. Studies indicate that poor adherence to the debriefing process, lack of training and education for hospital nurses and other personnel, and unsubstantiated fears that CISD will exacerbate PTSD symptoms may explain low utilization of the CISM model. Although the effect of critical incidents on urban emergency personnel is available, there is only limited data concerning the impact on those in rural communities.

Keywords: Post-Traumatic Stress Disorder, critical incident, critical incident stress debriefing and emergency healthcare personnel

Introduction

Healthcare providers working in the emergency department (ED) perform extraordinary services that benefit the lives of others. Regardless of how expert they may be at performing their duties, ED personnel are ordinary human beings who are subject to the acute stresses of life and the effects of being exposed to excessive danger, human tragedy and suffering (Mitchell & Brady, 1990). Working in a high stress environment such as the ED, hospital emergency personnel are exposed to critical incidents. A critical incident (CI) is defined as "any event that has sufficient emotional power to overcome the usual coping abilities of emergency personnel who are exposed to them" (Mitchell & Bray, 1990, p. 140).

Purpose

The two purposes of this paper are: 1) to review the literature on critical incidents and the impact of Critical Incident Stress Debriefing (CISD) on hospital emergency personnel, and 2) to explore the clinical research question, "How does the use of CISD compare to a no debriefing practice following a critical incident *in terms of its* effect on the development of PTSD in hospital emergency personnel?"

Critical Incidents in the Emergency Department

In systematic reviews examining the prevalence of ED personnel exposure to CIs, investigators reported that between 82% and 100% of hospital emergency personnel are exposed to CIs in the workplace (Adriaenssens, de Gucht, & Maes, 2012; Donnelly & Siebert, 2009). Cumulative CI exposure can leave providers with cognitive, emotional, physical, and behavioral distress (see Table 1). In severe cases where emotional distress is unresolved or left untreated, hospital emergency personnel are at risk for developing Post-Traumatic Stress Disorder (PTSD) (de Boer et al., 2011). PTSD is an anxiety disorder that occurs as a result of experiencing, witnessing, or re-experiencing an emotionally traumatizing event that results in intrusive or negative thoughts, avoidance, and hyper-arousal symptoms ranging in severity and duration (APA, 2017).

Group psychological debriefing has been used to mitigate the physical and psychological effects, including PTSD related to CI exposure in hospital emergency personnel (Hawker, Durkin, & Hawker, 2011). Psychological debriefing is a type of crisis intervention where participants discuss their cognitive perception of, as well as physical reaction to, a CI within a group setting (Everly, Boyle, & Lating, 1999). A popular form of psychological debriefing specifically developed for first responders and hospital emergency personnel is called Critical Incident Stress Debriefing (CISD). CISD is a form of crisis intervention within the Critical

Incident Stress Management (CISM) program that forms the basis for most crisis intervention models that have been adopted by healthcare organizations (Healy & Tyrrel, 2013).

Critical Incident Stress Management

CISM is a 'comprehensive, integrated, systematic and multi-component crisis intervention program' that spans a continuum from pre-crisis through post-crisis phases (Hurley, Ferreira, & Pain, 2005, p. 153). CISM is designed to (1) mitigate the impact of a critical incident (CI), (2) facilitate normal recovery processes in people who are having normal reactions to CIs, (3) restore individuals, groups and organizations to adaptive function, and (4) identify people within an organization who would benefit from additional services or a referral for further evaluation and psychological treatment (Mitchell & Brady, 1990; Mitchell, 2003). These programs are designed to assist hospital emergency personnel with managing the emotional and physical burden following a CI.

Critical incident stress debriefing. Defusing and Critical Incident Stress Debriefing (CISD) are two components of the CISM model. Both are utilized in small group crisis interventions and are routinely practiced in emergency departments. Defusing is described as an informal "conversation about the distressing event" (Magyer & Theophilos, 2010, p. 501), whereas CISD facilitates therapeutic discussion and expression of individual thoughts and emotions through a formal group discussion process. CISD promotes resistance to stress reactions, builds resiliency from a CI, and facilitates both a recovery from traumatic stress and a return to normal, healthy function (Mitchell & Brady, 1990; Mitchell, 2003).

Phases of CISD. Hurley, Ferreira and Pain (2005) describe the seven phases to the CISD process: introductory, fact-finding, thought, reaction, symptom, teaching, and re-entry. In the introductory phase, facilitators introduce themselves and explain the purpose of debriefing to the group. During this phase, the tone is established and the intent and process for the debriefing is clearly stated. In the fact-finding phase, hospital emergency personnel share the facts of the CI from their perspective. Recounting of the CI allows for re-creation of the event, thus allowing for individuals to discuss openly about the CI in a non-threatening manner. In the thought phase, participants express their immediate thoughts at the time of the CI. This phase gradually transitions into the reaction phase where hospital emergency personnel transition their thought processing from a 'cognitive level of intellectual processing into the emotional level of processing' (Mitchell & Brady, 1990, p. 146). Emotional responses of guilt, anger, frustration, and tearful reactions are often expressed during this phase of the CISD process. Within the symptom phase, hospital emergency personnel (participants) normalize one another's reactions by describing the cognitive, behavioral, emotional, and physical reactions that they are experiencing, or may have experienced at the time of the CI. A goal of this phase is for hospital emergency personnel to acknowledge their reaction to the CI as a normal response, rather than a

sign of weakness or vulnerability. In the teaching phase, facilitators highlight the signs of distressed noted by participants and provide information regarding stress reactions and stress alleviating techniques. The intent of this phase is to provide the participants with information that can assist them in overcoming their stress. The final phase of CISD is re-entry. This phase consists of the provision of final statements or questions about the issues discussed throughout the debriefing process. The facilitator makes a summary statement to the group regarding the debriefing sessions and provides additional information and resources to participants as appropriate (Hurley, Ferreira, & Pain).

Timing of CISD. CISD is more effective when administered within 24 to 72 hours following a critical incident. Campfield and Hills (2001) noted a significant decreased in PTSD symptoms when debriefings were conducted within 10 hours post event compared to 48 hours post event exposure. Depending on the incident and the number and specific needs of hospital emergency personnel, debriefing sessions can vary and last between 1 and 3 hours (Mitchell & Brady, 1990).

Required conditions for the application of the CISD process. CISD implementation requires the following conditions: (1) small group discussions composed of approximately twenty individuals involved in the CI, (2) the CI is concluded or past the acute stage, (3) hospital emergency personnel have similar levels of exposure to the CI experience, and (4) are psychologically ready for participation (i.e., not fatigued or distraught) (Mitchell & Brady, 1990). While the relevance of debriefing and the importance of reducing stress, including the incidence of PTSD among hospital emergency personnel have been investigated, there remains a significant debate as to the effectiveness of a debriefing intervention such as CISD.

Methods

A literature search was conducted using the computer databases, EBSCOhost and the Cochrane Database for Systematic Reviews. Published, peer-reviewed, English-language articles using the key search terms, “psychological debriefing,” “critical incident,” “critical incident stress management,” “critical incident stress debriefing,” “trauma,” “emergency personnel,” “code,” and “post-traumatic stress disorder” were used. Eighty-one articles were identified and evaluated for applicability to the purposes of this paper. Seven publications were deemed applicable. From these articles, reference lists were reviewed, and an additional three articles were identified as relevant. A total of 10 papers were included from 2000-2016 (Table 1). Articles were organized into three categories of evidence: (1) hospital personnel perception of CISD (three studies), (2) opposition to CISD (four studies) and (3) support of CISD (three studies).

Table 1. Literature Review for Critical Incident Debriefing Studies

Author/Year	**Aim of Study**	**Design/Methods**	**Findings**
Boscarino, Adams, & Figley (2005)	Program evaluation for the effectiveness of an employer-sponsored crisis interventions after a major disaster	Prospective cohort study N = 1,681	2-3 brief counseling sessions showed to be protective in terms of PTSD and depression development {OR=0.36 ($p<0.05$) and OR = 0.23 ($p<0.05$)} 2-3 brief counseling sessions showed to be protective in terms of somatization, anxiety, and global severity {OR=0.36 ($p<0.05$), 0.17 ($p<0.01$)}
Copeland & Liska (2016)	Program evaluation of post-code pause based on CISM	Pilot Study N = 46	During the 1-year project, 87 code events occurred whereby Post-Code Pause (PCP) occurred in 47 79% of participants felt that attending PCP was valued in the department at least half of the time or greater 76% of participants felt that attending PCP was at least somewhat helpful in allowing them to pay homage to patients 71% of participants could return to work with a sense of focus 74% of participants felt PCP improved work-related processes
Hokanson &Wirth (2000)	Program evaluation of the implementation of CISD among the Los Angeles county fire department	Qualitative study N = 2,073	Participants who participated in debriefing session – reduction of symptoms ▪ Within 24 hours- 39% ▪ 25-72 hours – 56% Participants who did not participate in a debriefing session ▪ With 24 hours – 29% 79% of participants who participated in the debriefing session would recommend the process

			85% of participants who did not participate in the debriefing session would also recommend the process to others.
Ireland, Gilchrist, & Maconochie (2008)	Survey current UK practices in order to develop best practice guidelines for psychological debriefing	Survey Methodology N = 144 ED doctors and nurses	72% of participants reported no formal policies for carrying out debriefing sessions in their hospitals 81% of participants who have facilitated a debriefing session reported a lack of education/training in debriefing facilitation
Laposa, Alden, & Fullerton (2003)	To evaluate the association between sources of workplace stress and PTSD symptoms	Survey Methodology N = 51 hospital emergency personnel in large Canadian urban center	18% of participants reported attending a CISD 67% believed they had received inadequate support following the incident
Magar, Theophilos, & Babl (2009)	To evaluate current baseline CISD practices and perceived needs of staff in the ED	Survey Methodology N = 26 ED staff members (13 hospitals)	90% of participants reported no ED-specific debriefing guidelines/policies 62% of participants acknowledged a desire for debriefing following a CI 89% reported a need for debriefing programmers and guidelines specifically for their ED
NICE (2005)	Clinical guideline for the management of PTSD in adults and children in primary and secondary care	Clinical guideline	Grade A recommendation Showed no evidence of an effect of debriefing at 3 months and 3-6 months' follow-up and a limited effect favoring non-debrief individuals at 13-month follow-up
Roberts, Kitchiner, Kenardy, & Bisson (2012)	Evaluating interventions aimed at treating acute traumatic	Cochrane Systematic Review	12 studies that evaluated brief trauma focused cognitive behavioral interventions (TF-CBT) were found to be

	stress reaction within three months of a traumatic event	N = 15 studies	more effective than a waiting list intervention and supporting counselling 4 studies supported evidence against counselling at 6-month follow-up 2 studies demonstrated a lack of evidence of the effectiveness of a structured writing intervention when compared against minimal intervention
Roberts, Kitchiner, Kenardy, & Bisson (2009)	Evaluation of the efficacy of multiple session early psychological intervention occurring within 3 months of a traumatic event aimed at preventing PTSD	Cochrane Systematic Review N = 11 studies	No observable difference between treatment and control conditions on primary outcomes measure (RR 0.84; 95% CI 0.60 to 1.17). Increase in self-report of PTSD symptoms at 3 to 6 months follow-up in those who received an intervention (SMD 0.23; 95% CI 0.00 to 0.46).
Rose, Bisson, Churchhill, & Wessley (2002)	Evaluation of a single session psychological debriefing with specific attention to the utilization of CISM	Cochrane Systematic Review N = 15 studies	Single session debriefing did not prevent the onset of PTSD At one year, one trial reported an increase risk of PTSD in those receiving psychological debriefing (OR 2.51 (95% CI 1.24 to 5.09)) Interventional group reported no reduction in PTSD severity at 1-4 months (SMD 0.11 (95% CI 0.10 to 0.32)), 6-13 months (SMD 0.26 (95% CI 0.01 to 0.50)), or 3 years (SMD 0.17 (95% CI -0.34 to 0.67)) No evidence that debriefing reduce psychological morbidity, depression, or anxiety or that it was superior to an educational intervention

Results

Our review examined the existing research related to hospital emergency personnel perceptions of Critical Incident Stress Debriefing (CISD) and needs in the workplace and the use of debriefing practice following a critical incident as it relates to the development of Post-Traumatic Stress Disorder. While Mitchell (2003) argued that CISD had been successfully implemented and deployed in various countries with differing populations, there are factors that affect the success of a CISD program such as using providers who are not trained in the six core competencies, offering sessions to individuals versus group sessions, and not adhering to specific program standards.

Hospital Emergency Personnel Perception of CISD

Surveying hospital emergency personnel experienced with psychological debriefing is paramount to understanding the needs and perception of CISD. Published studies have focused on hospital emergency personnel, their experience and needs associated with psychological debriefing. Collectively, they support the use of debriefing practices; however, many have identified a lack of support from hospital leaders in providing appropriate CISD. For example, in the Laposa, Alden and Fullerton (2003) study of 51 hospital emergency personnel in a large Canadian urban center, 18% of participants reported attending a CISD in which 67% believed they had received inadequate support following the incident. As a result, 20% had considered changing jobs. Ireland, Gilchrist, and Maconochie (2008) reported that of 144 ED doctors and nurses, 72% (n=104) of participants noted no formal policies for carrying out debriefing sessions in their hospital. Three-quarters (76%; n=109) had never been involved in facilitator-led debriefing sessions, and 81% (n=116) who had facilitated a debriefing session, said they had not been provided with any special training or education to act as a debriefing facilitator. Similarly, Magar, Theophilos, and Babl (2009) evaluated debriefing practices among 26 ED staff members in 13 hospitals across Australia and New Zealand. Ninety percent (n=23) of participants reported no ED-specific debriefing guidelines and/or policies at their hospital and 70% (n=18) reported no debriefing guidelines and/or policies at all. However, 62% (n=16) of participants acknowledged a desire for debriefing following a CI, and 89% (n=23) reported a need for debriefing programmers and guidelines specifically for their ED. Results of these studies suggest that the majority of hospital emergency personnel view debriefing practices and CISD as important and valuable following a CI, but the training and education needed to facilitate such practices within their hospital is lacking. Such an organizational lack of trainers is one of Mitchell's (2003) main tenets for why CISM may not be successful or not have support from hospitals or administrators who recognize the need for primary prevention programs that focus on CI debriefings for affected hospital ED personnel.

Debate on the Use of CISD in Emergency Settings

Since its development, CISD has gained popularity for the treatment of PTSD in hospital emergency personnel exposed to a CI. However, despite its popularity, the evidence for its reduction of PTSD has been mixed. Thus, the use of CISD has been the subject of debate as to its value and utility in the hospital emergency environment (Mitchell, 2003; Bledsoe, 2003; Hawker, Durkin, & Hawker, 2011).

Evidence opposing debriefing practices. The National Institute for Health and Clinical Excellence (NICE) in 2005 published a clinical guideline for the management of PTSD in primary and secondary care that does not support the use of debriefing. An update was released in 2018. This guideline includes information on early intervention for acute PTSD and recommendations about group psychological debriefing following a CI. The NICE guidelines state that "for individuals who have experienced a traumatic event, the systematic provision to that individual alone of brief, single-session intervention (often referred to as debriefing) that focus on the traumatic event should not be routine practice when delivering service" (NICE, 2005, p. 128). In support of their guideline, NICE identified seven randomized controlled trials (RCTs) that evaluated the use of debriefing measures. These studies failed to provide sufficient evidence to support the use of debriefing at 3 to 6-months after a CI with limited effect favoring non-debriefed individuals 13 months later (Hawker, 2010). However, the RCTs within the NICE report demonstrated poor adherence to CISD procedures. NICE (2005) acknowledges that CISM studies were not included in the evidence that governed their report and therefore, the clinical guideline cannot address the efficacy of CISM in the treatment of PTSD. Recommendations provided by the NICE report (2005) have been accepted by many healthcare leaders and, as a result, psychological debriefing has largely ceased. This change in practice has occurred without consideration of the limitations of the studies used to support the NICE (2018) recommendation.

The unwillingness to use psychological debriefing following CI exposure is due in part, to evidence that debriefing may exacerbate PTSD symptoms. The use of debriefing techniques following CI has been examined in three Cochrane reviews. In the first review, published in 2002, researchers evaluated the effect of single debriefing sessions on personnel following a CI. Fifteen RCTs were included and analyzed in this systematic review. Three of the RCTs found debriefing practices to have positive outcomes, nine determined no effect, two of the RCTs reported negative outcomes, and one found immediate debriefing to be more effective than delayed debriefing (Hawker, 2011). One RCT reported increased risk of PTSD in individuals receiving debriefing (OR 2.51; 95% CI 1.24 - 5.09). For the individuals receiving debriefing, there was no reduction in PTSD severity at 1-4 months (SMD 0.11; 95% CI 0.10 - 0.32), 6-13 months (SMD 0.26; 95% CI 0.01 - 0.50), or 3 years (SMD 0.17; 95% CI -0.34 - 0.67) (Rose, Bisson, Churchill, & Wessley, 2002). Limitations of this systematic review were two-fold: (1) the RCTs consisted of studies with only single-session debriefings with individuals who were

primarily victims of trauma, to include burn trauma (Bisson, Jenkins, Alexander, & Bannister1997) and injured road traffic accident survivors (Hobbs, Mayou, & Harrison, 1996; Regel, 2007) and (2) a lack of or inappropriate training for those facilitating the psychological debriefing. CISD standards dictate that debriefing sessions should only be used to debrief secondary trauma victims who have experienced CI. The burn trauma and accident survivors studied in the RCTs would be considered primary victims. CISD was neither designed nor intended for personnel who have experienced a traumatic injury, but for emergency responders and personnel such as firefighters, police officers, military and emergency service personnel. Within this Cochrane review, there were no detailed descriptions of the training that facilitators received for providing debriefing (Regel, 2007). Within the CISM model, facilitators are trained mental health professionals and peer support personnel that specialize in debriefing emergency personnel. (Mitchell, 1990, p. 89). Regardless of the limitations presented in this systematic review, researchers found a lack of evidence to support single debriefing sessions in reducing the effect or onset of PTSD following a CI and made the following recommendation, "compulsory debriefing of victims of trauma should cease" (Rose et al., 2002, p. 2).

In the second review, researchers evaluated the effect of multiple psychological debriefing sessions following a CI on the prevention of PTSD development. Eleven RCTs (n=941 participants) consisting of different debriefing practice interventions were included and analyzed in this systematic review. Eight studies were included in a meta-analysis. Researchers found no observable difference between the intervention and control groups on primary outcome measures (k=5, n=479; RR 0.84; 95% CI 0.60 - 1.17). Researchers found an increase in self-report of PTSD at 3 to 6-month follow-up time points in those who received multiple psychological debriefing sessions (n=292; SMD 0.23; 95% CI 0.00 - 0.46) (Roberts, Kitchiner, Kenardy, & Bisson, 2009). Limitations of this review are centered on poor adherence to the CISM standards. As in the 2002 Cochrane review, there was no description for the training of the debriefing facilitators (Regel, 2007, p. 413). Within the CISD process, facilitators are trained professionals that provide knowledge key to group facilitation, diagnosis of serious stress reactions, and education and supervision of peer support personnel (Mitchell & Brady, 1990). The authors concluded there was no clinical difference in the development of PTSD but did report an increase in self-identified PTSD symptoms at 3 and 6-month follow-up time points. (Roberts et al., 2010). As a result, the following recommendation was made, "no psychological interventions can be recommended for preventing PTSD following a CI and that multiple session interventions aimed at all individuals exposed to CI should not be used" (Roberts et al., 2009, p. 3).

Finally, in the third review, researchers evaluated different psychological treatments and interventions aimed at treating PTSD within 3 months of a CI in individuals, families, and communities. Fifteen RCTs were analyzed in this review. Twelve RCTs evaluated cognitive behavioral interventions. Six studies evaluated a waiting list intervention. Four studies evaluated

supportive counselling interventions. Cognitive behavioral interventions were found to be more effective than a waiting list intervention (SMD -0.64, 95% CI -1.06 -0.23) and supportive counseling (SMD -0.67, 95% CI -1.12, -0.23) (Roberts, et al., 2010). Limitations of this review include: (1) variable quality of RCTs included in the systematic review and small sample size, (2) clinical variability within the RCTs, and (3) and unexplained statistical heterogeneity in some of the comparisons. This systematic review found sufficient evidence to support trauma focused cognitive behavioral therapy, although the authors identified potential biases which should be treated with caution (Roberts et al., 2012).

Evidence supporting debriefing practices. In the review of the literature supporting debriefing practices, three evidence-based papers were included. Boscarino, Adams, and Figley (2005) evaluated personnel working in New York City during the September 11th World Trade Center Disaster (WTCD). Individuals who were offered crisis intervention services by their employer were compared to other workers whose employer did not offer any form of organized crisis intervention services. The researchers found that 80% reported more positive outcomes following debriefing sessions (n=1243, 95% CI 79.0-83.3; $p < 0.05$). The authors determined that two to three psychological debriefing sessions were protective during the follow-up period for both PTSD and depression development (OR=0.36; $p < 0.05$) (OR=0.23; $p < 0.05$). Limitations of this study center on study design. Employers elected to provide crisis intervention for their employees and therefore, unbiased treatment assignment was not possible. Thus, participants were not randomized to either a treatment or control group. Study findings were based on self-reported data and, because the study occurred one year after the incident in 2001, recall bias is a potential confounder. However, the health measures used were standardized and validated scales. Last, there was significant variation in study participant employment, with not all participants being emergency personnel. While New York residents experienced significant stress as a result of the WTCD, this study did not specifically evaluate hospital emergency personnel. Findings from this study demonstrated that debriefing has a benefit on the development of PTSD when CISM services are offered (Boscarino, Adams, & Figley, 2005).

Hokanson and Wirth (2000) performed a program evaluation of the CISM program within the Los Angeles Fire Department following implementation of this program in the LA district. Participants attended a debriefing session following a CI. The Los Angeles Fire Department provides services including fire suppression, prevention, emergency medical services (paramedics), terrorism preparedness, urban search and rescue, hazardous material management, ocean lifeguard services, and public education. After the suicide of a firefighter in 1985 and the Cerritos Air Crash in 1986, the fire department implemented the CISM model. Personnel who participated in a debriefing session reported less PTSD symptoms than those who had not been debriefed ($p < 0.001$)). The likelihood of significant symptom reduction within less than 1 week was greater when respondents were debriefed (74.7%) than when they were not debriefed (64.8%) (Cochran's $Q(1) = 35.16$; $p < 0.001$)). A limitation to this study is that it was

retrospective and subject to recall bias. Specific to this paper, the study evaluated emergency responders and not hospital emergency personnel, making the findings potentially less applicable. While firefighters are secondary trauma victims and experience similar distress as hospital emergency personnel, the study did not evaluate this group which is the primary focus of this paper. Overall, more participants reported a significant reduction of symptoms and a return to normal recovery following a traumatic event than those who did not participate in a debriefing session (Hokanson & Wirth, 2000).

While different from CISD, Copeland and Liska (2016) studied emergency department personnel who participated in a "post-code pause" (PCP) debriefing session. This interventional practice was comprised of 10 to 15 second moment of silence, followed by a facilitator-lead group debriefing session. Study investigators found that 70% of participants found the PCP debriefing session helpful and allowed them to pay respect to the patient (n=23, 76%), return to work (n= 22, 71%) and improve work-related processes (n=22, 74%). Limitations of this study include the small sample size (n=46) and response bias with recall error (measured within 24 hours of the code) as a self-reporting survey method was used. In addition, PCP is not grounded in CISM principles. Summary findings demonstrated a decrease in those reporting psychological distress associated with the critical incident event.

Discussion

The goal of the CISM model is to assist hospital emergency personnel with facilitating a normal recovery from the physical and psychological burden of a critical incident exposure. While the literature has mixed views on the effectiveness of psychological debriefing, such as CISD, healthcare administers continue to provide debriefing services due, in part, to the high prevalence of PTSD in hospital emergency personnel. As mentioned previously, undiagnosed or mistreated PTSD is linked to various psychological disorders as well as to provider burnout (Blacklock, 2012).

Nurses are at greater risk for burnout than many other occupations. Research has demonstrated that nurses report higher levels of work-related stress and that 30% to 50% of nurses experience burnout (Adriaenssens, de Gucht, & Maes, 2015). Hooper, Craig, Janvrin, Wetsel, and Reimels (2010) determined that approximately 82% of emergency nurses had moderate to high levels of burnout. Nurses burnout is shown result in job dissatisfaction, poor organizational commitment, absenteeism, intention to leave the job, and turnover (Leiter & Maslach, 2009). This can lead to significant economic loss for the employer (e.g., hospital).

The National Health Care Retention and RN Staffing Survey for 2017 (*Nursing Solutions Incorporation*) has reported the national turnover rate for emergency department (ED) registered nurses (RN) to be 19.1%, which is above the national rate for general RNs at 14.6%. The average cost of turnover for a bedside RN ranges from $38,900-$59,700, resulting in an average loss of

$5.13-$7.86 million annually for a hospital (NSI, 2017). With the prediction of a 29% nurse vacancy rate in healthcare by the year 2020 (Sawatzky & Enns, 2012), retaining experienced ED nurses is critical. Interventions aimed at addressing the needs and concerns of ED nurses, such as the psychological and physical impact of CI exposures, may be more critical than ever and should to be a focus for hospital and ED administrators now and in the future.

CISM principles can be used as an interventional program for addressing the physical and psychological effects of a CI on the development of stress and PTSD in hospital emergency personnel. The use of CISD, which is grounded in evidence-based crisis theory and psycho-educational theory, addresses the psychological and physical needs of hospital emergency personnel related to CI exposure. Nurses are one of the largest workforce groups in healthcare today. Within this group, emergency nurses have a high prevalence of CI (Adriaenssens, de Gucht, & Maes, 2012). They routinely move from one CI exposure to another, leaving little time for recovery, which increases their risk for developing PTSD. Research has demonstrated that high quality of nurse caring, and compassion correlates with high levels of patient satisfaction, but high levels of nurse burnout are linked to patient dissatisfaction (Adriaenssens, de Gucht, & Maes, 2012). Patient experience is recognized as a core component of a quality healthcare system, and patient experience has become a major component of hospital accreditation and reimbursement throughout the world (Edvardsson, Watt, & Pearce, 2016). Burnout and nurse job dissatisfaction are precursors to voluntary turnover that in turn, contribute to understaffing of nurses in hospitals with poor patient outcomes. Given the challenge rural hospitals face in recruiting and retaining experienced nurses and the predicted nursing shortage for 2020, interventions aimed at addressing the outcome from multiple CI exposures are critically important.

High quality studies evaluating the use of CISM within the emergency department are limited and should be a focus of future research. While the effect of multiple exposures to critical incidents on urban emergency personnel is common within the literature, continued high quality research is needed to examine the impact of CISD in rural and underserved areas. To do so, a needs assessment will be needed to evaluate the perception and needs of CISD as well as a feasibility study to determine whether CISD is sustainable within rural hospitals. A needs assessment should evaluate the prevalence and perception of CI, the prevalence and effect of PTSD on provider job satisfaction and quality of care, and whether or not psychological debriefing (CISD) is offered and if not, would it be favorably perceived by staff. A feasibility study should evaluate whether or not implementing a CISM team would be appropriate logistically and financially within rural hospitals.

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