Using Critical Incident Debriefing after Code Blue Events to Support Registered Nurses

David L. Boyd

University of San Francisco, dlboyd@dons.usfca.edu

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Using Critical Incident Debriefing after Code Blue Events to Support Registered Nurses

David L. Boyd, DNP(c), RN, PHN, FNP-BC, CEN

University of San Francisco

School of Nursing and Health Professionals

Committee Chair: Mary Lynne Knighten DNP, RN, NEA-BC
Committee Member: Sara L. Horton-Deutsch Ph.D., RN, FAAN, ANEF, Caritas Coach®
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Section I: Abstract

**Background:** During a code blue event (CBE), the environment becomes highly stressful and intense. Nurses rapidly transition from performing life-saving procedures on their patients to carrying out their usual duties. Without proper debriefing, nurses cannot properly process their emotions leading to increased burnout and secondary traumatic stress (Stamm, 2010).

**Local Problem:** In 2021, the nurses at Providence Saint John’s Health Center (2021a) responded to 110 CBEs, a 43% increase from 2020. Without a process for critical incident debriefing (CID), these nurses were exposed to trauma at each event without support for their psychological well-being.

**Methods:** This quality improvement change project occurred at a community hospital in Santa Monica, California (July 2022 through January 2023). It used a pre- and post-implementation design to determine if CID changed nurses’ professional quality of life survey scores.

**Interventions:** Interventions for this project included conducting a survey pre- and post-implementation of education on CID and implementing a formal debriefing process for CBEs.

**Results:** Eight-one nurses participated in this project’s survey. Eighteen nurses completed the pre- and post-implementation survey. No statically significant changes occurred in the nurses’ levels of compassion satisfaction, burnout, or secondary traumatic stress.

**Conclusions:** Implementing debriefing at PSJHC supported nurses involved in CBE. Several limitations exist, but the project overall supports CID. PSJHC should consider the formal adoption of this CID process.

**Keywords:** code blue events, critical incidents, critical incident debriefing, healthcare provider, professional quality of life scale, burnout, compassion satisfaction, secondary traumatic stress
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Section II: Introduction

Critical incident debriefing (CID) describes one method used to process high-stress, high-intensity events, defined as critical incidents, such as patient resuscitation (Mayer & Hamilton, 2018). CIDs may focus on psychological well-being, clinical competence, and quality improvement. This project used CID to encourage nurses to pause and process the emotions and trauma they experienced when performing cardiopulmonary resuscitating (CPR) on a patient.

Background

Long before the COVID-19 pandemic, nurses suffered high levels of stress, burnout, and secondary traumatic stress. Unfortunately, in the past, the healthcare environment in the United States has not prioritized nurses’ psychological health and well-being (Gómez-Urquiza et al., 2017). The field of nursing continues to struggle due to high volumes of critically ill patients, increased workloads, and a constant lack of adequate staffing (Agency for Healthcare Research and Quality [AHRQ], 2021). More than two years into the global COVID-19 pandemic, nurses continue to be traumatized by exposure to critical incidents, with little ability to prevent or the resources to recover from this trauma.

Definitions

Several key terms used in this project included critical incidents (CI), critical incident debriefing (CID), compassion fatigue (CF), compassion satisfaction (CS), burnout (BO), and secondary traumatic stress (STS). Critical incidents are events that occur in the healthcare setting that cause nurses an abnormally strong emotional response, which can lead to psychological trauma and burnout. Several examples include the death of a patient, the death of a child, performing CPR on a patient, and multiple casualty injury event (Cantu & Thomas, 2020; Mayer
& Hamilton, 2018). As described by Stamm (2010), critical incident debriefing, for this project, describes the act of stopping to pause and verbally process the event immediately after a code blue event (CBE) where a trained debrief facilitator guided nurses, doctors, and ancillary staff involved in the CBE as they process their emotions related to the CBE (Gilmartin et al., 2020; Leff, 2021; Lyman, 2021). Stamm also described compassion fatigue, which includes the feelings of anger, frustration, and exhaustion caused by caring for patients, which causes nurses to feel negative or fearful about providing care to patients. Compassion fatigue can decrease the nurse’s job satisfaction, psychological well-being, productivity, and quality of work performance. Compassion satisfaction describes the joy, happiness, and pride that nurses feel when caring for patients and interacting with their colleagues. Feeling drained of emotions or exhausted when exposed to stress from working overtime describes burnout. It includes experiencing three aspects, “emotional exhaustion, depersonalization and cynicism, and feelings of hopelessness” (Stamm, 2010). Secondary traumatic stress describes the distress and emotional trauma that occurs from overexposure to actual trauma or the suffering of others described as secondary trauma. It often happens to nurses as they witness or hear of the suffering of their patients. Nurses with high levels of burnout and secondary traumatic stress are often less productive, and they can decrease the entire team’s morale (Stamm, 2010). With the literature demonstrating that nurses have high levels of burnout and secondary traumatic stress, healthcare organizations need to establish processes that support nurses and help increase their nurses’ levels of compassion satisfaction while also reducing their burnout and secondary traumatic stress (Kawar et al., 2019).

Problem Description
At a community hospital in southern California, nurses, including the rapid response team nurses (RRT), bedside nurses, clinical supervisors, unit managers, and the nursing supervisor, respond to and manage CBE. However, without a formal CID process, these nurses did not debrief after CBEs. Before implementing this CBE project, the code blue documentation sheets comprised a quality improvement page that included several questions about how the process of the CBE could have been improved. Still, there wasn’t consistency with who or how to complete this form. In 2021, there were 110 CBEs, which was a 43% increase from 2020 (n=66 events). These numbers average one or two critical incidents per week (Providence Saint John Health Center [PSJHC], 2021a). Each CBE exposed an average of six nurses to a critical incident, suggesting 660 potential exposures to trauma per year confronting these nurses.

In March 2021, several members of the code blue committee officially asked for a formal CID process to use after CBEs. This request received additional support from the nurses in the rapid response team, intensive care unit (ICU), emergency department (ED), progressive cardiac care unit (PCCU), ICU physicians, and hospital administration. The consensus from these nurses and doctors suggested that the reason for adopting a formal debriefing process was to support the psychological well-being of nurses by providing scripting and a tool for the nurses to follow, and a safe space to process the events of a CBE.

Setting

Providence Saint John’s Health Center in Santa Monica, California, is part of the Providence Saint Joseph’s health system and has 266 licensed beds. The average daily census is 128 patients, with approximately 10,500 inpatient admissions yearly. Despite being a small community hospital, PSJHC does many great things and provides state-of-the-art care for a comprehensive list of medical conditions (PSJHC, 2021b). This project included approximately
500 nurses from the ICU, PCCU, medical-surgical (MS), orthopedics (ortho), oncology (onc), and caritas units (a MS unit used for patients who pay for upgraded rooms), comprised of 200 beds, and the ED with 27 beds.

Providence Saint John’s Health Center (2021b) lists compassion, dignity, justice, excellence, and integrity as its core values and embraces the following mission statement: “As expressions of God’s healing love, witnessed through the ministry of Jesus, we are steadfast in serving all, especially those who are poor and vulnerable” (para. 1). Nurses at PSJHC provide care to their patients, but rarely have time to care for themselves. Though not physically ill, nurses continue to experience high levels of trauma and secondary traumatic stress as they care for patients. This continuous trauma can cause nurses to be vulnerable. All nurses must first care for themselves to provide compassionate and excellent care. Not having a formal debriefing process demonstrates a gap in the mission and values of PSJHC that this proposal seeks to fill by first caring for nurses.

**Specific Aim**

This project aimed to determine (1) if participating in CIDs after CBEs increases the level of compassion satisfaction from a baseline score of low to moderate to a score of moderate to high and (2) if participating in CID decreases the levels of burnout and secondary traumatic stress from a baseline score of high to moderate to a score of moderate to low for nurses at PSJHC over six months.

**Available Knowledge**

**PICOT Question**

For nurses responding to code blue events at Providence Saint John’s Health Center (P), how does conducting critical incident debriefing after code blue events (I), compared to not
conducting a critical incident debriefing (C), impact these nurses’ levels of compassion satisfaction, burnout, and secondary traumatic stress related to the code blue events (O) over three months (T)?

**Search Methodology**

A comprehensive literature search included several databases: PubMed, Cumulative Index to Nursing and Allied Health Literature (CINAHL), Cochrane Database of Systematic Reviews (COHRAN), and Scopus. The specific search terms used included: *critical incident debriefing, resuscitation, critical incident, healthcare providers, code, code blue, debrief, pause, cardiac arrest, secondary trauma, compassion fatigue, psychological well-being, and burnout.*

The initial yield was 289 studies. Additional filters used in PubMed and CINAHL were peer-reviewed, English language, and published within five years. The use of the Boolean operator (AND) to combine *debriefing AND burnout* produced 106 studies and combining *debriefing AND psychological well-being* produced 51 studies. For each of these searches, a review of the titles and abstracts led to removing 148 studies unrelated to the PICOT question. After eliminating all but nine studies, the use of reverse reference reviews with COHRAN and Scopus from these nine studies identified four additional studies. A colleague provided a link to the Center of Advance Palliative Care website, which led to the discovery of a single systematic review. A new search occurred after the completion of this project using the same terms, filters, Boolean operators, but published within two years, which produced 105 studies. From these 105 studies, a review of the titles and abstracts led to removing multiple studies unrelated to the PICOT question. Four additional studies included in the literature review applied to the PICOT question. The total yield from this extensive review included one clinical guideline, two evidence-based practice (EBP) projects, one systematic review, one correlational study, four
qualitative and descriptive studies, three systematic reviews with meta-analysis, three quality improvement projects, and four cross-sectional studies, for a total yield of 19 studies relevant to this project.

**Integrated Review of the Literature**

Evaluating and synthesizing the current research and non-research evidence available helped provide evidence to support implementing a change in practice (Melnyk & Fineout-Overholt, 2018). Dang et al. (2022) provide tools to adequately appraise and synthesize the literature for this project and offer a step-by-step process to determine the level and quality of the evidence. The use of an evaluation table provided a concise way to organize the available evidence by quality, strength, feasibility, and appropriateness for this proposal (see Appendix A). Several themes were identified, including high stress and burnout; critical incidents and debriefing; benefits of debriefing; and measuring compassion satisfaction, burnout, and secondary traumatic stress.

**High Stress and Burnout.** Zhang et al. (2020) studied 1,943 ED physicians from 17 different quantitative studies in a Level III-B systematic review with meta-analysis. The researchers determined that these physicians had higher levels of stress and burnout than physicians in other specialties. The independent variable included physician burnout, and the dependent variables included emotional exhaustion, depersonalization, and personal accomplishment. The researchers used Begg’s test, Egger’s test, and the Maslach Burnout Inventory (MBI). The findings included high levels of emotional exhaustion with a mean burnout score (MBOS) of 23.95, high levels of depersonalization with an MBOS of 11.63, and low levels of personal accomplishments with an MBOS of 34.69. Limitations of this study included the small number of studies for the meta-analysis and the difficulty extracting what led to burnout.
strictly from the numbers listed in the study. Nevertheless, the study concluded that ED physicists suffer high burnout levels due to the high-stress environments, and it remains imperative to provide resources to address their mental well-being (Zhang et al., 2020).

Similarly, Gómez-Urquiza et al. (2017), in a Level III-B systematic review with meta-analysis, looked at 13 quantitative studies involving 1,566 ED nurses and identified high levels of burnout based on the MBI for emotional exhaustion, depersonalization, and personal accomplishment. The intervention included the MBI. The results of this study included high levels of emotional exhaustion (31%) and depersonalization (36%) and low levels of personal accomplishment (29%) in ED nurses (Gómez-Urquiza et al., 2017). The researchers identified several limitations, including a low number of studies with adequate statistical data due to the attempt to maintain homogeneity. Also, using a longitudinal study makes it nearly impossible to determine if the reported burnout led to nurses leaving the field of nursing. Since the researchers included all versions of the MBI, some limitations exist in interpreting how each score relates to the other (Gómez-Urquiza et al., 2017). To conclude, the researchers identified that levels of burnout remained high in ED nurses and affected one-third of the sample, which points to the importance of finding ways to provide psychological support for nurses in high-intensity environments (Gómez-Urquiza et al., 2017).

Kawar et al. (2019), in a Level III-A retrospective study, surveyed 1,174 direct patient care nurses at two multi-hospital health organizations in southern California. The researchers studied whether the registered nurses’ (RN) level of experience, specific specialty unit, age, years of experience, type of degree held, and employment status (full-time, part-time, or per diem) affected their levels of burnout, compassion satisfaction, and secondary traumatic stress. The survey included the RNs’ demographics and their scores on the Professional Quality of Life
(ProQOL) scale to complete the analysis. The participants, ages averaged 43.31 years. The average years of experience were 13.82, an average of 9.54 years at the facility, and 88.1% of participants were bachelor-prepared (Kawar et al., 2019). Most participants fell within the moderate to average (23-41) level for compassion satisfaction and burnout. Night shift nurses with more years of experience had increased levels of compassion satisfaction. Several groups of nurses identified as high-risk for CF due to having a high mean score for STS, including newly graduated nurses (29.5), ICU nurses (27.4), BSN nurses (27.2), and nurses working 12 hours shifts [26.9] (Kawar et al., 2019). Since this study used surveys, some limitation exists since it only represents those willing to participate. These three studies suggest that healthcare providers who work in high-intensity environments are at increased risk for stress and burnout (Gómez-Urquiza et al., 2017; Kawar et al., 2019; Zhang et al., 2020).

**Critical Incidents and Debriefing.** A review of six different studies provided a connection between critical incidents and debriefing. In a qualitative study rated Level III A/B, Chesham and Dawber (2019) examined the effects of nonclinical staff performing CPR. This study occurred at a large state-of-the-art teaching hospital in Australia and sought to determine if nonclinical healthcare professionals suffered trauma and distress from performing CPR. The authors also researched whether peer support or debriefing improved the nonclinical staff’s well-being. The first independent variable was performing CPR, with a corresponding dependent variable being the impact on nonclinical healthcare workers' psychological well-being. The second independent variable was peer support, with corresponding dependent variables of individual well-being, team functioning, and clinical performance. The researchers utilized semi-structured, face-to-face interviews that identified two themes: (a) the “psychological impact of performing CPR” and (b) “the value of peer support” (Chesham & Dawber, 2019, p. 245-246).
The sample included 12 nonclinical healthcare professionals. The researchers determined that performing CPR created post-traumatic stress disorder in nonclinical staff. However, these staff felt supported when they had peer support and attended a CID. The identified limitations included difficulty recalling the event's details and not answering truthfully due to the trauma the participants experienced. The researchers concluded that performing CPR causes trauma and distress and that providing support helps improve the nonclinical healthcare professionals’ psychological well-being who perform CPR (Chesham & Dawber, 2019).

Cantu and Thomas (2020) performed a Level III-B cross-sectional quantitative study by surveying staff in a community ED in Connecticut to determine the definition of a critical incident and whether staff embraced debriefs. The authors aimed to determine if the healthcare provider’s clinical role, years of practice, frequency of debriefs, perception of critical incidents, and willingness to debrief affected the Hospital Anxiety and Depression Scale scores and the ProQOL scale. The sample included 39 healthcare providers: six doctors, 27 nurses, physician assistants, and six emergency medical technicians. The researchers discovered a statistically significant connection between the desire to debrief after a critical incident and the number of years of experience of the healthcare professionals. For healthcare professionals with 3 to 10 years of experience, only 56% wanted to debrief, while those with less than three years or more than 11 years of experience reported the desire to debrief 100% of the time (Cantu & Thomas, 2020). Limitations included that this study occurred at a single study site and had a small sample. The researchers concluded that the participants described the death of a patient and catastrophic public health events as critical incidents. Additionally, the participants reported anxiety, burnout, and secondary traumatic stress associated with critical incidents and that being able to debrief helped improve their mental well-being (Cantu & Thomas, 2020).
In a Level III-B quantitative study, Ugwu et al. (2020) used a 20-question survey to conduct a cross-sectional observational study to assess the perceptions of CIDs of the staff of a community hospital in Brooklyn, New York. The sample included 130 healthcare professionals from the ED and ICU, including physicians, residents, physician assistants, and nurses. The researchers aimed to determine if the practice of debriefing affected the team’s communication and performance. They also sought to determine how often debriefs happened, if staff found value in them, and whether they provided psychological support for those who participated in a CID. The study’s results demonstrated that the staff understood the CID concept, wanted to use CID for CBEs, believed that CIDs are underutilized, and believed that a lack of time or resources prevented CIDs from occurring. Limitations included the potential for recall and participation bias. Also, the study only included healthcare professionals from one small community hospital. The researchers concluded that though highly valued, CID remains underutilized and that two possible reasons are a lack of time for CID and not having a formalized process (Ugwu et al., 2020).

In a Level III-B cross-sectional study, Spencer et al. (2019) aimed to determine how participating in CBEs impacts healthcare providers in the inpatient setting. The study took place at a 732-bed hospital facility in the United Kingdom. The researchers studied three separate things: the participants’ demographics, what debriefing practices the participants experienced over the last year, and the results of the participants’ trauma screening questionnaires (TSQ) scores. The researchers requested the participants only consider the emotions they felt from being involved in a CBE when answering the TSQ. The total participants included 312 healthcare providers who had participated in a CBE at least once in the preceding 12 months. Of these participants, 37.2% had debriefed after the CBE, and 72.4% of the participants thought
positively about the debriefing process (Spencer et al., 2019). For the TSQ, 96.7% (n=302) of the participants answered the questions, and 9.60% (n=29) had a positive score for post-traumatic distress (PTSD). The researchers could not associate debriefing with PTSD or the prevention of PTSD. Physicians and nurses who did not take breaks had higher levels of PTSD (Spencer et al., 2019). The participants reported the lack of time and training as the two most common reasons they did not conduct a debrief. Of the healthcare professionals who answered the survey, 19.2% (n=60) were upset that they had to return to work after a CBE, while 16.3% (n=51) thought about quitting their job as healthcare professionals because of CBEs (Spencer et al., 2019). Limitations of this study included that the participants came from the same facility, and there could be recall bias from retrospective surveys. Also, although the researchers directed the participants to associate their TSQ answers with their feelings after a CBE, it remains difficult to establish causation since they work in high-stress environments. The researchers concluded that the stress from a CBE can lead to burnout and cause healthcare professionals to want to leave their profession. Healthcare systems need to support the implementation of effective debriefing after CBEs and other interventions to support the psychological well-being of their staff (Spencer et al., 2019).

In a Level III-A/B study, Mayer and Hamilton (2018) used a qualitative approach with open-ended interview questions to determine the definition of a critical incident and assess the impact of critical incidents on healthcare providers. This study occurred at a Level II trauma center in the United States. The researchers identified four themes: (a) critical incidents happen and are not forgotten, (b) the many impacts of critical incidents, (c) navigating through critical incidents, and (d) barriers to navigating after critical incidents (Mayer & Hamilton, 2018, pp. 234). The limitations included a small sample size with three different professions from one
organization. The researchers concluded that though often focused on the prehospital setting, critical incidents also occur in the inpatient setting and that critical incidents cause significant distress for healthcare professionals involved in the critical incident. Also, healthcare systems need to provide more support for the mental wellness of these healthcare professionals (Mayer & Hamilton, 2018).

In a Level V-A quality improvement study, Przednowek et al. (2021) aimed to understand how the staff in the ED felt about the current debriefing process used during resuscitation. The participants came from a health system in Michigan, and the researchers used the Lakeland 7-item survey to establish baseline data. The researchers then implemented a formal debriefing form to debrief after CBEs. The study included 79 pre-intervention surveys, 51 6-month post-intervention surveys, and 48 12-month post-intervention surveys. The researchers demonstrated an increase in the participants’ satisfaction with performance in codes after implementing code debriefing, from $M = 6.661$, standard deviation ($SD$) = 2.028, to $M = 7.90$, $SD = 1.359$. However, the results also demonstrated a decrease (Pearson chi-square $14.977$, $df 4$, $p = 0.005$) in whether the healthcare workers felt supported emotionally by each other after implementing debriefings (Przednowek et al., 2021). The decrease in the emotional support that the participants felt after debriefing stands out, as it demonstrates a negative response to CID. Limitations included lacking the ability to track a survey’s response to the same person at each data collection point, having a small sample size, and pressure to answer the questions to influence the results. The researchers concluded that the post-CBE debrief increased the participants’ overall satisfaction ratings related to how CBEs were run. However, the participants reported feeling less emotionally supported by each other after participating in a debrief, which provides a negative effect of CID compared to other evidence that supports CID. The researchers suggested the need
for more research at other healthcare centers to understand the relevance of these results (Przenowek et al., 2021). Based on these six studies, CBEs qualify as critical incidents, exposure to critical incidents increases burnout, and CIDs provide healthcare providers emotional support when used after a critical incident.

**Benefits of Debriefing.** In a Level, V-A EBP study of 47 healthcare providers, including nurses, respiratory therapists, hospital unit coordinators, physicians, certified nursing assistants, nurse practitioners, child life specialists, and chaplains, the researchers demonstrated a statistically significant positive change after implementing a resiliency bundle in the pediatric ICU. This resiliency bundle by Davis and Batchelor (2020) had several steps, including:

- an ethical issue resolution process, mindfulness reminders through cell phone applications, patient death process outline, case conference discussions, structured debriefings with pastoral care, discussions with colleagues and supportive staff,
- leadership notification, social events, host site educational courses aimed at improved clinician well-being, and their employee assistance program (pp. 606).

Implementing the resiliency bundle helped caregivers engage in activities to help them process the trauma they faced to improve moral distress. This study focused on staff in the pediatric ICU and used the Connor-Davidson Resilience Scale (CD-RISC-25) to obtain baseline data on their staff’s resilience. Six months after implementing the resiliency bundle, the healthcare providers completed a second CD-RISC-25 assessment, which showed an increase in resilience from 79.9 to 83.4, \( p < 0.0001 \) (Davis & Batcheller, 2020). This finding further validates the use of CID to improve resiliency. In addition, this improvement in resiliency provides additional support for the benefits of debriefing.
In a Level III-B study, Lyman (2021) conducted a retrospective, correlational design to collect data from 68 nurses working in the ED from 27 states. This survey aimed to connect the answers of the Nursing Teamwork Survey with the type and frequency of debriefing that ED nurses from 27 U.S. states experienced. The researchers aimed to establish a relationship between how often debriefing occurred, the type of debriefing, the timing of the debrief, and the perception of teamwork in nurses working in the ED. With 68 responses, the researchers identified a relationship between debriefing frequency and the perception of teamwork ($\eta = 0.41, p = .02$). They identified a relationship between the use of a formal debriefing process and the perception of teamwork ($\eta = 0.36, p = .01$). The researchers identified a relationship between the perception of teamwork and whether the debrief occurred immediately after the critical incident ($\eta = 0.36, p = .03$). Several limitations included the study focused only on ED nurses, a low response rate, and the inability to fully interpret the participants’ perceptions without qualitative questions. Lyman (2021) concluded that the study results supported using a formal debriefing process if implemented consistently and preferably immediately following a CBE.

In a Level V-B quality improvement project, Gilmartin et al. (2020) discussed implementing hot debriefs in the ED at a large medical center in Ireland. The term hot debrief describes the process of debriefing immediately after a cardiac arrest or any other critical incident. The project aimed to implement CID immediately after the resuscitation of patients in cardiac arrest. The results demonstrated that staff received these hot debriefs well, and 90% of the staff believed that the hot debriefs helped their psychological well-being (Gilmartin et al., 2020). Despite high levels of participation, maintaining engagement was challenging. The limitations involve using a paper debrief form designed for a clinical scenario versus a cardiac arrest, which made data collection more complex, and the debriefing tool was too restrictive.
Additional threats to the success of the hot debrief included time restraints, staff awareness, and not completing the paper survey used to track the debriefs. Nevertheless, the researchers concluded that the hot debriefing process improved the clinical practice for cardiac arrest patients and the staff’s mental well-being (Gilmartin et al., 2020).

In another Level V-B quality improvement project, McDermott et al. (2017) described using the peer debrief model, which promotes psychological well-being for healthcare professionals. For this project, a team of physician educators at Children’s Hospital Los Angeles aimed to address the trauma and secondary traumatic stress that resident doctors experience while involved in traumatic patient situations. The educators developed a program to train residents to function as debrief facilitators to support these residents. The researchers observed a statistically significant increase in self-reported comfort with leading a debriefing session during the initial training session, where 25 of 31 residents answered the pre- and post-survey questions. Before the training, 32% of the residents (nine of the 25) reported feeling comfortable facilitating a debrief, and after the training, 83% (22 of the 25) reported feeling comfortable leading a peer debriefing. All residents who completed the course said it was valuable and applicable to their roles. The researchers concluded that, despite concerns about this training eliciting emotional distress, the training provided a critical opportunity for these residents to reflect, which improved the resident’s mental well-being (McDermott et al., 2017).

To address the psychological well-being of healthcare providers during the COVID-19 pandemic, Leff (2021) created a Level IV-A clinical guideline supported by the Center to Advance Palliative Care and the Icahn School of Medicine at Mount Sinai on how to facilitate well-being debriefings. Leff’s manuscript provides an overview of what to expect, the role of the facilitator, and how to promote and troubleshoot well-being debriefs.
**What to Expect.** The focus of the debrief is to address the emotional distress associated with caring for patients. The debrief should occur in the healthcare organization and include staff who work together to foster an environment of psychological safety. The well-being debrief cannot be used to provide psychotherapy or quality improvement for clinical processes, and it should be inclusive for all healthcare providers interested in participating (Leff, 2021).

**Role of the Facilitator.** The facilitator should approach the debrief with empathy and emotional intelligence. Also, the facilitator should guide the debrief but not lead it. Several critical responsibilities include setting expectations, maintaining boundaries, identifying areas for emotional and cognitive reflection, normalizing reactions, and opening and closing the debrief (Leff, 2021).

**How to Promote.** An organization first needs to determine if there is a need or if staff wants to participate in well-being debriefing. Once there is an identified need, it remains critical to have the organization’s administration support for debriefing. If an individual meets resistance to gaining approval, one way to gain acceptance is by implementing well-being debriefing as a quality improvement project or proposing a pilot program as a trial to further demonstrate the need and benefits of well-being debriefing (Leff, 2021).

**How to Troubleshoot.** There is no guarantee that staff will attend when implementing well-being debriefs, and it might take time to gain the trust. However, the facilitator should make the intent to debrief known. The facilitator should recommend that participants introduce themselves, refer to each other by their first name, and monitor the session to avoid getting off-topic. Another critical role of the facilitator includes identifying participants needing professional mental health support and making the resources available to assist them. The facilitator must understand that the participant may be nervous and that remaining silent is acceptable during the
debrief. At times, humor can help others feel comfortable and decrease stress. The facilitator’s primary goal is to foster an environment of psychological safety, allowing the group to process any identified problems (Leff, 2021).

**Measuring Compassion Fatigue, Burnout, and Secondary Traumatic Stress.** Many different tools to measure burnout and poor work environments exist. This DNP student considered using the MBI, the Brief Resiliency Scale (BRS), and the ProQOL scale for this project. The current evidence supports each tool as valid and reliable (Maslach & Johnson, 1981; Smith et al., 2008; Stamm, 2010). The creation of a burnout scales crosswalk helped identify the best scale to use for this project (see Appendix B).

Each of these scales has value and could have worked for this project. However, the reason for picking the ProQOL includes several points: (a) The ProQOL aligns closer with the vision for this project. (b) The belief is that more nurses suffer from compassion fatigue versus true burnout, as defined by Maslach and Jackson (1981). (c) The ProQOL focuses on compassion satisfaction, burnout, and secondary traumatic stress, which demonstrates a focus on positive and negative feelings related to providing care. (d) the ProQOL questions place the focus on the caregiver instead of the environment (Maslach & Johnson, 1981; Stamm, 2010). (e) The ease of obtaining permission to use the ProQOL provided an additional reason for using the ProQOL. (f) The BRS does not measure burnout but measures a person’s ability to recover from a traumatic event (Smith et al., 2008). (g) Using the BRS during the pandemic may have helped identify nurses with low levels of resiliency, which may have helped nurse leaders address their psychological well-being at that time; however, this scale does not measure compassion fatigue, compassion satisfaction, and secondary traumatic stress. This fact helped eliminate the BRS as the appropriate scale for this project.
**New Available Evidence.** A new search for reemerging evidence was conducted in March 2023, since the first search was conducted in 2021. Four additional research studies were identified that are ready for translation into practice.

In a Level III-A/B systematic scoping review with meta-analysis, Bloomquist and Lasiter (2022) looked at studies focused on nurses' coping mechanisms during and after performing CPR on a patient. This review included nine studies in the United States, Australia, the United Kingdom, Sweden, Canada, and South Korea. The study included eight qualitative and one quantitative study, including participants working in the inpatient setting. The authors grouped the studies based on Lazarus and Folkman’s coping strategies, “planful problem solving, seeking social support, distancing, escape avoidance, self-controlling, accepting responsibility, confrontive coping, and positive appraisal” (Bloomquist & Lasiter, 2022, planful section). The authors identified from these studies that current research data focuses highly on the stress and trauma nurses experience in performing CPR. Still, it rarely discusses how nurses cope with these critical incidents. The authors identified conflicted information related to the benefits of debriefing after CBE. They recommended debriefing focusing on logistics and performance instead of psychological well-being and support due to conflict. The studies demonstrated substantial evidence of the benefits of social and peer-to-peer support when coping with CPR (Bloomquist & Lasiter, 2022). Other ways that nurses coped with performing CPR included remaining resilient by distancing themselves from the situation, maintaining self-control, and questioning or second-guessing their performance. The authors suggest that nurse leaders should change their focus from addressing the stress related to CBE to instead focus on supporting how nurses cope with CPR (Bloomquist & Lasiter, 2022).
A level V-A EBP project conducted at a Level II trauma center in the Midwest by Beres et al., (2022) sought to use a structured debrief after CBE in the ED and ICU to improve healthcare providers’ psychological well-being. In this study, the researchers implemented structured debriefs that included three specific questions for each debrief. The researchers used a pre- and post-implementation test design that used the ProQOL survey along with several qualitative questions. The study included staff from the ED and ICU with 31 pre-implementation surveys and 25 post-implementation surveys. The debrief facilitators comprised 14 healthcare providers, either nurse managers, assistant nurse managers, nursing supervisors, and spiritual services staff.

The health center had 52 patient deaths during the 12-week pilot period; debriefs were conducted on 20. The study did not show statistically significant changes in the pre- and post-implementation ProQOL scores of the staff who participated. Before implementing debriefs, the participants' compassion satisfaction scores (M = 37.7, SD = 6.1) demonstrated staff had moderate levels of compassion satisfaction. The staff’s levels of burnout (M = 24.3, SD = 6.7) and secondary traumatic distress (M = 23.1, SD = 6.7) remained low. The participants post-implementation levels of compassion satisfaction (M = 36.8, SD = 6.4, p = .61) decreased. Their levels of burnout (M = 25.5, SD = 5.4, p = .47) and secondary traumatic stress (M = 23.9, SD = 5.6, p = .99) increased. Though not statistically significant, the scores demonstrated a worsening in the ProQOL score after implementing debriefings (Beres et al., 2022). The researchers identified several limitations, including the timing of the pilot program is close to the implementation of a new electronic health care record, fatigue of caregivers related to COVID-19, and the inclusion of nursing leadership in the debriefing process. The authors noted that the healthcare providers had high levels of compassion satisfaction and moderate levels of burnout and secondary traumatic stress. This study’s final recommendation included acknowledging the
need for more research on the topic, and the healthcare providers and debrief facilitators verbalized benefiting from debriefing.

In a Level III-A/B qualitative study by McCall et al. (2022), the researchers sought to evaluate how trauma nurses who cared for victims from a school shooting coped with the trauma and secondary trauma of the events with hopes of decreasing nurse resignations. The study occurred at a Level I trauma center in Tennessee, USA, with seven trauma unit nurses participating. The researchers identified several themes focused more on the patients being shooting victims than on debriefing. They also included a question on debriefing and how nurses cope with the trauma associated with caring for these patients. The responses from the participants included a high reliance on peer-to-peer support. If nurses were new to the unit, they had greater difficulty coping due to not having close relationships with the other staff. The nurses mentioned that while the nursing leadership ensured debriefs occurred, they struggled to debrief while still providing patient care. The participants felt they couldn’t fully process their emotions while still being responsible for their patients. From these responses, the researchers recommended that debriefing is valuable but should occur immediately after the nurses have completed their shifts. They also suggested that the nursing leadership promote close peer-to-peer relationships for nurses working in the trauma unit (McCall et al., 2022).

Finally, in a Level III-A/B study by Rose et al., (2022), researchers at a Level I trauma center in Calgary, Canada, interviewed 30 healthcare providers to support debriefing after critical ED incidents. The researchers used NVivo software to analyze the transcribed interviews. The researchers identified five themes from the qualitative data collected. Theme 1: how debriefing affected the care of patients and clinical practice. Theme 2: teamwork and psychological safety. Theme 3: the emotional connection with debriefing. Theme 4: dealing with the stressor in the
ED. Theme 5: what prevented debriefs from occurring (Rose et al., 2022). The results of these themes demonstrated that 97% of participants reported favorably for debriefing related to how they influenced clinical practice and patient care. Eighty-seven percent of participants said the debriefs as an intervention that improved peer-to-peer morale and support, and 83% of participants reported that the debriefs allowed them to share their emotions in a supportive environment, helping them process their emotions. Also, 90% of the participants said that debriefing helped manage the high levels of stress in the ED. Every participant identified a lack of time or committed time as the biggest hindrance to completing a debrief (Rose et al., 2022). The researcher identified the high number of debriefs since 2016 that occurred in the studied hospital as a strength of this project. However, they noted having a small sample of participants from a single organization as a study limitation. The researchers suggested that these results help to show strong support for debriefing, and they recommended that the health system work to provide healthcare providers with dedicated time to debrief to provide further support.

**Summary/Synthesis of the Evidence.** Some gaps in the literature exist, as many of the studies focused on various elements of debriefing, but they did not focus entirely on debriefing and the nurses’ psychological well-being. Many studies demonstrated that participants voiced that CID improved their psychological well-being. Despite demonstrating support for debriefing, most studies (other than the study by Leff) lacked a formalized process for implementing a CID to support psychological well-being, establishing another gap in the literature. Identifying and connecting these gaps with the available data helped support this project.

Many studies described the concepts of CID, compassion fatigue, burnout, and secondary traumatic stress, and most of these studies demonstrated a level of connection between these terms. Before the global COVID-19 pandemic, these topics were of grave concern within the
healthcare environment. As a result, many organizations have attempted to learn more about each
to determine how to increase compassion satisfaction and decrease burnout and secondary
traumatic stress (Kawar et al., 2019). In two separate systematic reviews with meta-analysis one
by Zhang et al. (2020), which included 1,943 ED physicians, and one by Gómez-Urquiza et al.
(2017), which included 1,566 ED nurses, the authors sought to demonstrate the levels of burnout,
depersonalization, and emotional exhaustion experienced by healthcare providers who work in
high-stress environments. A third study by Kawar et al. (2017) included 1,174 nurses who
worked throughout the various units in several different health centers and demonstrated the
levels of compassion satisfaction, burnout, and secondary traumatic stress for these nurses. The
first two studies took place in the emergency department setting, and the third study surveyed
nurses from all departments. Kawar et al. (2017) reported that nurses working in the critical care
setting had higher levels of secondary traumatic stress and burnout. Based on these findings, this
literature review supports the belief that healthcare professionals working in a high-stress, high-
intensity environment or exposed to critical incidents are at high risk for burnout and secondary
traumatic stress (Gómez-Urquiza et al., 2017; Kawar et al., 2019; Zhang et al., 2020).

Two studies by Cantu and Thomas (2020) and Mayer and Hamilton (2018) described
what constitutes a critical incident and that CBEs fall into that category. The literature suggests
that the act of caring places a person at an increased risk for burnout and secondary traumatic
stress and that burnout results from the accumulation of trauma and secondary trauma associated
with providing care. These studies also support using CID for CBE to improve healthcare
professionals’ psychological well-being. Three additional studies demonstrated the emotional
distress healthcare professionals experience when exposed to CBEs. These studies suggested that
CIDs are underutilized, despite being reported as helpful in addressing psychological trauma and
distress associated with CBEs (Chesham & Dawber, 2019; Spencer et al., 2019; Ugwu et al., 2020). The study by Przednowek et al. (2021) suggested that CID after CBEs caused healthcare professionals in that study to feel less emotionally supported by each other, unlike the support seen in other studies. However, these researchers did not study whether CID affected the psychological well-being of the participants. The study by Davis and Batcheller (2020) applies to this project as it further supports the use of CIDs by identifying a statistically significant increase in resiliency in healthcare providers related to the use of CID.

Four additional studies identified in the literature after the completion of this project provided similar results as the evidence from the original literature search. These studies also show similarities to the results of this EBP project. Based on Bloomquist and Lasiter (2022), nurse leaders should focus more on how nurses cope with CBEs. The authors state that since conflicts exist in the literature about whether CID helps improve nurses’ psychological well-being, hospitals should stick to debriefs related to clinical practice. Authors from all four studies identified peer-to-peer support as a vital coping mechanism for nurses involved in critical incidents and CBEs. For the study conducted by Beres et al. (2022), the authors provided debriefing as an intervention with the hope of changing the participants' scores from their ProQOL surveys. Despite receiving positive verbal communication about debriefs from the participants, the study did not show statistically significant changes. In the studies by McCall et al. (2022) and Rose et al. (2022), the participants voiced that not having dedicated time to debrief as the most significant barrier to preventing it from occurring. These studies also demonstrated that the staff surveyed had a strong desire to debrief, and that they felt debriefing provided positive outcomes related to their psychological well-being.
This review and synthesis of 19 different studies provided evidence that answers the PICOT question, and the evidence supports the belief that critical incidents can cause increased stress and burnout. The evidence further supports using CID to decrease stress and emotional distress caused by critical incidents and demonstrates strong support for using CID to help improve nurses’ psychological well-being (Gilmartin et al., 2020; Leff, 2021; Lyman, 2021).

**Rationale**

*Conceptual Framework*

The Clinical Scholarship Framework for Nursing (CSFN), embraced by PSJHC, provides the conceptual underpinnings supporting this project. The CSFN demonstrates the importance of promoting nursing practice using the concepts of inquiring, improving, and informing to support the need to identify and implement EBPs (see Appendix C for the figure illustrating the CSFN). Maddux et al. (2017) developed the CFSN to meet the needs of a large health organization that sought to establish a conceptual framework to support nurses at all levels of experience and to provide a path forward to support each nurse’s growth. This framework applies to this project, as the project’s first step asks what needs to change (inquire). The second step is implementing CID for healthcare providers who respond to CBEs and demonstrate a desire to change (improve) the current process to decrease stress and burnout. The third concept of the CSFN (inform) supports disseminating and publishing the knowledge obtained from implementing this project. Using these concepts provides support for completing this project and disseminating the results to further nursing practice.

*Theoretical Framework*

Dr. Jean Watson’s Theory of Human Caring provides the theoretical underpinnings supporting this project. The Theory of Human Caring emphasizes the critical need for nurses first
to care for themselves to be prepared to care for their patients and to remain resilient (Watson, 2021). In the Theory of Human Caring, Watson (2021) describes Ten Caritas Processes® that address basic concepts of life (see Appendix D). First, nurses need to treat themselves and others with respect. Nurses need first to be true to themselves and then to others, and they need to use their spirituality to develop loving and trustful relationships. Nurses have the unique opportunity to create a problem-solving environment that promotes healing. Nurses also need to remain open to the possibility of miracles witnessed through spirituality. Finally, since increased exposure to critical incidents and high-stress environments leads to higher burnout and levels of secondary traumatic stress, healthcare providers must prioritize caring for themselves. The CID process allows healthcare providers to pause, reflect, and process the events and emotions of the critical incident. CID enables healthcare providers to connect with their inner selves while being supported by the medical center, which allows the nurses to afford themselves the resources and referrals for support. These facts further demonstrate the connection between CID and Watson’s Ten Caritas Concepts®.

**Conceptual & Theoretical Guidance**

The Clinical Scholarship Framework for Nursing supports the need to examine processes in nursing to ensure they are best practices. The CSFN supports improving a process that needs to be changed and disseminating the information for others to learn. Following these three steps, inquire, improve, and inform provided the conceptual underpinnings guiding this project. From the literature review that provided support for the project to the creation of the education and implementation of the debrief project, each part of this project followed these steps. This DNP student found evidence in the current literature to support implementing critical incident debriefing. The evidence also supported creating an education program to train the debrief
facilitators and the rest of the nurses who participated in the project. Each step of this project required a level of inquiring, improving, and informing to ensure changes occurred. While the CSFN provided step-by-step guidance for this project, the Theory of Human Caring provided theoretical motivation for educating all nurses involved in CBEs at PSJHC on why and how to debrief. It also offers strong support for teaching nurses how to use a holistic view of well-being, which helps nurses recognize their need to care for their psychological well-being. Teaching the terms and definitions of compassion fatigue, compassion satisfaction, burnout, and secondary traumatic stress helps these nurses understand the threats they face daily. Identifying these threats and learning how to mitigate them demonstrates self-care, which comes back to the concepts of the Theory of Human Caring (Watson, 2021).
Section III: Methods

Context

According to the AHRQ (2021), the current climate in nursing is not sustainable, and significant changes must occur. Executive nurse leaders are in the prime position to address this concerning trend. One way they can help this crisis is to develop a culture in healthcare organizations that supports implementing evidence-based practices that promote the nurses’ safety and psychological well-being. With the guidelines from Leff (2021), this DNP student implemented an evidence-based project that promoted psychological safety and well-being for nurses who have endured years of trauma and secondary trauma from exposure to critical incidents. Encouraging nurses to first care for themselves sought to create an environment of safety for staff and patients.

Interventions

This DNP student uploaded the ProQOL scale (Appendix E) and debriefing survey (Appendix F) to the PSJHC Redcap data collection platform, the official pre- and post-implementation survey site. The next steps included developing a debrief survey recruitment tool (see Appendix G), a training PowerPoint, a debriefing Edu-gram (see Appendix H), and a well-being badge card, created with permission for the ProQOL (see Appendix I) used to recruit and educate nurses about debriefing and the debriefing project. These documents received approval and support after being presented to the PSJHC shared governance research committee, the unit manager council, and the nursing executive leadership council.

After obtaining final approval, in mid-July 2022, before implementing the CID project, 15 ICU clinical supervisors, five ED clinical supervisors, and five rapid response nurses received training on facilitating a CID (see Appendix J). This DNP student instructed each debrief
facilitator to use the debriefing Edu-gram and debrief survey recruitment tool to help educate nurses from the approved units about the debriefing project, the purpose and how to participate in debriefing, and reminders to take the debriefing survey. Each unit’s manager and clinical supervisors were asked to include the debriefing Edu-gram in their shift-to-shift huddles. Additionally, all inpatient units and the ED received copies of the recruitment flyer with a QR code to complete the baseline CID survey on the Redcap platform. Recruitment flyers were posted in staff lounges and message boards in the ED, ICU, PCCU, MS, ortho, onc, caritas, and on the PSJHC Microsoft SharePoint homepage. This DNP student provided in-services at the clinical supervisor’s shift bed huddles that occurred at 8:00 a.m., 3:00 p.m., and 9:00 p.m. on designated days using the Edu-gram. All nurses received a well-being badge card that provided recommendations to remind them of several concepts that can help decrease burnout. These badge cards included a QR code the nurses could scan to participate in the debriefing survey. The implementation of CIDs occurred throughout all patient care units in the hospital, not just the units participating in the debriefing project, starting the last week of July 2022. The debrief facilitators provided ongoing training to nurses about CID, encouraged them to participate in CID, and asked them to complete the post-implementation survey by providing a QR code for the survey. Due to the large number of nurses that needed to receive education, this DNP student continued to communicate with the debrief facilitators, unit nurses, and managers throughout the implementation period of this project. This continued communication helped ensure as many nurses as possible received an education, had the opportunity to participate in debriefing and responded to the CID survey.

This DNP student developed a critical incident debriefing form (see Appendix K) and distributed copies of the form throughout the units in the code blue documentation sheet on each
code cart. For the inpatient units, immediately after a CBE, the rapid response team nurse or ICU clinical supervisor would announce the intention to debrief, gather those who chose to participate into a small group and facilitate the debrief. The ED clinical supervisor followed the same process for code blue events in the ED. The facilitators started the CID using the scripting provided on the CID form. The CID facilitators monitored the group to identify any staff needing additional support and to provide them with the numbers to the National Suicide Prevention Line, Physician Support Line, Lyra Health Counseling (a Providence Employee Mental Health resource), or the Behavioral Health Concierges (employee assistance program). If the facilitator felt that a nurse needed more immediate mental health support, they could have escalated the concern to the house supervisor and/or the nurse’s manager. The house supervisor would have escalated to the appropriate manager or administrator on call for any immediate mental health needs for physicians or nurses, which is the current established escalation process at PSJHC. On the nights or weekends, the house supervisor was to escalate to the administrator on call for any incidents needing immediate mental health needs. However, there were no reported cases of distressed caregivers needing additional support during this implementation time. Once the debrief ended, the facilitator gave the participants the QR code for the nurses to complete the post-implementation survey. The debrief facilitators placed each CID form in the ICU manager’s locked mailbox with the code blue documentation.

Gap Analysis

Prior State. A gap existed before the implementation of this project (see Appendix L) at PSJHC, which lacked a formal CID process after CBEs. Adding to this gap, informal CIDs had inconsistently occurred after critical incidents. These CIDs usually occurred due to a perceived need to support nurses involved in the critical incident. For example, one CID occurred after the
ICU manager recognized the need following the death of a young patient. A second CID happened after a critical incident involving a massive transfusion protocol. The ICU manager sought to provide the healthcare providers the opportunity to process critical incidents in real-time. Both incidents lacked a formal process for debriefing and a designated CID facilitator. The attending physician facilitated one debrief, and the ICU manager facilitated the other. The concept of CID at PSJHC remained widely unknown and unused by most healthcare providers. According to Leff (2021), debriefing can cause harm if not done correctly, and those facilitating CID should receive education on how to facilitate debriefs. Providing evidence-based knowledge about CIDs helped the nurses at PSJHC understand the benefits and reasons to participate in a debriefing.

**Desired State.** The project’s desired outcome was to provide the healthcare providers at PSJHC with a formalized CID process to occur after every CBE in the ED and all inpatient units to help promote higher levels of compassion satisfaction. Other desired outcomes included ensuring that a trained CID facilitator attends each CBE and that each nurse involved in the CBE understood when to debrief and what to expect. The final desired outcome was for all nurses to feel comfortable and find value in participating in CIDs.

**Action Items.** The plan was to bridge this gap with CIDs. To ensure the success of CID, the nurses received education about debriefing. This project provided the necessary support by developing and implementing a formalized debriefing process and provided resources in the form of an Edu-gram and trained debrief facilitators. In addition, this DNP student recruited and trained the ICU clinical supervisors, the ED clinical supervisors, and the rapid response team nurses on how to facilitate CID since these nurses were the most consistent participants of CBEs.

*Gantt Chart*
Using a Gantt chart (see Appendix M) complimented the work breakdown structure (WBS), and it illustrated the project’s timeline. In July 2021, this project began with a discussion between this DNP student and the PSJHC chief nursing officer (CNO). From July 2021 to February 2022, an extensive review of the current evidence ready for translation into practice occurred. In August 2021, this DNP student received written approval to proceed with this quality improvement change project from the CNO (see Appendix N). In December 2021, this project met the guidelines for an evidence-based change in practice project from the University of San Francisco’s (USF) Executive Leadership DNP department (see Appendix O). This DNP student presented this change project to the Nursing Research Council at PSJHC in January 2022, where it received approval to move forward. All required documents were submitted to the PSJHC Institutional Review Board (IRB) and received final approval to implement this project at PSJHC on June 2, 2022 (see Appendix P). Several factors necessitated further review by the PSJHC IRB (see Appendix Q) and the project required an extension (see Appendix R for the approval). This DNP student changed the optics on the debrief recruitment flyer, the well-being badge cards, and the CID form. The project was slow to gain initial acceptance from the debrief facilitators and nurses eligible to participate in the survey, which made it necessary to extend the length of the project until January 2023. The CID facilitators made the post-intervention survey available after each CID. This DNP student sent a survey link and QR code to all the potential participants via email at least once a month from July 2022 through January 2023. The deadline for all pre- and post-intervention surveys was January 31, 2023, and the data analysis occurred after February 1, 2023. Upon completing the data analysis, this DNP student presented the project’s results to the PSJHC’s Nursing Research Council.

*Work Breakdown Structure*
The WBS for this project (see Appendix S) included a portrayal of the different steps of the project, following the PDSA model described by (Langley et al., 2009). The planning stage of this project included the following action steps: obtaining support from the CNO, establishing the budget for the project, completing a gap analysis, and establishing the appropriate units in the hospital for implementation. For the do stage, the subcategories included meeting with the ICU and ED clinical supervisors and the rapid response team nurses, presenting to the code blue committee, explaining to the Nursing Research Council, meeting with the intensivists, providing the necessary education, and implementing CID. The action items under the study stage included collecting and analyzing the data and obtaining feedback from CID facilitators and the nurses who participated in the debriefs. Feedback from the study stage led to the decision to extend the pilot period and to continue collecting pre-intervention surveys for nurses who had not participated in a CID. The fourth and final stage, act, included evaluating the project, reporting the results to the Nursing Research Council, and facilitating a formal acceptance and implementation of this change project. Breaking this project into several defined stages helped keep the project manageable and ensured it stayed within scope.

**Responsibility/Communication Matrix**

The success of a project is highly dependent on effective communication, and in the healthcare setting, clear communication is critical. Each of this project’s stakeholders needed to receive communication, some required more than others, and some communication was bidirectional. This project’s communication matrix illustrated each of these stakeholders and demonstrated the importance of each stakeholder related to the project (see Appendix T). The methods of communication for this project included the hospital’s intranet, Microsoft SharePoint, flyers, Edu-gram, emails, in-person discussions, and phone conversations.
The actions of nurses facilitating and participating in the CIDs determined the success of this project, and they received frequent check-ins. Check-ins were conducted with the CID facilitators after each CID, either in person, via phone, or by email. For the PSJHC’s unit managers, the CNO and/or the executive director of critical care services, the Providence Southern California research director, and the DNP student committee chair, communication allowed for bidirectional communication. Contact with this group of stakeholders occurred as needed and with prescheduled meetings.

The code blue committee and the quality department received notification at the start of the project and once during the implementation period. No identified need to communicate to national or local regulatory agencies occurred during the implementation period. This DNP student’s second committee member received updates throughout the project as needed and as mandated by the DNP curriculum. The project’s proposal was initially presented to the PSJHC Research Council for approval, and the project’s results were presented to the council on April 11, 2023. Other than the initial notifications, no updates necessitated updating the chief executive officer, chief operating officer, or the regional CNO.

Identifying and engaging with these stakeholders brought increased awareness for the project. It also provided clear pathways of communication to help decrease any unexpected roadblocks. Since evidence-based projects can help improve the care of patients and the practices of the healthcare organization, clear communication remains critical.

**SWOT Analysis**

A SWOT analysis aims to identify and plan for things that might support, accelerate, delay, or prevent the implementation and completion of a project. The four components included in this analysis are strengths, weaknesses, opportunities, and threats (see Appendix U).
**Strengths.** This project had several identified strengths. One strength is that the project has the support of the PSJHC doctors, nurses, and executive leadership. Another strength is the close alignment between this project and the PSJHC mission and values, which embrace the principles of compassion, dignity, justice, excellence, and integrity. Promoting the psychological well-being of nurses connects closely to these values.

**Weaknesses.** Despite being a project focused on providing support for nurses, and the nurses themselves requesting it, a study by Gilmartin et al. (2020) provided insight that sustaining staff engagement became a barrier when implementing CIDs. The lack of staff engagement and the fact that participation was voluntarily added to the difficulty in gaining acceptance and involvement in debriefing and participating in the debrief survey. The project was slow to gain acceptance and support from the debrief facilitators and eligible nurse participants. Despite being a project asked for by nurses, getting them to complete the necessary paperwork was difficult. Topics related to mental health can cause distrust and concern. This project is directly related to nurses’ mental health; therefore, the nurses needed to see the environment as one of psychological safety to ensure success.

**Opportunities.** Opportunities for a project demonstrate room or support for growth. One opportunity came from the SoCal Providence’s regional directive for all ministries to provide evidence-based care, practice, and projects. The best way to provide best practices is to implement EBP projects (AHRQ, 2021). Also, PSJHC is on the journey to obtain accreditation from the American Nurses Credentialing Center as a Magnet-recognized center of excellence, and improving processes is one way to promote excellence.

**Threats.** Threats to this project included anticipated additional COVID-19 surges, but there were none during the implementation period. The eligible nurses were in labor negotiations
for a new contract during the implementation period, and there was a concern this would threaten the project. However, there wasn’t any proof to suggest that this occurred. However, several external surveys: including the yearly caregiver satisfaction survey and a survey for Magnet certification from the Providence Saint Joseph’s Regional Health System (PSJRHS), and a mandatory transportation survey from the city of Santa Monica created an environment of survey fatigue that lasted through November 2022. In addition, the PSJRHS implemented a new regional human resources platform in July 2022, which caused extreme turmoil for each of the unit managers. This new platform distracted them from being able to help with education and dissemination of the debriefing project during the implementation period. These threats caused delays in the project and were the primary cause of the need to change the data collection process.

**Budget**

The proposed budget for this EBP project was $11,505. However, the final expenses were $10,675 (see Appendix V). The breakdown includes two hours of training for each of the 25 trained ICU and ED clinical supervisors and the rapid response team nurses. This DNP student’s time, an in-kind investment, is four hours per week for 20 weeks. The average wage of $65 per hour provides the dollar amount used to calculate the time for staff participation. Each debriefs facilitator received a Starbucks gift card for the first debrief they completed. In addition, this DNP student purchased an iPad mini to encourage participation in the debriefing project, as every nurse who completed the pre-implementation survey received one entry to the raffle. If they completed the pre-and post-implementation survey, they received two entries to the raffle. The rest of the costs for this project included printing educational handouts, recruitment flyers, and well-being badge cards.
Cost Effectiveness Analysis

According to Kelly et al. (2021), retaining nurses remains critical to a medical center’s financial needs. When a nurse leaves an organization, the estimated costs range from $11,000 to $90,000 to cover the cost of recruitment and training of one nurse. To determine the cost of a RN turnover, an average of $54,000 was obtained from Kelly et al. (2021), that RN turnover costs between $11,000 and $90,000 per RN. Across the United States, nurse turnover costs healthcare organizations millions of dollars, and this lack of staff further adds to the stress affecting the existing caregivers. Kelly et al. (2021) proposed that high levels of burnout indicate why nurses leave a position. Therefore, as described in Appendix W, the cost of replacing one nurse was subtracted from the cost of the project to calculate the cost-effectiveness (Centers for Disease Control and Prevention [CDC], 2021). If preventing a single nurse from leaving their job by decreasing their levels of burnout results in a decrease in costs of $43,330, then preventing two nurses from leaving increases the cost-effectiveness analysis (CEA) to $97,330. With both values much higher than the cost of the project, this demonstrates a positive CEA. This CEA demonstrates how decreasing nurse turnover can immediately lead to reduced operational expense, which helps support using CID s to help nurses manage their stress and burnout, preventing them from leaving the organization.

The CNO at PSJHC requested that this project track the number of nurses who resigned throughout the organization from three months prior to implementation, during, and three months after implementation to demonstrate the potential CEA. Though many factors influence nurse turnover, the desired state to support a positive CEA was to see a decrease in the number of resignations during the implementation or post-implementation period (see Appendix X).

Study of the Interventions
The interventions were chosen based on the comprehensive literature review that supported implementing critical incident debriefing. One of the first interventions completed was to develop and publish the pre- and post- implementation survey in Redcap to quantify if nurses valued debriefing. This DNP student chose the ProQOL and Debriefing Surveys as both were identified as EBP scales from the available evidence, and these surveys captured the vision of the DNP project. PSJHC required the project to use the Redcap platform. The second intervention completed was identifying and training the designated critical incident debrief facilitators. The nurses chosen to facilitate CIDs were nurses seen as most likely to be at each CBE and who were closer to the bedside care compared to a nurse manager. The next intervention was completed by developing a debriefing form and disseminating education and insight about this EBP project and CID. A study by McDermott et al. (2021) and a practice guideline by Leff (2021) provided evidence and critical insight to develop the Debriefing Form and Edu-gram. These two studies justified using these forms to educate nurses. Both studies used debriefing to support healthcare professionals that experienced trauma from a critical incident. The results of the pre- and post- implementation survey and feedback from the debrief facilitators helped provide insight to determine if the outcomes were due to the interventions. No incidents occurred to suggest that another variable caused the outcomes.

**Contextual Elements**

The pre-implementation surveys were the only data collected at baseline. Despite many attempts to inspire more participation, the project ended up with less than 30 pre- and post- implementation responses, and there were many missing pre- and post- implementation responses. To participate, nurses had to participate in a CID after a CBE, which limited which nurses could complete the post- implementations survey. Nurses were supposed to take the survey
before participating in a debrief, but nothing prevented them from only completing the survey after participating in a debrief. These nurses who only answered post-debriefing couldn’t complete the pre-implementation survey once they had participated in a debrief.

The data in the Redcap survey platform was downloaded into an Excel spreadsheet, which helped ensure the accuracy of the data. Comparing the data from Excel to Redcap helped ensure that the data remained intact and accurate. Once organized in the Excel spreadsheet, the data was uploaded into the Statistical Package for the Social Sciences (SPSS) Graduate Pack 29 analysis software. Again, comparing the data from SPSS to Excel helped ensure it was accurate. After confirming the data remained intact, it was analyzed using SPSS leading to the final data outcomes for this project. Using SPSS, Redcap, and Excel, all platforms accepted by PSJHC and USF as safe and reliable for data collection and analysis, provides additional support for the completeness and accuracy of this data.

Keeping a copy of the receipts for the expenses in a folder on the PSJHC Microsoft SharePoint helped keep track of the ongoing expenses of the project. This DNP study checked the expenses monthly to ensure that the project remain within the proposed budget. Since the project had very few expenses, it was easy to keep the project within budget.

Before starting this project, PSJHC lacked an official debriefing process and designated trained debrief facilitators. Also, there wasn't a formal debrief form that focused on nurses' psychological safety and well-being. Debriefs only occurred in the reactionary sense. Nurses and other healthcare professionals had to implement debriefs and find ways to support each other.

Providence Saint John's Health Center now has 20-plus trained debrief facilitators and a formal debrief form. In addition, the nurses now have the knowledge and understanding of the
concept of debriefing, which helps to support having debriefs occur after each code blue event. Developing and implementing each of these steps helped ensure that the process remains viable.

**Outcome Measures**

This project used two surveys, the Debriefing survey and the ProQOL survey, which produced the primary outcomes. The Debriefing survey's outcome measures are confidence-based outcomes related to the questions. The outcome measures for the ProQOL include the PSJHC nurses’ levels of compassion satisfaction, burnout, and secondary traumatic stress. Nurse turnover was the secondary outcome.

**Data Collection Tools**

**Debriefing Survey.** The debriefing survey included four demographic questions that included gender, current age range, shift worked, years of practice, and seven questions directly related to the debriefing process (see Appendix F). Cantu and Thomas (2020) developed and used the debriefing survey questions among a group of healthcare workers. The survey was not psychometrically tested, so it did not change the psychometric properties to change the content of these questions for the PSJHC Debriefing survey. The answers to each of these questions provided quantitative data, which helped determine if the nurses understood the concepts of critical incidents. Additionally, the survey included questions that helped determine if the CID benefited the nurses and how often they participated in a critical incident.

Permission to use the debriefing survey came from the Creative Commons Attribution 4.0 International License. The requirements included citing the original authors and describing any changes made to the original survey. This DNP student made several changes to the debriefing survey to ensure the questions were inclusive and applicable to this project. Question 1 was changed to add inclusive language for caregivers who identify as a different gender than male or
female, as guided by the Human Rights Campaign (2022). Questions 2 thru 4 were changed to reflect the age ranges, shifts, and years of experience based on Kawar’s and colleagues’ research. Question 5 was changed to include two terms that define a critical incident since many nurses at PSJHC frequently mentioned that CBEs and continuing to provide care when it is believed to be futile is a situation that caused them distress. The PSJHC nurse scientist recommended that ten nurses from different units at PSJHC complete the survey to help provide content validity, and this step occurred before implementing the survey. These two steps helped support the decision to use these questions, as the questions directly related to this project’s content (see Appendix F). Additionally, this project’s original proposal, which received approval from the PSJHC IRB, clearly explained these changes.

**ProQOL.** The ProQOL is a 30-question psychometrically tested survey supported by evidence to measure levels of compassion satisfaction, burnout, and secondary traumatic stress (see Appendix E). Each of these questions provides quantitative data. The desired state that indicates psychological well-being and fulfillment as a caregiver includes high levels of compassion satisfaction and low levels of burnout and secondary traumatic stress (Stamm, 2010). A score of 23 or less describes a low level of compassion satisfaction; moderate levels of compassion satisfaction include scores of 23-41. A score of 42 or higher suggests high levels of compassion satisfaction, with an Alpha scale reliability of 0.88. The interpretation for burnout follows the same numbers and ratings and has an Alpha scale reliability of 0.75, but a high level of burnout describes an adverse finding. The numbers and ratings are the same for secondary traumatic stress, but the Alpha scale reliability is 0.81. High levels of secondary traumatic stress are like burnout and signal psychological distress. Ideally, to demonstrate positive psychological well-being, a healthcare provider would have high levels of compassion satisfaction and low
levels of burnout and secondary traumatic stress. Over 200 studies have used the ProQOL, which helps establish its validity. The ProQOL works well for this project as it quantifies the levels of CS, BO, and STS nurses' report when answering the survey. Focusing on these values directly connects the ProQOL to the vision of this project.

**CQI Method**

This project followed the PDSA model described by Langley et al. (2009) for the Institute for Healthcare Improvement, which provided a method to evaluate, adjust, and reevaluate as often as needed. Following this model ensured a pathway existed to fully embrace the concept of quality improvement (see Appendix Y). Using the PDSA model, which PSJHC embraces, made identifying and solving potential problems easier without derailing the whole project.

**Analysis**

**Resignations Data**

In the three-months before the project, 32 nurses resigned from PSJHC—11 in April, 12 in May, and nine in June. During the six months of the project’s implementation, 57 nurses resigned, 10 in July, 13 in August, nine in September, eight in October, seven in November, and 10 in December. For 2023, 25 nurses resigned in January, 14 in February, and 16 in March (see Appendix W). For the first three months of the implementation period, 32 nurses resigned, the same as the three months preceding the implementation period. However, in the second three-month period of the implementation period, 25 nurses resigned, which is seven fewer resignations. For the three months after the implementation period, a total of 55 nurses resigned, 30 more resignations than in the three preceding months.

**Survey Responses**

There were 115 survey responses: 12 incomplete, four duplicates, and 99 complete responses. Of the 99 complete responses, 18 respondents completed both pre- and post-implementation surveys,
while 43 completed just pre-implementation and 20 completed just post-implementation. The total number of nurses who responded to the survey was 81, or 16% of the 500 nurses eligible to participate in the survey at PSJHC (see Appendix Z).

Demographics & Debriefing Survey Questions One to Four

The 81 nurses completing the surveys included 22 males, 56 females, and three participants who preferred not to identify their gender. The ages of the nurses included the age range 20-29 (n=20), age range 30-39 (n=29), age range 40-49 (n=12), age range, and 50 or above range (n=20). Shifts worked included nurses who worked days (n=48), nurses who worked mid-shift (n=2), and nurses who worked the night shift (n=31)—the years of experience for nurses completing included 0-5 years (n=32), 6-10 years (n=13), 11-15 years (n=7), 16-20 years (n=8), 21-25 years (n=10), and greater than 25 years [n=11] (see Appendix AA).

Debriefing Survey Analysis and Debriefing Survey Question Five

Analysis for the debriefing survey used descriptive statistics for the demographic Questions 1 through 4 and Questions 6 through 11. When looking at the debriefing survey questions, of the 81 nurses who responded to Question 5—Which of the following events would you consider a critical incident? (Choose all that apply)—results included 74% (n=60) choosing the death of a patient, 77.8 % (n=63) choosing injury resulting in significant morbidity, 86.4% (n=70) choosing mass casualty event, 87.7% (n=71) choosing code blue events, 82.7% (n=67) chose a medical error leading to harm, 48.1% (n=39) chose non-accidental injury, 46.9% (n=38) chose to continue to provide care when it is believed to be futile, and 46.9% (n=38) chose caring for a critically ill child (see Appendix BB).

Years of Practice and Clinical Events. A chi-square test of independence showed no significant association between years of practice and what nurses consider critical incidents to be, $\chi^2 (21, N = 446) = 8.649, p = .992$. 
Debriefing Survey Questions Six to Eleven. The answers for all 81 eligible participants were as follows. Question 6, 88% (n=71) of participants answered yes, and 12% (n=10) answered no to whether they had participated in a critical incident in the last year. Question 7, 73% (n=59) of participants answered that they participated in a patient care scenario, they classified as a CI once per week, 25% (n=20) answered they participated in CI multiple times a week, 1% (n=1) answered that they participated in a CI once per shift, and 1% (n=1) answered they participated in a CI multiple times per shift (see Appendix CC for graphic display for Questions 6. and 7). Question 8, 40% (n=32) of participants reported that involvement in the CI negatively impacted their well-being, while 60% (n=49) reported participation in a CI did not negatively impact their well-being (see Appendix DD). Questions 9 and 10, 79% (n=64) reported wanting to discuss and discussing a CI with their team (see Appendix EE). Question 11, focused on whether those who discussed a CI with their team found it to be helpful, 75% (n=65) found it helpful, 14% (n=19) answered not applicable, and 1% (n=1) participant answered that discussing a CI with their team was not helpful (see Appendix FF).

ProQOL Data & Analysis

According to Stamm (2010), the ProQOL scale provides a method to assign a numerical value to how a nurse answers the question, establishing a way to quantify the level of compassion satisfaction, burnout, and secondary traumatic stress a healthcare provider is experiencing. When nurses completed the ProQOL, they answered a 30-question survey that used a five-point scale: 1 = never, 2 = rarely, 3 = sometimes, 4 = often, and 5 = very often. The summed scores of Questions 3, 6, 12, 16, 18, 20, 22, 24, 27, and 30 provided the value of the level of compassion satisfaction. Adding the values of Questions 2, 5, 7, 9, 11, 13, 14, 23, 25, and 28 provided the level of secondary traumatic stress. The summed scores of Questions 1, 4, 8,
10, 15, 17, 19, 21, 26, and 29 provided the value of the level of burnout. Before adding these scores, the values of Questions 1, 4, 15, 17, and 29 must be reversed to reflect a score of 1 = 5 or very often, 2 = 4 or often, 3 = 3 or sometimes, 4 = 2 or rarely, and 1 = 5 or never.

The analysis of the mean scores for compassion satisfaction, burnout, and secondary traumatic stress remained independent from each other. For this project, the burnout Questions 1, 4, 15, 17, and 29 were reversed in the Redcap survey before implementation to decrease the chance of error. The means scores of each of the ten questions for each category were downloaded from Redcap into SPSS, then summed and analyzed. Descriptive statistics were used for most of the reported values. However, for the pre- and post-implementation survey data, a paired $t$-test was used to compare the means of the pre- and post-implementation survey responses to the ProQOL.

**Pre- and Post-Implementation ProQOL.** The 18 nurses (4% of eligible nurses) who completed the pre- and post-implementation survey included female (n=13), male (n=5), working days (n=10), working nights (n=8), age 20-29 (n=6), age 30-39 (n=5), age 40-49 (n=2), and 50 or older (n=5)—the years of experience including 0-5 years (n=9), 6-10 years (n=0), 11-15 years (n=1), 16-20 years (n=1), 21-25 year (n=6), and greater than 25 years of experience (n=1). See (Appendix GG) for a graphic display of the demographics for the pre- and post-implementation ProQOL.

**Compassion Satisfaction.** A two-tailed paired $t$-test was used to determine if there was a statistically significant difference in the mean scores of compassion satisfaction pre-implementation of CID and post-implementation of CID, with a significance level of $\alpha = 0.05$. While the participant’s scores for compassion satisfaction increased with the post-implementation survey, it wasn’t statistically significant ($M = 39.83$, $SD = 6.051$) compared to
the pre-implementation survey \((M = 39.50, SD = 4.423)\), \(t(17) = -.309, p = .761\) (see Appendix HH).

**Burnout.** A two-tailed paired \(t\)-test was used to determine if there was a statistically significant difference in the mean scores of burnout pre-implementation and post-implementation of CID, with a statistical significance level of \(\alpha = 0.05\). For mean scores of burnout, there was a decrease in the post-implementation score. Still, it was not a statistically significant decrease \((M = 24.56, SD = 4.449)\) compared to scores of burnout pre-implementation survey scores of burnout \((M = 23.44, SD = 5.437)\), \(t(17) = .899, p = .381\) (see Appendix HH).

**Secondary Traumatic Stress.** A two-tailed paired \(t\)-test was used to determine if there was a statistically significant difference in the mean scores of secondary traumatic stress pre-implementation and post-implementation of CID with a statistical significance level of \(\alpha = 0.05\). The mean scores of secondary traumatic stress decreased in the post-implementation survey. Still, the decrease was not statistically significant \((M = 24.22, SD = 6.459)\) compared to scores of secondary traumatic stress pre-implementation of the CID project secondary traumatic stress \((M = 25.94, SD = 4.108)\), \(t(17) = 1.079, p = .296\). (see Appendix HH).

**Independent T-test.** According to Kim and Mallory (2017), an independent samples \(t\)-test can help show statistical significance between two separate data sets. Since the project did not receive at least 30 pre- and post-implementation responses to the ProQOL survey to show statistical significance, an analysis was run on the means scores of all the pre-implementation surveys \((n = 43)\) and for all the post-implementation survey responses \((n = 38)\). There was a statistically significant improvement in the scores of compassion satisfaction for nurses who answered after they participated in a CID \((M = 39.553, SD = 6.2933)\) compared to nurses who answered before participating in CID \((M = 37.047, SD = 6.3206)\), \(t(79) = -1.784, p = .039\). There
was a statistically significant decrease in the mean scores of burnout for nurses who answered after they participated in a CID ($M = 23.605$, $SD = 5.7117$) compared to nurses who answered before participating in a CID ($M = 25.837$, $SD = 4.6799$), $t(79) = 1.932$, $p = .028$. There wasn’t a statistically significant difference in the mean scores of secondary traumatic stress for nurses who answered after they participated in a CID ($M = 24.974$, $SD = 5.4648$) compared to nurses who answered before participating in a CID ($M = 24.209$, $SD = 4.8135$), $t(79) = -.669$, $p = .505$ (see Appendix II).

**Debrief Form Data**

The CID project ran from July 26, 2022, through January 31, 2023. A total of 96 CBEs, with 76% ($n=73$) of the CBE occurring in the inpatient units, including the cardiac catheterization lab; 24% ($n=23$) of the CBEs occurred in the ED. The debrief facilitators completed debriefs for 47% ($n=45$) of the CBE that occurred. The debriefs occurred in the following units 56% ($n=25$) in ICU, 16% ($n=7$) in ED, 16% ($n=7$) in PCCU, 9% ($n=4$) in MS, 2% ($n=1$) in oncology, and 2% ($n=1$) in the catheterization lab. The average amount of time spent debriefing with each debrief was six minutes. A total of 158 nurses participated in debriefs (it is unknown if any nurses debriefed multiple times). There was an average of four nurses at each debrief. There were 32 doctors documented as attending a debrief, 29 respiratory therapists, six certified nurse assistances, and 21 caregivers falling into the other caregiver category, which included ED technicians, chaplains, or hospital unit coordinators (see Appendix II). The two debriefing questions most frequently used by the debrief facilitators were *what feelings/emotions are you experiencing since the code,* and *what will you do today to support yourself as you process this situation?*
Anecdotal Narrative Themes. The debrief facilitators and nurses were not asked to write anything on the CID form except to check what questions they used and to capture the demographic information. However, several forms had statements written on them related to how the caregivers involved in the debriefs processed or felt related to the care of the patient that coded. For these anecdotal narrative comments, the following themes emerged using content analysis. Theme 1: caregivers identify dealing with a patient's family in cardiac arrest as stressful. Theme 2: caregivers frequently mentioned feeling exhausted, relieved, happy, and sad. Theme 3: caregivers largely turned to exercise, sleep, playing with a pet, relaxing at home, prioritizing self-care, and talking to colleagues as coping mechanisms. Theme 4: caregivers noted they would miss or remember their patients’ personalities and positivity the most. Theme 5: nurses saw opportunities for self-improvement or felt they provided the best care possible for the patients in cardiac arrest.

Ethical Considerations

According to Hunt et al. (2021), moral and ethical implications are frequently overlooked in non-research projects, such as quality improvement and EBP projects. To address concerns related to ethics for this project, the American Nurses Association’s (2015) Code of Ethics provides several provisions to guide potential ethical concerns. Provision 1 describes the importance of treating each other with dignity and respect. This provision gives guidance for maintaining an environment of psychological safety and team support for each other’s well-being. Provision 3 shows the importance of maintaining privacy for patients, colleagues, and especially participants in a survey or research. This provision also demonstrates the importance of promoting a culture of safety. Provision 5 and Provision 6 encourage nurses to promote their own health and the health of their patients and strive to maintain a supportive work environment.
Finally, Provision 7 encourages nurses to contribute to nursing through scholarly inquiry and embracing EBP. This DNP student demonstrated using this provision by completing the CITI Program’s Human Subjects Research program (see Appendix KK for the certificate).

This project aligns with the Ignatian values that guide the USF academia and with the concepts from the Theory of Human Caring by Watson (2021). Cura personalis means to see a person holistically and to provide care or support to every aspect of each other (USF, 2021). At the same time, Watson encourages nurses to enter into a caring environment by recognizing the physical and spiritual well-being of the nurses and patient interactions. Nurses provide excellent care for their patients, and they usually provide holistic care. However, with the high demands of caring for patients, nurses often forget to provide the same holistic care to themselves. Also, the mission of PSJHC embodies the desire to serve all and especially vulnerable populations. Especially in the aftermath of the COVID-19 pandemic, nurses belong to a vulnerable population, and the mission and values of PSJHC supports the need to support their vulnerable nurses (PSJHC, 2021b). This project aligns with Cura personalis, as the project sought to support the psychological well-being of nurses involved in CBEs. “As expressions of God’s healing love, witnessed through the ministry of Jesus, we are steadfast in serving all, especially those who are poor and vulnerable” (para. 1).

Several steps were taken to address any additional potential ethical concerns for this project. On December 31, 2021, the USF DNP department determined that this project met the guidelines for an evidence-based change in practice project, as outlined in the Statement of Non-Determination IRB checklist (see Appendix O for the USF IRB approval form), and it was approved as non-research. There were no identifiable issues or conflicts of interest noted for this project. The project also received approval as an EBP project from the Nursing Research Council.
and the IRB at PSJHC. In addition, this DNP student obtained permission to use the ProQOL 
survey (see Appendix LL).

Participation in this project remained voluntary, and everyone who joined a CID was 
encouraged, but not required, to complete the post-debrief survey. Additionally, all data was de-
identified and reported in aggregate form. To maintain the anonymity of the survey, participants 
provided the last four digits of their childhood phone number to link responses to the pre-
implementation and post-implementation surveys.
Section IV: Results

Evolution of the Interventions

The initial steps for this project included identifying who would facilitate the debriefs and developing and implementing a formal critical incident debriefing process after code blue events. The process used to accomplish this objective included developing and disseminating education about debriefing, developing, and implementing the CID debrief form, and creating a survey to identify if a change occurred. The Plan, Do, Check, and Act process identified that the project had to be extended by three months due to a lack of participation and various organizational factors impacting the project. It also identified that without oversight, debriefs weren’t being done. This fact led this DNP student to monitor the number of CBEs that occurred closely and to check in with the debrief facilitators, managers, and directors to maintain engagement. Using the PDSA process helped identify that there wasn’t a current process to track the number of CBEs in the ED. This observation led to a new process that included performing a manual search of the dispositions of each patient in the ED to determine the number of CBEs.

The initial steps included training the debrief facilitators and bedside nurses and encouraging nurses to complete the pre- and post-implementation survey. This process helped identify the need for more data, leading to the decision not to close the survey. Instead, nurses could take the pre- and post-implementation survey at any time if they identified whether they had answered the survey before or after participating in a debrief.

The process measures, and outcomes included the number of resignations, the number of debriefs, the mean scores of the pre- and post-implementation surveys, and the answers to the debrief survey questions. Seven fewer nurses resigned during the second three-month implementation period, and 30 more nurses resigned in the three months after the
implementation period. Unfortunately, these numbers did not move in the expected direction, and more than just this project likely influenced the number of resignations. Debriefing occurred at slightly less than half of the CBEs during the implementation period (n=45). The responses to the pre- and post-implementation surveys increased during the implementation period but never reached the goal of 30 pre- and post-responses. The answers to the debrief survey supported the use of CID.

Feedback from the debrief facilitators demonstrated that nurses usually felt more comfortable discussing the clinical aspects of the CBE versus the emotions they felt about the CBE. The lack of time or perceived lack of time prevented more debriefs from occurring. Also, nurses only answered the pre- and post-implementation survey when it was convenient for them to respond. The unintentional collection of anecdotal narrative comments by the debrief facilitators provided an unexpected benefit to the project as this data may provide critical information to help further support nurses.

Maintaining engagement proved to be one of the biggest problems. The project nearly failed in the initial three months due to survey fatigue among the nurses caused by multiple conflicting mandatory hospital surveys. The implementation period was extended three more months to mitigate this. This DNP student changed positions from being the manager of the ICU to be a per diem house supervisor. Changing positions midway created more work for this DNP student to ensure that the nurses knew the project was still in the implementation period, but it also allowed this DNP student to have a more global approach since the role of the house supervisor has greater visibility for all units versus just the ICU.

This DNP student examined problems that occurred during the implementation period and reported them to the appropriate stakeholder when needed, as guided by the communication
matrix. These interventions mainly involved keeping the debrief facilitators engaged in completing debriefs and encouraging nurses to participate in debriefs and to complete the survey. Initially, nurses received candy and snacks to motivate participation, but eventually, using a raffle for a new iPad Mini helped encourage further participation. This DNP student was the main driver of the changes, but at times the debrief facilitators or several unit managers helped promote participation in the project.

There weren’t any negative responses or suggestions that the project had caused harm, and several debrief facilitators and bedside nurses voiced appreciation for the project. The mean scores of the ProQOL for the nurses who completed the pre- and post-implementation survey all moved in the intended direction. For the data from the independent t-test, the increase in compassion satisfaction and the decrease in burnout suggest nurses find value in the act of debriefing as a concept, because these two groups connect only in how they felt before participating in a debrief versus how they felt after participating in a debrief. The scores of the independent t-test help provide additional support for CID, despite not being specifically connected to the debriefing process implemented at PSJHC. This project received vocal support from nurses and support in the results of the pre- and post-implementation surveys. Based on these results, the project demonstrates clinical importance. The nurses who participated in CID had the opportunity to stop, pause, and process the events of the CBE in a psychologically safe environment. The anecdotal narrative themes provide further insight into how debriefing provided a place for the nurses to process the trauma of the CBE, which further demonstrates the clinical benefits of this CID project for nurses. Missing data for this project included not having at least 30 pre- and post-implementation survey responses, missing pre- and post-implementation survey responses, and not having the baseline numbers of CBEs in the ED. It remains unknown
how much this missing data could have changed the statistical significance of this project. However, the project still shows clinical importance even with this missing data.
Section V: Discussion

The initial Aim was to complete at least 30 debriefs and 30 pre- and post-implementation surveys. Extending the implementation period by three months helped provide the minimum number of debriefs desired, but the extended time did not result in a minimum of 30 responses. For the 18 participants who answered the pre- and post-implementation surveys, the results of the participants’ ProQOL mean scores did not change any of the three categories of low to moderate, moderate to high, or vice versa, as proposed in the Aim statement. Despite not having at least 30 responses and not demonstrating statistical significance, each of the metrics moved in the direction expected. However, statistical significance shows support for a project based on chance; the statistical significance relies heavily on the number of participants versus the content of the intervention for statistical analysis. Clinical significance or importance focuses on the results and outcome of the intervention and how the intervention influenced the participant (Ranganathan & Buyse, 2015). Using these concepts helps to demonstrate how this project has clinical importance despite not having statistical significance. The fact that the nurses who participated in CID debriefing had improved mean scores of the ProQOL demonstrates this concept and points to the clinical importance for participants of this CID project.

Also, 79% (n=65) of nurses who answered the pre- and post-implementation survey responded that they wanted to debrief after critical incidents. Of participants who reported participating in a CID, 75% (n=65) found the CID helpful to their psychological well-being. The participants’ positive responses to the desire to debrief and the perceived benefits of participating in debriefing further support the clinical importance of this project. The study by Cantu and Thomas (2020) demonstrated similar results, and most of the studies that discuss debriefing included in this project’s literature review support the clinical importance of CID.
Additional support for formally adopting this project comes from the project’s low cost. The fact that the project stayed under budget helps provide additional support. While the number of resignations decreased by seven fewer nurses for three months of the implementation period, the number of resignations significantly increased for the three months after the implementation period. Using only these numbers does not suggest a positive CEA, but the project cost remains four times lower than the cost of replacing one nurse. More information about other variables related to nurse turnover is needed to help determine the final CEA for this project.

Summary

Initially, this project had low participation and acceptance among the debrief facilitators and eligible nurses, as multiple conflicting priorities existed. However, meeting with the debriefing facilitators and identifying barriers helped eliminate some of the barriers. Some debrief facilitators viewed the project as a project to be run by this DNP student. They required additional education on the reasons for implementing this project throughout the hospital and how the hospital planned to establish CID as a standard going forward. The most significant barriers reported included not having the time to debrief immediately after the CBE, assuming that none of the nurses wanted to debrief, difficulty prioritizing debriefing over patient care, and the perceptions that debriefing on the floor pulled resources from the ICU.

This DNP student responded to each of the concerns voiced by debrief facilitators and encouraged them to refer to the information from their initial training, which provided a roadmap for addressing most of their concerns. Ways to streamline the debriefing process were examined and implemented when feasible. For example, despite receiving the suggestion to train all clinical supervisors in the hospital to facilitate debriefs, no additional supervisors received debriefing training as that was outside the scope of this project. Sending reminder emails and
providing a running log of the number of codes and debriefs completed helped further encourage the facilitators to remember to facilitate debriefs after CBE.

Though not required to collect answers to the debriefing questions on the debriefing form, the fact that many of the forms had answers written down demonstrates the debrief facilitators used the forms. Writing these answers to the questions may have served to help the debrief facilitator or the nurses participating in the debrief put words to how they were feeling. Further assessment or study of these responses might provide more information and insight.

Despite spending many hours studying and developing this EBP change project to anticipate potential issues that might arise, several issues arose that provided learned lessons. The lessons include the importance of using texting for communications, how accountability improved participation in the project, and the effects of survey fatigue on nurses. Also, in today’s climate of nursing, simply providing a process that benefits nurses doesn’t guarantee participation, and maintaining engagement took extensive work and required frequent reminders. Finally, when trying to use technology, including a QR code, to make accessing the pre- and post-implementation survey easier, this DNP student discovered that texting a link directly to eligible nurses provided more success in obtaining responses. Another lesson learned related to the importance of identifying the nurses and debrief facilitators who embraced and supported the project the most, and ensuring these individuals received recognition and support for their dedication.

Several possibilities that emerged include the importance of super users to ensure the project's success, the need for dedicated time to debrief free from other tasks, and that training more debrief facilitators might lead to greater success. While not a new concept, having nurses who choose to participate would help ensure the project's success. Despite educating and
encouraging nurses to stop and pause to debrief, not having the time remained one of the most significant factors preventing debriefs from happening. This need for dedicated time remains critical for supporting the psychological well-being of nurses, and health systems should prioritize this when possible. While the current debrief facilitators strove to create a psychologically safe environment, using clinical supervisors from each unit may promote increased psychological safety due to established relationships. These concepts point to important topics related to supporting nurses and further thought and research on them might lead to new ways of caring for nurses.

Implications for nurse leaders include several thoughts. First, while nurse leaders often approach their role with the desire to provide solutions, this project helped demonstrate that the staff often have strong opinions related to the support they receive. Even with this project supported by evidence, the anecdotal narratives showed the importance of having peer support when processing the events of a CBE, which further points to the importance of promoting healthy work relationships and environments. While this project mainly focused on nurses, the small number of nurses aids who participated in CID demonstrates an opportunity for nurse leaders to find ways to include all members of the patient care team. This fact is crucial since all care team members experience trauma when participating in CBE. Other implications for nurse leaders include giving nurses time to debrief when free from patient care, providing compassionate listening, and actively learning what activities offer their staff the most support.

Interpretation

Despite being included in the cost evaluation analysis, the reasons nurses leave an organization are multifactorial. However, two significant changes that occurred at PSJHC during the implementation of this project may have led to the increase in nurse turnover from January
through March. One, the hospital and the nurses ratified a new union contract, and it is possible some nurses weren’t happy with the outcome leading to resignations. Two, the hospital’s well-known CNO resigned, and the hospital hired a new CNO. The new CNO started in December and is still getting to know the nurses, which may have influenced the turnover rate in the next three months. Other variables may exist, but further research is needed to fully understand how each variable, including the critical incident debriefing project, affects nurse turnover.

Code blue events cause increased stress and trauma for the nurses who respond to and manage the care of the patient needing CPR. The literature suggests that this exposure over time places nurses at high risk for burnout and secondary traumatic stress and decreases their levels of compassion satisfaction. Critical incidents can include many situations, but nurses frequently list CBEs as critical incidents. The literature supports using CID to help healthcare providers involved in critical incidents. The main goals for this project were to implement a formal CID process at PSJHC and to promote the psychological well-being of the nurses at PSJHC. The project aimed to evaluate if participating in a CID improved the nurses at PSJHC's levels of compassion satisfaction. This project also sought to demonstrate whether nurses valued participating in a CID. With the strength of the available evidence, this project provides an official process for implementing this CID after CBE as an EBP project for healthcare providers at PSJHC.

Each of the objectives in this project connects with the available evidence. For example, studies by Beers et al. (2022); Cantu and Thomas (2021); Gilmartin et al. (2020); Mayer and Hamilton (2018) demonstrate the clinical importance of debriefing by reporting that participants voiced strong support for debriefing after critical incidents. This project also demonstrated clinical importance for nurses at PSJHC, who expressed support for debriefing. Their answers to
the post-implementation survey showed improved mean scores of the participants' ProQOL results. A study by Beres et al. (2022) used the ProQOL to address compassion fatigue and burnout levels in trauma nurses. The researchers could not demonstrate statistically significant differences in the ProQOL, but they received strong verbal support for debriefing. This study demonstrates another hospital-based study using the ProQOL to evaluate debriefing after CBEs, which closely connects the PSJHC project to the available evidence. Other studies by Bloomquist and Lasiter (2022), David and Batcheller (2020), and McCall et al. (2022) suggested that peer-to-peer support is one of the most significant factors that lead to improved psychological well-being. The anecdotal narratives from the PSJHC demonstrated that the nurses at PSJHC rely heavily on the support they receive from each other. These concepts illustrate a connection between this project and the available evidence that further supports the implementation of CID.

While this project impacted a small number of the nurses at PSJHC, it could potentially impact most of the nurses at PSJHC once fully implemented. In addition, because the concepts remain fully supported by evidence, this project could easily spread to sister ministries within the Providence Saint Joseph's Health System, which could bring support to thousands of nurses and other caregivers.

From identifying the problem to the conclusion, this project used a step-by-step approach used to ensure the project's success. The Clinical Scholarship Framework for Nursing and the Theory of Human Caring offered the theoretical and conceptual underpinnings that supported this project. The project focused on caring for nurses to ensure they can care for patients, a concept from the Theory of Human Caring. By focusing on the emotional well-being of nurses, this project further followed the guidance of this theory. Finally, the step-by-step approach of
inquiring, improving, and informing from the CSFN (Maddux et al., 2017) guided identifying and implementing this EBP change project.

The total cost of this project remains low, which helped demonstrate a positive cost evaluation analysis. While a more extensive implementation will have higher costs, the benefits still outweigh the costs. Adding education about the debriefing process to new hire orientation, annual skills days, and the established clinical supervisor academy would provide a process to ensure the project remains sustainable without adding high costs.

The project results implied that the participating nurses at PSJHC valued CID after CBEs and saw a lack of time as the most significant barrier to debriefing. Also, the assumption was that the debrief facilitators found ways to foster psychological safety leading to more effective debriefing. However, despite each of these positive assumptions, the reality remains that maintaining continued engagement in this project may prove to be complicated. One way to maintain engagement is to identify superusers, especially those who voice or are passionate about implementing debriefing. To ensure the success of this project, the PSJHC nursing leadership needs to formally decide to implement this as an EBP project and start to incorporate training for all nurses, especially for new hires and with yearly competencies. Implementing CID after CBEs for nurses a PSJHC demonstrated one way that nurse leaders could continue to support bedside nurses.

**Limitations**

While the literature demonstrated that CBEs fall into the category of critical incidents that cause trauma and secondary traumatic stress, many factors influence the levels of compassion satisfaction, burnout, and secondary traumatic stress experienced by nurses. For example, after more than two years of the global COVID-19 pandemic, nurses reported high
burnout levels and witnessed many patient deaths. These concepts describe possible limitations of this project. It may be difficult to attribute the levels or a change in these levels of compassion satisfaction, burnout, and secondary traumatic stress only to the emotions felt after a CBE.

Despite showing several positive results related to using CID after CBE, this project failed to impact the participants’ scores of the ProQOL as listed in the Aim statement. One limitation is that there weren’t at least 30 pre- and post-implementation survey responses. Only having 18 responses provided a limited understanding of the results. Other limitations are related to this project only involving one hospital where this DNP student was in a supervisory position to many of the surveyed staff. Another limitation comes from the time of year for the project’s implementation, as it coincided with multiple mandatory hospital-initiated surveys leading to survey fatigue for the first three months of its implementation. Though widely accepted as a scale for monitoring compassion satisfaction, burnout, and secondary traumatic stress, the number of questions in the ProQOL may have discouraged nurses from participating.

There could be bias in the results since participation was voluntary, and those willing to complete the pre- and post-implementation surveys may be more engaged and willing to embrace this new process. Also, each organization’s culture can add or subtract value from a project. Many times, despite receiving verbal confirmation that the facilitators were conducting debriefs or that nurses had completed the pre- and post-implementation surveys, this DNP student didn’t see a change in the number of debrief forms or survey answers. This fact, plus the slow acceptance of the project, demonstrates a limitation related to the level of engagement seen in the staff. These facts coincide with an anecdotal perception of mistrust from nurses toward new projects implemented by nurse leaders at this hospital.
Despite identifying several limitations, this project demonstrated several key benefits of conducting CID after CBE at PSJHC. First, this project's limitations provide opportunities for nurse leaders to study and potentially implement changes to the current process. Also, the limitations help explain parts of the project that are outside the control of this project. Finally, identifying and discussing these limitations helps ensure a well-rounded understanding of the results of this project.

**Conclusions**

This project aimed to create a formal CID after CBEs to improve the psychological well-being of nurses. A comprehensive review of the available literature provided several studies on stress, burnout, and secondary traumatic stress and the connection between these topics and code blue events, critical incident debriefing, and healthcare providers. Most of the available evidence supported using CID after CI, and nurses and other healthcare providers viewed the use of CIDs positively. Two surveys supported by the evidence, the ProQOL, and the Debriefing survey, were used to measure data outcome measures.

The results of the pre- and post-implementation surveys suggest that debriefing improved a small sample of nurses’ compassion satisfaction and decreased the nurses’ burnout and secondary traumatic stress. Additional data further indicates that nurses at PSJHC find value in CID after CBE, which helps justify the short-term implications of being able to provide education and support to the nurses at PSJHC related to improving their psychological well-being. Despite not being asked to collect anecdotal analysis, the themes from the answers to the debriefing questions included on the debriefing form further demonstrate homogeneity with this EBP project and the available evidence. For example, one of the themes lists that the participants felt various emotions, including relief and happiness. Their happiness was related to how they
felt when a patient survived a CBE. Their feelings of relief related to when a patient survived or
died since they saw the patient as no longer suffering. This information provides vital
information for nurse leaders on how to further support the psychological well-being of their
staff. The results of the Debriefing Survey and the anecdotal narrative responses offer additional
data to help support the adoption of CID permanently.

By adopting CID, PSJHC can continue to support their nurses’ psychological well-being
and decrease costs related to nursing turnover. PSJHC should use the Code Blue committee to
manage the CID process and debrief facilitators to sustain this process. The education
department should include training about the debriefing project in new hire orientation and
yearly skills days and train all clinical supervisors as debrief facilitators. The next steps include
reporting and disseminating the information gained from this project and helping ensure the
implementation of debriefing after CBE throughout the whole hospital. Further dissemination
includes presenting the project results to the nursing executive leadership council, presenting the
results at the annual PSJHS EBP symposium, and uploading the project to the PSJHS’s and
University of San Francisco’s repositories.
Section VI: Funding

The budget for this project remained low at less than $11,000, and the project cost received full acceptance from the CNO, executive nurse leaders, and executive director of human resources. No additional funding or philanthropic assistance was requested or needed. Each unit covered the project's cost with regular day-to-day operational funds, with the ICU responsible for most expenses.
Section VII: References


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https://doi.org/10.1016/j.ienj.2021.101005


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definitely different because they were kids”: Caring for patients from a school shooting. *Journal of Trauma Nursing, 29*(5), p. 252–261.

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### Section VIII: Appendix A

#### Evidence Table

<table>
<thead>
<tr>
<th>Purpose of article or review</th>
<th>Design / Method / Conceptual framework</th>
<th>Sample / setting</th>
<th>Major variables studied with definitions</th>
<th>Measurement of major variables</th>
<th>Data analysis</th>
<th>Study findings</th>
<th>Level of evidence (critical appraisal score) / Worth to practice / Strengths and weaknesses / Feasibility / Conclusion(s) / Recommendation(s)</th>
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<tbody>
<tr>
<td>This study sought to see if implementing debriefing changes the levels of CS, BO, &amp; STS in the ED and ICU in a trauma center in the Midwest</td>
<td><strong>Design:</strong> Evidence-based practice project / pilot study</td>
<td><strong>Sample:</strong> N=56</td>
<td><strong>IV:</strong> Structured debriefing</td>
<td><strong>ProQOL Survey</strong></td>
<td><strong>Data analysis</strong></td>
<td><strong>Study findings</strong></td>
<td><strong>Level:</strong> V-A</td>
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<tr>
<td><strong>Method:</strong> Pre- &amp; post-implementation assessment</td>
<td><strong>Setting:</strong> Staff at an academic trauma center in the ED and ICU in the Midwest</td>
<td><strong>DV:</strong> Staffs levels of BO, CS, STS</td>
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<td>StataIC 16 statistical software program</td>
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<td><strong>Worth to Practice:</strong> Clearly demonstrates a project that implements debriefs after code blue events. Demonstrates the use of nursing leaders debrief facilitators.</td>
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<td><strong>Conceptual Framework:</strong> Ottawa Model of Research</td>
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<td><strong>Strengths:</strong> Includes nurses in the ED and ICU, uses the ProQOL</td>
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<td><strong>Weakness:</strong> Occurred at a single facility and had less than thirty responses</td>
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<td><strong>Conclusions:</strong> It can be used for this change project, it demonstrates as a study similar to this project</td>
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Definition of abbreviations: compassion satisfaction (CS), burnout (BO), secondary traumatic stress (STS), emergency department (ED), intensive care unit (ICU),
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| This study sought to identify studies to learn more about how nurses cope with performing CPR, and how they cope after performing CPR. | **Design:** Systematic review and meta-analysis  
**Method:** Meta-analytic following the preferred reporting items for systematic reviews and metaanalysis  
**Conceptual Framework:** Lazarus & Folkman’s theory of stress and coping | **Sample:** Search yielded N=2689 n=9 eligible studies  
~authors  
~year of publication  
**Setting:** CINAHL, PubMed, PsycINFO and ProQuest databases  
Search terms: (nurse OR Nurses OR Nursing) AND (CPR OR cardiopulmonary OR cardiac) | **IV:** Performing CPR  
**DV:** How nurses cope with code blue events  
**Qualitative Semi-structured interviews:** Framework analysis  
**Qualitative Semi-structured Interviews:** Phenomenological interviews and paradigm exemplars. Colaizzi framework  
**Qualitative Interviews Content-analysis:** Quantitative and Qualitative Survey followed by supportive semi-structured interviews Thematic analysis | Independent author’s review, discussed using iterative process  
Discussed until a reaching a consensus | Nurses need validation and reassurance  
CBE cause psychological stress, newer nurse valued debriefing more and preferred debriefing about the logistics of the code more than psychological health.  
Nurses felt connection to the patients and the families and often felt a sense of loss after the patient died.  
Nurses were anxious about performing CPR, and especially if | **Level:** III-A/B  
**Worth to Practice:** Clearly identifies CPR as causing emotional distress. Demonstrate ways nurse cope with performing CPR, questions the use of CID for wellbeing.  
**Strengths:** No publication bias seen looks had a clear process for how they analyzed the studies  
**Weakness:** Scoping study  
**Feasibility:** Is and to be repeated and the process is clearly demonstrated the steps they used.  
**Conclusions:** Demonstrates a different approach that focuses on how nurses cope with performing CPR, which provides new ways of supporting staff.  

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<tr>
<td>arrest OR code blue) with 1996 to 2021, English AND (Hospital OR inpatient) NOT (Out-of-hospital) NOT (paediatric OR child OR baby OR neonate) NOT (simulation OR mock code) NOT (family witnessed OR family presence)’. –Language inclusive of English –Studies occurred in</td>
<td>Qualitative Interview ‘debriefing sessions’ Focus groups Qualitative Exploratory Questionnaire with open-ended questions. Nurses’ narrative descriptions of CPR experience. Hermeneutic Phenomenology with focus groups Thematic analysis Qualitative Descriptive Semi-structured</td>
<td>they were new to the ER. This caused level of psychological distress. CBEs cause critical incident stress which my alter provider well-being The level of teamwork code cause more distress. Nurses felt anxiety related to performing CPR, especially the difference between training and real life.</td>
<td><strong>Recommendations:</strong> It can be used in the change project, because it demonstrates opposition to debriefing for wellbeing, and demonstrates how nurses often turn to peer-to-peer support after CBEs, which is see in this project’s data.</td>
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<td>UK, USA, CA, AUS, S.Korea, &amp; Sweden</td>
<td>interviews Content Analysis</td>
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Definition of abbreviations: code blue events (CBE)
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| To investigate a community hospital’s ED staff’s perception of CI, assess openness to CISD, and assess baseline well-being. | Design: Cross-sectional Quantitative  
Method: Self-report questionnaires in Qualtrics  
Anonymously collected through email  
Conceptual Framework: None seen | Sample:  
n = 39 RNs, PAs residents  
29 Female  
10 Male  
32.5% of ED staff  
Setting: ED clinical staff at a community hospital in Connecticut  
IV: Critical incidents: Mass casualty events, Death of a child, and death of patient  
Frequency of experiencing a CI in past 12 months  
DV: Perception of CIs  
DV-1: Perception of CIs  
DV-2: Openness to debriefing Assess baseline well-being  
HADS ProQOL Scale | Data analysis  
Pearson's chi-square  
One-way ANOVA  
Tukey post hoc test | Role and Mass casualty as an CI significant (χ(1) = 6.850, p = .033), with 50% selection among ED technicians compared to 83.3% of physicians and 92.6% of RNs and PAs.  
Clinical event and years of practice unrelated  
Participation in CI in the last year was 97.4% n=38.  
Frequency of CI once per week reported by 81.6% n=31 | Level: III-B  
Worth to Practice:  
This study demonstrates baseline well-being and willingness to debrief, along with a description of what defines a CI. Each of these data points relates directly to this EBP project.  
Strengths:  
Represents 32.5% of the ED staff. Anonymous  
Weakness:  
Small sample size. Only one site. Nonresponse bias may exist.  
Feasibility:  
Able to be replicated. It provides important data to support this change project.  
Conclusions:  
This study demonstrated staff’s understanding of what defines a CI and their willingness to debrief. It also assesses baseline well-being.  
Recommendations: |
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<th>Measurement of major variables</th>
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<th>Study findings</th>
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<td>desire to debrief and years of practice $\chi(1) = 9.229, p = .026$, with the highest proportion from the $&lt;$ 3 years of practice (100%, n = 4) and 11–20 years of practice (100%, n = 7) groups and the lowest proportion among the 3–10 years of practice group (56.3%, n = 9) There was no statistically significant association between wanting to discuss a critical incident and</td>
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<td>It can be used for change project, but if it included more than one facility it would be of greater value.</td>
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<td>Cantu, L., &amp; Thomas, L. (2020). Baseline wellbeing, perceptions of critical incidents, and openness to debriefing in community hospital emergency department clinical staff before covid-19, a cross-sectional study. <em>BMC Emergency Medicine, 20</em>(1), 2-8. <a href="https://doi.org/10.1186/s12873-020-00372-5">https://doi.org/10.1186/s12873-020-00372-5</a></td>
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<td>clinical role ($\chi^2(1) = 0.725$, $p = .696$). Significant difference between clinical roles and mean secondary trauma scores. STS was statistically significantly lower in the combined RN/PA group (21.46 ± 6.043) compared to ED techs (30.83 ± 6.369, $p = .011$). No difference between physicians and EMTs or RNs and PAs.</td>
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Definition of abbreviations: critical incident (CI), critical incident debriefing (CISD), hospital anxiety and depression scale (HADS), professional quality of life (ProQOL)
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<tr>
<td>To look at how non-clinical staff are affected psychologically when performing CPR, and what other factor could cause serious psychological issues.</td>
<td>Design: Qualitative descriptive Evidence-based practice project&lt;br&gt;Method: Semi-structured face-to-face interviews&lt;br&gt;Setting: A regional 450-bed tertiary teaching hospital in Australia</td>
<td>Sample: n=12 Out of 250 PSAs who performed CPR&lt;br&gt;50% Male to Female participants</td>
<td>IV: IV1: Performing CPR&lt;br&gt;IV2: Peer Support&lt;br&gt;DV: DV1: impact on the psychological well-being&lt;br&gt;DV2: Individual well-being&lt;br&gt;Stress Symptoms&lt;br&gt;Team functioning&lt;br&gt;Clinical performance</td>
<td>PTSD Rating Scale&lt;br&gt;CISS criteria from Diagnostic and Statistical Manual</td>
<td>Two underpinning themes relating to the research questions: 1) psychological impact of performing CPR&lt;br&gt;2) the value of peer support. Results of PCL-C 8 or 75% scored below 30-35, the threshold (No PTSD) 3 scored borderline 30, 31, &amp; 32 (Possible PTSD) 1 scored 45 (PTSD) or 8%</td>
<td>Two underpinning themes relating to the research questions: 1) psychological impact of performing CPR&lt;br&gt;2) the value of peer support. Results of PCL-C 8 or 75% scored below 30-35, the threshold (No PTSD) 3 scored borderline 30, 31, &amp; 32 (Possible PTSD) 1 scored 45 (PTSD) or 8%</td>
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</table>


**Worth to Practice:**
Provides insight into how non-clinical hospital staff feel after performing CPR and demonstrates the importance of peer support and CID.

**Strengths:**
Saturation of themes reached, adds additional information supporting what is needed in CIs. Ethical concerns addressed. Participants were supported.

**Weakness:**
Only addresses non-clinical staff. Authors list sample size as being small. Could have recall bias. The PCL-C test could have been offered at the same time as the interviews.

**Feasibility:**
This study works well for this project as it provides context for how non-clinical staff are affected by code blues. Some comparison can be assumed related to clinical staff, also, as...
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<tr>
<td>Conceptual Framework: None Seen</td>
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<td>this project aims to help all members of the code blue team. Non-clinical staff are included on the code blue team.</td>
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<td><strong>Conclusions:</strong> This study provides support for both peer support and CID to help decrease symptoms of CID, which provide support for this author's DNP project.</td>
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<td><strong>Recommendations:</strong> Additional studies could focus more on checking on non-clinical staff's immediate reaction to performing CPR and any psychological effects.</td>
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</table>

Definition of abbreviations: patient support assistant (PSA), critical incident debriefing (CID), post-traumatic stress disorder (PTSD), Post-traumatic Stress Disorder Checklist Civilian (PCL-C)
To determine which resiliency techniques are helpful to a multi-disciplinary team.

**Design:** Evidence-based practices project

**Method:** Pre- & post-implementation assessment

**Conceptual Framework:** Iowa Model of EBP

**Sample:** n=47 critical care unit HCPs, RNs, MDs, RT, CNAs, chaplain, NPs, unit coordinator child life specialists

**Setting:**

**IV:** Resiliency bundle (Ethical issue resolution process, mindfulness, cellphone reminders; Pt death process outline; Structured debriefing with pastoral care; Peer-to-peer discussions; Leadership notifications; Social events; EAP

**DV:** Level of resilience

**Measurement of major variables**

**Major variables studied with definitions**

**Data analysis**

**Measurement of major variables**

**Data analysis**

**Study findings**

**Level of evidence (critical appraisal score) / Worth to practice / Strengths and weaknesses / Feasibility / Conclusion(s) / Recommendation(s)**

**Level:** V-A

**Worth to Practice:** Shows support for the PICOT question, also supported by the literature.

**Strengths:** Quantitative data demonstrated a positive response.

**Weakness:** Small sample size, One facility

**Feasibility:** Is generalizable for this facility. Can be repeated, with a larger sample size to validate the findings.

**Conclusions:** Debriefings, peer-to-peer support, and social interactions outside = more resiliency.

**Recommendations:** Resiliency bundle that includes structured debriefs, Increases Resiliency for staff in PICU.

**Definition of abbreviations:** pediatric intensive care unit (PICU), employee assistance program (EAP), evidence-based practice (EBP)
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| Discussion of one ED’s experience with implementing hot debriefs after CBE in the ED | Design: Quality Improvement  
Method: Qualitative  
Conceptual Framework: PDSA | Sample: n=38 CBEs & n=16 debriefs  
Setting: A busy ED in Dublin, Ireland | IV: Hot Debrief  
Length of Debrief  
DV: Feeling debrief was the right length, Improved clinical practice, Improved Psychological Wellbeing | SurveyMonkey post-survey (no name) | Number of Debriefs compared to number of CBEs  
Measures of the percentage of staff’s response to Hot Debrief | 16 debriefs completed out of 38 CBE,  
95% participants felt the debrief was the right amount of time,  
100% believed that debrief help clinical practice  
90% believed the debrief improved their psychological wellbeing | Level: V-B  
Worth to Practice: This QI project demonstrates support for using Debriefing to improve psychological well-being. It also, provides valuable insight on potential threats to the project related to staff engagement.  
Weakness: Only one facility, small number of debriefs, no mention of the number of staff that answered the surveys. Only a post-intervention survey, so no baseline data.  
Feasibility: The concept could be applied to other facilities, but unsure the number of participants.  
Conclusions: |

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<tr>
<td>Gilmartin, S., Martin, L., Kenny, S., Callanan, I., &amp; Salter, N. (2020). Promoting hot debriefing in an emergency department. <em>BMJ Open Quality, 9</em>(3), 1-5. <a href="https://doi.org/10.1136/bmjoq-2020-000913">https://doi.org/10.1136/bmjoq-2020-000913</a></td>
<td>Provides critical insight into the benefits and struggles related to implementing debriefings in the hospital setting. <strong>Recommendations:</strong> The QI project provides key concepts to think about when implementing debriefing.</td>
<td>Definition of abbreviations: emergency department (ED), code blue event (CBE), Plan Do Study Act (PDSA), quality improvement (QI)</td>
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To determine how common burnout is in ED nurses by reviewing articles that identified burnout.

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**Design:** Systematic review and meta-analysis

**Method:** Meta-analytic following the preferred reporting items for systematic reviews and metanalysis

**Conceptual Framework:** None Seen

**Sample:** Search yielded N=1,049 n=13 eligible studies

~1,566 nurses evaluated

~Authors

~Year of Publication

~Type of MBI

~Cross-sectional vs longitudinal

~Intentional vs random

~Mixed Sample

~Total sample of RN with high EE

~Total sample of RNs with high DP

~Total sample of RNs with low PA

**IV:** Nurse burnout

**DV:** Prevalence of burnout based on Maslach Burnout Inventory on the 3 dimension of EE, DP, PA

**MBI**

<table>
<thead>
<tr>
<th>StatsDirect software</th>
<th>High EE 31% (95% CI, 20-44), prevalence of EE. Heterogeneity analysis showed a 286.6 Cochran Q value with P &lt; .001 and an I2 index of 95.8% (95% CI, 94.6-96.6), indicating high heterogeneity.</th>
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<tr>
<td>Cochran Q test</td>
<td>High DP 36% (95% CI, 23-51), prevalence of DP. The value of Cochran Q of the heterogeneity analysis is 363.4 with P &lt; .001; the I2 index was 96.7% (95% CI, 95-97).</td>
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<td>I index</td>
<td>Two researcher independent search and selection, Inverse search</td>
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<tr>
<td>Eggers linear regression</td>
<td>High EE 31% (95% CI, 20-44), prevalence of EE. Heterogeneity analysis showed a 286.6 Cochran Q value with P &lt; .001 and an I2 index of 95.8% (95% CI, 94.6-96.6), indicating high heterogeneity.</td>
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**Level:** III-A

**Worth to Practice:**

Clearly demonstrates that high levels of EE and DP and low levels of PA in ED nurses. This supports the thought that nurses working in high-intensity environments who frequently deal with code blues suffer burnout and distress.

**Strengths:**

No publication biases seen. Strong degree of homogeneity.

**Weakness:**

Low number of studies with statistical information. Doesn’t provide a clear indication of the number nurses leaving the field due to burnout.

**Feasibility:**

Able to be replicated, and it is useful for this project as it clearly demonstrates increased burnout for nurses working in high-intensity environments.
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<tr>
<td>Gómez-Urquiza, J. L., De la Fuente-Solana, E. I., Albendin-García, L., Vargas-Pecino, C., Ortega-Campos, E. M., Canadas-De la Fuente, G. A. (2017). Prevalence of burnout syndrome in emergency nurses: A meta-analysis. Critical Care Nurse, 37(5), e1-e9. <a href="https://doi.org/10.4037/ccn2017508">https://doi.org/10.4037/ccn2017508</a></td>
<td>Setting: - CINAHL Cochrane CUIDEN IBECs LILACS PubMed ProQuest Platform (ProQuest Health &amp; Medical Complete) PsycINFO, SciELO, and Scopus. ProQuest Dissertation &amp; Thesis and Google Scholar - Language inclusion: Spanish English Portuguese - Studies out of: Europe Spain Brazil the United Kingdom the U.S. Australia</td>
<td>CI, 95.9-97.3, representing high heterogeneity. Low PA, was 29% (95% CI, 15-44). The Cochran Q value was 295.2 with P &lt; .001, and a high heterogeneity was found with an I2 index value of 96.6% (95% CI, 95.7-97.3).</td>
<td>Conclusions: ED nurses have high levels of burnout demonstrated by high levels EE and DP, and low levels of PA. Health administrators need to consider these facts to support their ED nurses. Recommendations: Increase the size of the study. Healthcare employers should work to build better work environments.</td>
<td>Definition of abbreviations: Maslach Burnout Inventory (MBI), emotional exhaustion (EE), personal accomplishment (PA), depersonalization (DP)</td>
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| To establish the levels of compassion satisfaction, burnout, and secondary traumatic stress in point-of-care RNs at two large health organizations in southern California. Also, to determine if the hours of the shift, shift type, or experience of the RNs influences the levels of compassion satisfaction, burnout, and secondary traumatic stress. | **Design:** Quantitative descriptive  
**Method:** Cross-sectional 30-question survey plus demographics  
**Conceptual Framework:** ProQOL Framework | **Sample:** n=1,174 RNs  
**Setting:** Kaiser Southern California hospitals & Loma Linda Health System in southern California in the inpatient setting for direct patient care RNs | **IV:** Years of experience, units worked in, age of RN, years of service, BSN vs ADN degree, Ft, Pt, or Per diem, Levels of compassion satisfaction, burnout, or secondary traumatic stress  
**DV:** Impact of working condition and RN experience with compassion satisfaction, burnout, & secondary compassion framework | **ProQOL Cronbach alpha reliability values**  
CF = .82,  
BO = .64,  
CS = .82  
**Descriptive statistics**  
ANOVA/Student t-test and analysis of variance with post hoc tests  
Correlations and regression modeling  
Stepwise logistic regression | Participants scored moderate to average (23-41) on levels of CS & BO  
Night RNs with more experience had increased CS  
Increased levels for CF for new grads (29.5), BSN RNs (27.2), ICU RNs (27.4), 12-hr Shift RNs (26.9) | Level: III-A  
**Worth to Practice:** Demonstrates us of the ProQOL for RNs. Supports the concept the Intensive care RNs have high levels of BO.  
**Strengths:** Large volume of participants from bedside fields of nursing, from multiple hospitals.  
**Weakness:** Survey based & voluntary participation.  
**Feasibility:** Able to be replicated.  
**Conclusions:** BO & CF remain prominent in nursing & several factors make it worse.  
**Recommendations:** This study is useful for this project as it demonstrates the successful use of the ProQOL in nurses.
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Definition of abbreviations: registered nurse (RN), Professional Quality of Life Scale (ProQOL)
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<tr>
<td>Serves as a review that provides education on how to facilitate well-being debriefs.</td>
<td>Design: Clinical Guideline</td>
<td>Sample: n=Healthcare workers</td>
<td>IV: Well-being debriefs</td>
<td>1. Introduction</td>
<td>No data analysis for this review.</td>
<td>Debriefing Dos &amp; Don’ts:</td>
<td>Level: IV-B</td>
</tr>
<tr>
<td>Method: Step-by-step instructions</td>
<td>Setting: For palliative care providers, doctors, nurses &amp; other health care workers suffering trauma and secondary trauma during the COVID-19 pandemic</td>
<td>DV: levels of stress and distress, and reducing rates of burnout and/or empathic strain</td>
<td>2. The Structure of Well-Being Debriefings Within a Health Care Organization</td>
<td>1. DO be ok with silence.</td>
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<td>1. DO be ok with silence.</td>
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<tr>
<td>Conceptual Framework: None seen</td>
<td></td>
<td>social support and decreasing feelings of isolation</td>
<td>3. The Facilitator’s Role</td>
<td>2. DO know that it may feel nerve-wracking the first few times you facilitate.</td>
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<td>coping strategies, self-awareness techniques, and resilience tools with peers</td>
<td>4. Getting Started</td>
<td>3. DO use humor; it helps people feel relaxed, at ease, and increases social interaction.</td>
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<td>5. Tips and Troubleshooting</td>
<td>4. DO take responsibility for running the group.</td>
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<td>Don’ts</td>
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<tr>
<td>Leff, V. (2021). Well-Being debriefings for health care workers: An evidence-based method for improving well-being. Center to Advance Palliative Care.</td>
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<td>1. DON’T be afraid to make mistakes! We</td>
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2. DON’T feel as if you have to “fix” a situation. It is much more powerful when a group comes up with a solution themselves.

3. DON’T share too much of your own experience. Use this as a springboard to ask questions or clarify.

**Recommendations:**
This clinical guideline directly applies to this project as it provides a straightforward process for debriefing that is easy to follow. This review provides information vital for the teaching the code blue event debrief facilitators.

Definition of abbreviations:
The purpose of this study was to examine the relationship between the use of post-resuscitation debriefings and perceptions of teamwork in emergency department nurses.

**Design:** Quantitative correlational

**Method:**
- Survey Monkey, 33-point questionnaire including a 5-point Likert scale
- Conceptual Framework: None seen

**Sample:** n=68

**Setting:** ER RNs listed in the ENA database from 27 different states in the U.S.

**IV:**
- Following CBE:
  - Frequency of debriefing
  - Type of debrief
  - Timing that the debrief occurs at

**DV:**
- Perception of teamwork

**Measurement of major variables**
- Nursing Teamwork Survey

**Data analysis**
- Scheffe post hoc tests: ANOVA

**Study findings**
- Frequent debriefs (η = .41, p = .02), Formally conducted debriefs method (η = .36, p = .01), & Hot debriefs (η = .36, p = .03), Demonstrated a significant positive relationship (eta coefficient) with higher levels of trust, team orientation, backup, shared mental model, and leadership.

**Level of evidence (critical appraisal score) / Worth to practice / Strengths and weaknesses / Feasibility / Conclusion(s) / Recommendation(s)**
- Level: III-B
- Worth to Practice: Useful for this project at it establishes that debriefing helps build trust and support for healthcare professionals involved in resuscitations.
- Strengths: This study is specifically looking at CBEs. A well-rounded population
- Weakness: Survey based & specific only to ENA members
- Feasibility: Able to be replicated
- Conclusions: The study was specific to the effects of CBEs on nurses, and demonstrated increased levels of trust associated with debriefing.
- Recommendations: Useful for this project as it provides further support for the use of debriefing.
Definition of abbreviations: Emergency Nurses Association (ENA), registered nurse (RN), United States (US), code blue events (CBE), emergency nurses’ association (ENA).

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<tr>
<td>To evaluate how CIs (traumatic events that cause a crisis response) impact HCPs.</td>
<td><strong>Design:</strong> Qualitative descriptive</td>
<td><strong>Sample:</strong> n=11 (Purposive sampling) 3 ICU/ED RNs 3 M/S RNs 1 OP RN 1 MD 1 NP 2 Chaplain 10 females 1 male Ages 30 to &gt;50 5-35 yrs. of experience</td>
<td><strong>IV:</strong> CIs  <strong>DV:</strong> Impact on HCP Physical, cognitive, and emotional impact.  <strong>Open-ended questions to inquire about impact after a CI.</strong> Probing questions related to support and barriers encountered after a CI.</td>
<td><strong>Applied thematic analysis</strong>  Rigorously inductive qualitative method combining several theoretical and methodological perspectives.  Two authors each on their own reviewed the transcripts of the notes &amp; reflexive journals then collaborated to determine discrepancies.  Codes developed Identified CIs include deaths, workplace bullying, and cases of assault.</td>
<td><strong>Level: III-A/B</strong>  <strong>Worth to Practice:</strong> Identifies the negative effects of CI on HCP. Demonstrates support for debriefings and peer support.  <strong>Strengths:</strong> Trustworthiness determined by an analytic process appropriate for applied thematic analysis. The impression of the data was clarified the end of each interview with the participant. An independent experienced researcher reviewed and verified the data analysis.  <strong>Weakness:</strong> Small sample size. Only one facility included. 10 female, 1 male (although, this might be more representative of healthcare, since women dominate the nursing field).</td>
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<td>Mayer, D., &amp; Hamilton, M. (2018). Critical incidents in health care. <em>MEDSURG Nursing</em>, 27(4), 231–237.</td>
<td>independently to reflect mutually-agreed definition before identifying themes.</td>
<td>This study can be replicated, but it may be difficult to get the same results. This study works well for this project as it provides an identification of several CIs, and it demonstrates support for CID. <strong>Conclusions:</strong> Critical incidents cause HCP distress that is not forgotten. CIDs positively effect HCPs ability to cope with CIs. Work culture can worsen the impact of CIs. <strong>Recommendations:</strong> This article determines that CIDs are helpful to HCP who experience CIs. Nurse leaders need to expect CIs to happen and develop strategies to support CIDs.</td>
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Definition of abbreviations: outpatient (OP), healthcare provider (HCP), critical incident (CI)
This study sought to see how caring for or dealing with the death of school shooting victims affected the mental wellbeing of nurses working in a trauma unit.

**Design:** Qualitative descriptive

**Method:** Conducted interviews.

**Conceptual Framework:** Compassion Fatigue Resilience Model

**Sample:** N=7 nurses

**Setting:** A Level I trauma center in Tennessee

**IV:** Caring for school shooting victims

**DV:** Nurses in the trauma unit’s responses and psychological health

**Data analysis:** NVivo for analysis

**NVivo for analysis**

**Primary & collaborating investigators independent analysis with comparison**

**Identified themes.**

~Innocence of the patients - nurses struggled with the age of the patients - disbelief that someone could hurt innocent children

~Trajectories of increased emotions - feelings of anger, fear, and anxiety. Feeling of joy when the patient survived - anger and sadness with the loss of a child - chronic stress working in the trauma unit

**Level: III-A/B**

**Worth to Practice:**
This study demonstrates the thoughts and opinions of nurses involved in critical incidents. It also provides vital information for ways to promote peer to peer relations to support staff. It also shows input on how to improve the debriefing process.

**Strengths:**
A study on nurses with volumes of critical incidents. Provides similarities to this debrief project.

**Weakness:**
Small sample size. It covers several topics outside this project’s scope.

**Feasibility:**
Able to be replicated and clearly demonstrates the steps taken.

**Conclusions:**
This study provides several valuable points related to real world nurse’s experiences with

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<tr>
<td>Process emotional stressors</td>
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<td>Debriefing, and how they recommended improving the debriefing process. It also demonstrates the importance of peer-to-peer support for nurses involved in critical incidents.</td>
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<td>-Voice support for peer-to-peer support</td>
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<td><strong>Recommendations:</strong> The study can be used for this project and it helps supports the outcomes of this study, which helps connect this study to the current literature.</td>
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<td>-Wished for improved debriefing process</td>
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<td><strong>Recommendations:</strong> The study can be used for this project and it helps supports the outcomes of this study, which helps connect this study to the current literature.</td>
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<td>-Felt difficult to fully participate in debriefing since they still needed to care for their patients due to no relief nurses,</td>
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<td><strong>Recommendations:</strong> The study can be used for this project and it helps supports the outcomes of this study, which helps connect this study to the current literature.</td>
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<td>-Lack of support for newer nurses due to lack of close relationships with other nurses.</td>
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<td><strong>Recommendations:</strong> The study can be used for this project and it helps supports the outcomes of this study, which helps connect this study to the current literature.</td>
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</table>
| To provide simulation and training to residents on facilitating debriefing after experiencing a distressing patient event. | **Design:** Quality Improvement Project  **Method:** Pre- & post-training survey  **Conceptual Framework:** None | **Sample:** n=25 residents  **Setting:** An academic pediatric medical center, located in east LA, CHLA | **IV:** Peer debriefs simulation & training  **DV:** Resident's comfort with leading a debriefing session, likelihood of leading a future debriefing session | Level of comfort facilitating a debrief, Likelihood  | Chi-square analyses of proportions p=.05 or significance & 95% CI | $\chi^2(1) = 13.0$, p = .0003, 95% CI, 21.5-71.8. Pre-survey 32% of residents comfortable leading a debrief; Post-survey 83% of residents comfortable leading a debrief.  
$\chi^2(1) = 11.6$, p = .0006, 95% CI, 18.6-64.9, Pre-survey 36% or resident likely to lead debrief; post-survey 88% of residents likely to lead debrief | Level: V-B  **Worth to Practice:** Provides a scripted debrief to help with traumatic emotional events related patient care, which will be used for this project.  **Strengths:** Provides guidelines for simulation and training for facilitating debriefs.  **Weakness:** Only 25 participants.  **Feasibility:** Can be repeated, and it will be used for this project.  **Conclusions:** Simulation and training on how to facilitate CID provides confidence to facilitators.  **Recommendations:** |

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Definition of abbreviations: Children’s Hospital Los Angeles (CHLA), confidence interval (CI)
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| To see if implementing debriefs after a code blue help improve performance and help emotional processing and support. | **Design:** Quality Improvement project  
**Method:** 7-item survey pre-intervention, 6 months post-intervention & 1-year post-intervention  
**Setting:** HCP in the ED at a community medical center in Michigan  
**Conceptual Framework:** None seen | **Sample:** n=138 HCPs  
MDs, RNs other HCP | **IV:** Rapid-Post Code Debriefing  
**DV:** Code performance according to Overall satisfaction of code process  
Number of people running code  
Frequency of missing items  
Right number of staff in the code  
Thoughts about just returning home Felt emotionally | The Lakeland 7-item survey  
The Lakeland seven-item survey was created with this goal in mind it part based on a previous, non-externally validated survey from a previous study in an ED setting and partially created de-novo with staff input from physicians, nurses, physical therapists, and emergency technicians from the EDs participating in this study.  
**independent t-tests**  
Chi Square crosstabulations and graphs  
Graphs  
A series of non-parametric stepwise multinomial regression analytic  
SPSS version 25 analytic software | Statistically significant improvement in overall satisfaction. Pearson Chi Square = 37.377, df 10, p < 0.001 (continuous measure), Pearson Chi Square = 16.561, df 2, p < 0.001 (categorical measure).  
Thoughts about just returning to work Pearson Chi Square 11.351, df 4, p = 0.023  
Number of people running a code Pearson Chi Square =  |
| **Level:** V-A | **Worth to Practice:** Helps to show an opposite view to the PICOT question and other included evidence.  
**Strengths:** Directly related to CIDs and data were collected over three different times, which provides greater strength since it's a longitudinal view. Quantitative data.  
**Weakness:** Data from one ED, and it may be difficult to generalize.  
**Feasibility:** Can be replicated and it could be done for this project it helps provide an opposing view compared to the other data.  
**Conclusions:** Implementing debriefs after a code blue may not provide improved emotional support for HCPs. |  

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<td>supported after a code by their staff</td>
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<td>10.945, df 4, p = 0.027</td>
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<td>Statistically significant decrease in feeling emotionally supported after intervention of debriefing Pearson Chi Square 14.977, df 4, p = 0.005</td>
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<td><strong>Recommendations:</strong> This study works well for this project as it demonstrates that debriefs may have unexpected results.</td>
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Definition of abbreviations: healthcare provider (HCP), emergency department (ED)
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<td>This study sought to provide support for a debriefing process established at a trauma center in Calgary, Canada. The debriefs had occurred since 2016, but the researchers wanted to demonstrate their staff’s support for debriefing.</td>
<td><strong>Design:</strong> Qualitative Descriptive  <strong>Method:</strong> Interview questions  <strong>Conceptual Framework:</strong> None seen</td>
<td><strong>Sample:</strong> N=7 Healthcare providers  <strong>Setting:</strong> Level I trauma center in Calgary, Canada</td>
<td><strong>IV:</strong> INFO Debriefing  <strong>DV:</strong> Effect of debriefing on clinical practices and patient care  Psychological safety and teamwork  Emotional acknowledgment after critical events  Managing work stress in the ED  Barriers to debriefing</td>
<td><strong>An interview script with questions</strong>  <strong>By the researchers &amp; NVivo software</strong></td>
<td></td>
<td><strong>Theme 1:</strong> effect of debriefing on clinical practices and patient care - 97% felt debriefing led to better patient care.  <strong>Theme 2:</strong> psychological safety and teamwork -87% reported having better relationships with teammates after debriefing and that they could empathize more closely  <strong>Theme 3:</strong> emotional acknowledgment</td>
<td><strong>Level:</strong> III-A/B  <strong>Worth to Practice:</strong> This study demonstrates strong positive responses from healthcare providers related to the act of debriefing from a trauma center that had a well-established debriefing process.  <strong>Strengths:</strong> The study had strong positive results.  <strong>Weakness:</strong> Small sample size in one area of Canada  <strong>Feasibility:</strong> Can be repeated easy follow the steps to produce a similar study.  <strong>Conclusions:</strong> This study demonstrates high levels of support for debriefing. It also demonstrates what well-established debriefing program can accomplish.</td>
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https://doi.org/10.1007/s43678-022-00361-6
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<tr>
<td>Rose, S. C., Ashari, N. A., Davies, J. M., Solis, L., &amp; O’Neill, T. A. (2022). Interprofessional clinical event debriefing—does it make a difference? Attitudes of emergency department care providers to INFO clinical event debriefings. <em>Canadian Journal of Emergency Medicine</em>, 24(7), p. 695-701. <a href="https://doi.org/10.1007/s43678-022-00361-6">https://doi.org/10.1007/s43678-022-00361-6</a></td>
<td>89% reported feeling safe to share emotions and that their emotions were well received by other staff in the debrief</td>
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<td>Recommendations: This study can be used for this project as provides recent evidence that highly supports debriefing to improve the psychological well-being for staff exposed to critical incidents.</td>
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Theme 4: managing work stress in the ED
-90% reported working in the ED caused stress, but debriefing and support of coworkers made the stress more manageable

Theme 5: barriers to debriefing
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Definition of abbreviations: emergency department (ED)

To determine if the act of debriefing post-resuscitation changed the perception of teamwork in the inpatient setting.

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<tbody>
<tr>
<td>Design: Quantitative</td>
<td>Cross-sectional</td>
<td>n=312</td>
<td>Perception of teamwork</td>
<td>29 screened positive for PTSD</td>
<td>HCA &amp; First year doctors had higher TSQ scores, when compared to RNs and experienced MDs.</td>
<td>Level: III-B</td>
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<td>Method: 33-question survey</td>
<td>Setting: acute, 732-bed district general hospital in the UK</td>
<td>Timing of brief</td>
<td>Debriefing not associated with risk for PTSD</td>
<td>Debriefing leaders had previous debriefing training</td>
<td>Only 8 of 67 resuscitation leaders had previous debriefing training</td>
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<td>StataCorp. 2017 (Stata Statistical Software: Release 15. College Station, TX: StataCorp. LLC). Exact Fisher's test and x2</td>
<td>Mann–Whitney U test General linear model and Spearman's rank correlations</td>
<td>StataCorp, 2017</td>
<td>29 screened positive for PTSD</td>
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Worth to Practice: Applicable to topic, demonstrates support for use of debrief, as it was well received by staff.

Strengths: Study of MDs, RNs & HCAs in multiple units, which reflects similarities with a code blue team. Directly related to cardiac arrests and debriefing.

Weakness: Not exhaustive among the target cohort as there a small number of surveys returned. Single hospital study.

Feasibility: Can be replicated and it could be conducted in other facilities. Also, the topic correlates directly to this project.
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<td><strong>Conclusions:</strong> Conducting debriefs is well received by staff, but debriefing can't be associated with decreasing PTSD.</td>
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<td><strong>Recommendations:</strong> This study helps to show the benefit of using debriefing after CBEs. This evidence can be used in this project as it helps support implementing critical incident debriefing.</td>
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Definitions of abbreviations: health care assistance (HCA), trauma screening tool (TSQ), in-hospital cardiac arrests (IHCA)
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<td>This clinical guideline provides an overview of the ProQOL survey. It also provides instructions for administering, interpreting, and analyzing the ProQOL.</td>
<td><strong>Design:</strong> Clinical practice guideline  <strong>Method:</strong> 30 question survey  <strong>Conceptual Framework:</strong> Professional Quality of Life Model</td>
<td>Sample: n= individuals who provide care to others.  <strong>Setting:</strong> A clinical guideline developed to help healthcare workers rate their levels of compassion satisfaction, burnout &amp; secondary traumatic stress</td>
<td><strong>IV:</strong> Caring for others  <strong>DV:</strong> Levels of compassion satisfaction, -Burnout -Secondary traumatic distress</td>
<td>ProQOL Survey  5-point likert scale in the ProQOL  Reverse items 1, 4, 15, 17, and 29 into 1r, 4r, 15r, 17r and 29r  (1=5) (2=4) (3=3) (4=2) (5=1)  Sum the items for each subscale.  CS = SUM(pq3,pq6,pq12,pq16, pq18,pq20,pq22,pq24,pq27,pq30).  BO = SUM(pq1r,pq4r,pq8,pq10,pq15r,pq17r, pq19, pq21, pq26, pq29r).</td>
<td>Compassion Satisfaction  Low levels: 22 or less  Moderate levels: 23-41  High levels: 42 or more  Burnout  Low levels: 22 or less  Moderate levels: 23-41  High levels: 42 or more  Secondary traumatic stress  Low levels: 22 or less</td>
<td></td>
<td>Level: IV-B  <strong>Worth to Practice:</strong> This guideline provides the tool used to determine this project’s proposed outcome measures.  <strong>Strengths:</strong> The ProQOL is specific for healthcare &amp; it has been used for many years with significant validation.  <strong>Weakness:</strong> Participants must complete a 30-question survey, and the answers could be answered subjectively.  <strong>Feasibility:</strong> Able to be replicated.  <strong>Conclusions:</strong> Using the ProQOL provides quantitative data to measure compassion satisfaction, burnout, &amp; secondary traumatic stress.  <strong>Recommendations:</strong> This clinical practice guidelines provides a concise overview of</td>
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<td>Stamm, B. H. (2010). <em>ProQOL manual</em>. <a href="https://proqol.org/proqol-manual">https://proqol.org/proqol-manual</a></td>
<td>STS = SUM(pq2,pq5,pq7,pq9,pq11,pq13,pq14,pq23,pq25,pq28). Convert the Z scores to t-scores with raw score mean = 50 and the raw score standard deviation = 10, if this is something you wish to do within your own sample. SPSS code is provided for this below.</td>
<td>Moderate levels: 23-41 High levels: 42 or more</td>
<td>how to use the ProQOL, and it helps simplify this project with simplicity of the study. It directly relates to this project.</td>
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Definition of abbreviations: professional quality of life (ProQOL),
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| To determine if debriefing after a critical event can decrease errors, improve communication, review team performance, and provide emotional support for staff. | **Design:** Cross-sectional observational study (quantitative data)  
**Method:** The researcher, in collaboration with other experts, designed a 20-question survey.  
This activity was carried out over a 2-month periods to capture most of the healthcare workers in those departments. Participation was voluntary and risk free.  
This study met the criteria for exempt status after being | **Sample:** n=130 HCW  
-43 Nurses  
-38 internal medicine residents  
-26 pediatric residents.  
**Setting:** Adult & pediatric emergency rooms, adult intensive care unit, & neonatal intensive care unit, with high rates of critical events. | **IV:** Practice of debriefing  
**DV:** Communication Team performance  
Emotional support for staff  
Frequency of errors  
**Position and years of clinical experience** | **Descriptive statistical analysis**  
SPSS Statistics Version 25 (IBM Corp)  
**Current practice of debriefing after CI**  
Who conducts the CID?  
How often do they occur?  
Effectiveness of CID  
When or how often do CID occur?  
What occurs During CID  
Prior training On CID  
What events need CID | **65 (50%)** respondents reported little (<25% of the time) or no practice of debriefing.  
20 (15.4%) respondents reported frequent practice (>75% of the time).  
More than once a week as reported by 35 (26.9%).  
Led by attending physicians 77 (59.2%)  
Occurred immediately after an event 46.9% of the time. | **Level: III-B** |

**Worth to Practice:**  
Applicable to topic, as it supports completing debriefs immediately after CBEs, and describes the need for more consistent debriefing in the health care setting.  

**Strengths:**  
Study of healthcare workers that provides key insight into their beliefs about CIDs.  

**Weakness:**  
Subject to nonresponse bias, recall bias uncomfortable answering questions.  

**Feasibility:**  
Able to be replicated since survey clearly defined. Also, directly applicable to this project as it demonstrates importance of CID.  

**Conclusions:**  
This literature suggests that most staff had heard about debriefs or had participated in one. Many
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<td>reviewed by the IRB.</td>
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<td>Established format for CID</td>
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<td>118 (90%) of surveyed participants wanted to receive training on CID.</td>
<td>staff felt more training was needed. Staff felt that formal debriefing should be implemented after all critical incidents or traumatic events, but especially traumatic and medical resuscitations.</td>
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<td><strong>Conceptual Framework:</strong></td>
<td>None seen</td>
<td></td>
<td>Importance of CID</td>
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<td>51 (39%) of the participants have received formal training on CID.</td>
<td><strong>Recommendations:</strong> This study can be used for evidence as is good quality, and it points demonstrates of the importance of CID for professionals.</td>
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<td>Perceived goals and barriers to CID</td>
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<td>92 (70.8%) participants cited too much work decreased their ability to debrief.</td>
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<td>(123 [94.6%]) support a CID after a pt death 108 [83.1%]) support a CID after a trauma.</td>
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</table>

<table>
<thead>
<tr>
<th>Purpose of article or review</th>
<th>Design / Method / Conceptual framework</th>
<th>Sample / setting</th>
<th>Major variables studied with definitions</th>
<th>Measurement of major variables</th>
<th>Data analysis</th>
<th>Study findings</th>
<th>Level of evidence (critical appraisal score) / Worth to practice / Strengths and weaknesses / Feasibility / Conclusion(s) / Recommendation(s)</th>
</tr>
</thead>
</table>
(95 [73.1%]) support CID after a mass casualty event. |

Definition of abbreviations: Healthcare worker (HCW), critical incident debriefing (CID), critical incident (CI)
<table>
<thead>
<tr>
<th>Purpose of article or review</th>
<th>Design / Method / Conceptual framework</th>
<th>Sample / setting</th>
<th>Major variables studied with definitions</th>
<th>Measurement of major variables</th>
<th>Data analysis</th>
<th>Study findings</th>
<th>Level of evidence (critical appraisal score) / Worth to practice / Strengths and weaknesses / Feasibility / Conclusion(s) / Recommendation(s)</th>
</tr>
</thead>
</table>
| To systematically evaluate the prevalence of physician burnout especially in emergency medicine physicians. | Design: Systematic review and meta-analysis Method: All original articles selected used Maslach Burnout Inventory to assess the prevalence of burnout and its 3 dimensions EE, DP, and PA in emergency medicine physicians. Registration: INPLASY202060060 in inplasy.com Conceptual Framework: None seen | Sample: Yield N=243 n=17 PICOS guided eligible criteria: Cross-section studies Intervention studies Exclusion criteria: Conference abstracts, reviews, letters, case reports, Unpublished data, and insufficient data. | IV: Physician burnout DV: Prevalence of burnout as seen in the three dimensions of EE, DP, PA | Beggs test Egger test MBI | PRISMA STATA 12.0 software Random effect models Begg test Egger tests Joanna Briggs Institute’s | Pooled-prevalence rates High levels of EE Mean BOS score 23.95 SD =11.88 High levels of DP Mean BOS score 11.63 SD = 6.85 Low levels of PA Mean BOS score 34.69 SD = 7.71 | Level: III-B

Worth to Practice: Useful for this project as physicians attend codes & MBI is used to evaluate nurses as well.

Strengths: 13 studies showed high prevalence of burnout Pool Prevalence rates.

Weakness: No mention of the additional 4 studies and burnout prevalence. Small Sample size. Difficult to quantify factors related to burnout.

Feasibility: Can be repeated & this type of study has been used on other populations with success.

Conclusions: EM physicians are at greater risk of suffering burnout compared to other physicians.

Recommendations: |

<table>
<thead>
<tr>
<th>Purpose of article or review</th>
<th>Design / Method / Conceptual framework</th>
<th>Sample / setting</th>
<th>Major variables studied with definitions</th>
<th>Measurement of major variables</th>
<th>Data analysis</th>
<th>Study findings</th>
</tr>
</thead>
</table>


**Setting:**
PubMed (prior to 9/7/2019), Embase /Ovid; 1974 to 9/6/2019, PsychINFO (Ovid; 1806 to 9/1/2019) & the Cochrane Library (Ovid; before 9/5/2019)

English language article

12 different countries and involving

- Increase sample size.
- Pay close attention to the mental status of Ems.
- Perform additional studies on how to decrease EM physician's burnout.

**Definition of abbreviations:** Maslach Burnout Inventory (MBI), emotional exhaustion (EE), personal accomplishment (PA), depersonalization (DP), standard deviation (SD), emergency (EM), burnout score (BOS)
## Appendix B

### Burnout Scales Crosswalk

<table>
<thead>
<tr>
<th>Maslach Burnout Inventory (MBI)</th>
<th>Professional Quality of Life Scale 5 (ProQOL 5)</th>
<th>Brief Resilience Scale (BRS)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Measures:</strong></td>
<td><strong>Measures:</strong></td>
<td><strong>Measures:</strong></td>
</tr>
<tr>
<td>Emotional Exhaustion</td>
<td>Compassion Satisfaction</td>
<td>Low Resilience</td>
</tr>
<tr>
<td>Depolarization</td>
<td>Burnout</td>
<td>Normal Resilience</td>
</tr>
<tr>
<td>Low Personal Achievement</td>
<td>Secondary Traumatic Distress</td>
<td>High Resilience</td>
</tr>
<tr>
<td><strong>Number of Questions</strong></td>
<td><strong>Number of Questions</strong></td>
<td><strong>Number of Questions</strong></td>
</tr>
<tr>
<td>22</td>
<td>30</td>
<td>6</td>
</tr>
<tr>
<td><strong>Purpose:</strong></td>
<td><strong>Purpose:</strong></td>
<td><strong>Purpose:</strong></td>
</tr>
<tr>
<td>• Developed to identify how poor work environments affect workers.</td>
<td>• Developed for people working in helping profession/caregivers.</td>
<td>• Developed to assess the ability to recover from a stressful event.</td>
</tr>
<tr>
<td>• Used to evaluate the HCPs in high-stress environments at high-risk for burnout.</td>
<td>• Helps to quantify when caregivers feel compassion satisfaction, burnout, and compassion fatigue.</td>
<td>• Useful in behavior medicine research.</td>
</tr>
<tr>
<td>• Helpful in quantifying the level of hopelessness some HCPs experience.</td>
<td>(Maslach &amp; Jackson, 1981)</td>
<td>• Helpful in providing a method to quantify low, normal, and high resiliency.</td>
</tr>
<tr>
<td></td>
<td>(ProQOL, 2010)</td>
<td>(Smith et al., 2008)</td>
</tr>
<tr>
<td><strong>Pros:</strong></td>
<td><strong>Pros:</strong></td>
<td><strong>Pros:</strong></td>
</tr>
<tr>
<td>- Gold Standard for burnout.</td>
<td>- Frequently used for caregivers, especially nurses.</td>
<td>- Good internal consistency.</td>
</tr>
<tr>
<td>- Scores suggesting burnout can be correlated to lower quality of life.</td>
<td>- Easy to access and gain permission to use.</td>
<td>- Relates to resiliency and how to recover from traumatic events.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Only six questions.</td>
</tr>
</tbody>
</table>
- Establishes poor work environments that lead to burnout in workers.
- Only 22 questions Vs. 30 for the ProQOL.
- Established for use in healthcare.

(Poghosyan et al., 2009)

- Is already being used in the Providence Health System.
- The questions point more to the caregiver when looking at solutions to overcome burnout and compassion fatigue.

(ProQOL, 2010)

- No mention of burnout / less confusion on terminology.

(Smith et al., 2008)

**Cons:**
~ More focused on the environment as the cause of the burnout Vs. the individual.
~ Many nurses do not understand the difference between how the literature defines burnout and feeling overworked.
~ Process of gaining permission to use is not as easy as the ProQOL.

(ProQOL, 2010)

**Cons:**
~ Uses burnout but defines it differently than the MBI.
~ Higher number of questions.
~ Uses terms some HCPs may find unfamiliar.
~ Measures resilience Vs. compassion fatigue & burnout.
~ Not as commonly known as other scales.

(Smith et al., 2008)

**Reason Picked:**
1. More closely aligned with my vision of this project.
2. I believe far more nurses suffer from compassion fatigue vs. true burnout.
3. Provides a way to show positive feelings along with negative feelings.
4. Less focus on the organization or an environment that will not likely change for the foreseeable future.
5. Resiliency is mentioned so often it has lost its value with many HCPs.

Abbreviations: Health Care Professionals (HCP), Versus (Vs.)
Appendix C

Clinical Scholarship Framework for Nursing

(Maddux et al., 2017)
Appendix D

Watson’s Caritas Processes

Watson (2021) developed ten caritas processes for nurses to use when approaching care for themselves, and for patients under their care.

10 CARITAS PROCESSES®

1. Sustaining humanistic-altruistic values by practice of loving-kindness, compassion, and equanimity with self/others.
2. Being authentically present, enabling faith/hope/belief system; honoring subjective inner, life-world of self/others.
3. Being sensitive to self and others by cultivating own spiritual practices; beyond ego-self to transpersonal presence.
4. Developing and sustaining loving, trusting-caring relationships.
5. Allowing for expression of positive and negative feelings - authentically listening to another person's story.
7. Engaging in transpersonal teaching and learning within context of caring relationship; staying within other's frame of reference-shift toward coaching model for expanded health/wellness.
8. Creating a healing environment at all levels; subtle environment for energetic authentic caring presence.
9. Reverentially assisting with basic needs as sacred acts, touching mindbodyspirit of
   spirit of other; sustaining human dignity.

10. Opening to spiritual, mystery, unknowns-allowing for miracles (Watson, 2021, 10
    Caritas Processes Section).
Appendix E

ProQOL Scale

**PROFESSIONAL QUALITY OF LIFE SCALE (PROQOL)**

**COMPASSION SATISFACTION AND COMPASSION FATIGUE**

(ProQOL) Version 5 (2009)

When you [help] people you have direct contact with their lives. As you may have found, your compassion for those you [help] can affect you in positive and negative ways. Below are some questions about your experiences, both positive and negative, as a [helper]. Consider each of the following questions about you and your current work situation. Select the number that honestly reflects how frequently you experienced these things in the **last 30 days**.

<table>
<thead>
<tr>
<th>1 = Never</th>
<th>2 = Rarely</th>
<th>3 = Sometimes</th>
<th>4 = Often</th>
<th>5 = Very Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I am happy.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>I am preoccupied with more than one person I [help].</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>I get satisfaction from being able to [help] people.</td>
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<td></td>
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<tr>
<td>4.</td>
<td>I feel connected to others.</td>
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<tr>
<td>5.</td>
<td>I jump or am startled by unexpected sounds.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>I feel invigorated after working with those I [help].</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>I find it difficult to separate my personal life from my life as a [helper].</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>I am not as productive at work because I am losing sleep over traumatic experiences of a person I [help].</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>I think that I might have been affected by the traumatic stress of those I [help].</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>I feel trapped by my job as a [helper].</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Because of my [helping], I have felt &quot;on edge&quot; about various things.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>I like my work as a [helper].</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>I feel depressed because of the traumatic experiences of the people I [help].</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>14.</td>
<td>I feel as though I am experiencing the trauma of someone I have [helped].</td>
<td></td>
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<tr>
<td>15.</td>
<td>I have beliefs that sustain me.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>I am pleased with how I am able to keep up with [helping] techniques and protocols.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td>I am the person I always wanted to be.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18.</td>
<td>My work makes me feel satisfied.</td>
<td></td>
<td></td>
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<tr>
<td>19.</td>
<td>I feel worn out because of my work as a [helper].</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>20.</td>
<td>I have happy thoughts and feelings about those I [help] and how I could help them.</td>
<td></td>
<td></td>
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<tr>
<td>22.</td>
<td>I believe I can make a difference through my work.</td>
<td></td>
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<tr>
<td>23.</td>
<td>I avoid certain activities or situations because they remind me of frightening experiences of the people I [help].</td>
<td></td>
<td></td>
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<tr>
<td>24.</td>
<td>I am proud of what I can do to [help].</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25.</td>
<td>As a result of my [helping], I have intrusive, frightening thoughts.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>26.</td>
<td>I feel &quot;bogged down” by the system.</td>
<td></td>
<td></td>
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<tr>
<td>27.</td>
<td>I have thoughts that I am a &quot;success” as a [helper].</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28.</td>
<td>I can’t recall important parts of my work with trauma victims.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29.</td>
<td>I am a very caring person.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30.</td>
<td>I am happy that I chose to do this work.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
YOUR SCORES ON THE PROQOL: PROFESSIONAL QUALITY OF LIFE SCREENING

Based on your responses, place your personal scores below. If you have any concerns, you should discuss them with a physical or mental health care professional.

Compassion Satisfaction

Compassion satisfaction is about the pleasure you derive from being able to do your work well. For example, you may feel like it is a pleasure to help others through your work. You may feel positively about your colleagues or your ability to contribute to the work setting or even the greater good of society. Higher scores on this scale represent a greater satisfaction related to your ability to be an effective caregiver in your job.

If you are in the higher range, you probably derive a good deal of professional satisfaction from your position. If your scores are below 23, you may either find problems with your job, or there may be some other reason—for example, you might derive your satisfaction from activities other than your job. (Alpha scale reliability 0.88)

Burnout

Most people have an intuitive idea of what burnout is. From the research perspective, burnout is one of the elements of Compassion Fatigue (CF). It is associated with feelings of hopelessness and difficulties in dealing with work or in doing your job effectively. These negative feelings usually have a gradual onset. They can reflect the feeling that your efforts make no difference, or they can be associated with a very high workload or a non-supportive work environment. Higher scores on this scale mean that you are at higher risk for burnout.

If your score is below 23, this probably reflects positive feelings about your ability to be effective in your work. If you score above 41, you may wish to think about what at work makes you feel like you are not effective in your position. Your score may reflect your mood; perhaps you were having a “bad day” or are in need of some time off. If the high score persists or if it is reflective of other worries, it may be a cause for concern. (Alpha scale reliability 0.75)

Secondary Traumatic Stress

The second component of Compassion Fatigue (CF) is secondary traumatic stress (STS). It is about your work related, secondary exposure to extremely or traumatically stressful events. Developing problems due to exposure to other’s trauma is somewhat rare but does happen to many people who care for those who have experienced extremely or traumatically stressful events. For example, you may repeatedly hear stories about the traumatic things that happen to other people, commonly called Vicarious Traumatization. If your work puts you directly in the path of danger, for example, field work in a war or area of civil violence, this is not secondary exposure; your exposure is primary. However, if you are exposed to others’ traumatic events as a result of your work, for example, as a therapist or an emergency worker, this is secondary exposure. The symptoms of STS are usually rapid in onset and associated with a particular event. They may include being afraid, having difficulty sleeping, having images of the upsetting event pop into your mind, or avoiding things that remind you of the event.

If your score is above 41, you may want to take some time to think about what at work may be frightening to you or if there is some other reason for the elevated score. While higher scores do not mean that you do have a problem, they are an indication that you may want to examine how you feel about your work and your work environment. You may wish to discuss this with your supervisor, a colleague, or a health care professional. (Alpha scale reliability 0.81)
WHAT IS MY SCORE AND WHAT DOES IT MEAN?

In this section, you will score your test so you understand the interpretation for you. To find your score on each section, total the questions listed on the left and then find your score in the table on the right of the section.

**Compassion Satisfaction Scale**

Copy your rating on each of these questions on to this table and add them up. When you have added them up you can find your score on the table to the right.

<table>
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<tbody>
<tr>
<td>The sum of my Compassion Satisfaction questions is</td>
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<td></td>
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<td></td>
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<tr>
<td>22 or less</td>
<td>Low</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between 23 and 41</td>
<td>Moderate</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>42 or more</td>
<td>High</td>
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</tbody>
</table>

**Total:** ___

**Burnout Scale**

On the burnout scale you will need to take an extra step. Starred items are “reverse scored.” If you scored the item 1, write a 5 beside it. The reason we ask you to reverse the scores is because scientifically the measure works better when these questions are asked in a positive way though they can tell us more about their negative form. For example, question 1. “I am happy” tells us more about the effects of helping when you are not happy so you reverse the score.

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<tbody>
<tr>
<td>The sum of my Burnout Questions is</td>
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<td>22 or less</td>
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<td>Between 23 and 41</td>
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<td></td>
<td></td>
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<tr>
<td>42 or more</td>
<td>High</td>
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<table>
<thead>
<tr>
<th>You Wrote</th>
<th>Change to</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
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</tbody>
</table>

**Total:** ___

**Secondary Traumatic Stress Scale**

Just like you did on Compassion Satisfaction, copy your rating on each of these questions on to this table and add them up. When you have added them up you can find your score on the table to the right.

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>The sum of my Secondary Trauma questions is</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>22 or less</td>
<td>Low</td>
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<tr>
<td>Between 23 and 41</td>
<td>Moderate</td>
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<tr>
<td>42 or more</td>
<td>High</td>
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</tr>
</tbody>
</table>

| **Total:** ___ |

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Appendix F

Debriefing Survey

1. Gender
   a. Female
   b. Male
   c. Transgender Female
   d. Transgender Male
   e. Gender variant/nonconforming
   f. Prefer not to answer

2. Current age range
   a. 20-29
   b. 30-39
   c. 40-49
   d. 50 and above

3. Shift worked
   a. Day
   b. Mid
   c. Night

4. Years of Practice
   a. 0-5
   b. 6-10
   c. 11-15
   d. 16-20
   e. 21-25
   f. >25

5. Which of the following events would you consider a critical incident? (Choose all that apply.)
   a. Death of a patient
   b. Injury resulting in significant morbidity
   c. Mass casualty events
   d. Code blue event
   e. A medical error leading to harm
   f. Non-accidental injury
   g. Continuing to provide care when it is believed it to be futile
   h. Caring for a critically ill child

6. In the past 12 months, have you participated in a patient care scenario that was a critical incident?
   a. Yes
   b. No

7. On average, how often do you participate in a patient care scenario that you would label as a critical incident?
   a. Once per week
   b. Multiple times per week
   c. Once per shift
d. Multiple times per shift

8. Did your involvement in this critical patient care scenario negatively impact your wellbeing?
   a. Yes
   b. No

9. In the past 12 months, have you wanted to discuss a critical incident with your team?
   a. Yes
   b. No

10. In the past 12 months, did you discuss a critical incident with your team?
    a. Yes
    b. No

11. If yes to question 8: Did you find it useful to your wellbeing to discuss with your team?
    a. Yes
    b. No

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Changes made:

The first changes were to add inclusivity by changing female, male, and other to female, male, transgender female, transgender male, gender variant/non-conforming, and prefer not to answer for the gender question. Since this project only relates to nurses, this DNP student removed the question about the participants’ clinical roles. The demographic questions mirrored the participants' age range, shift worked, and years of experience described in the study by Kawar et al. (2019). The age range ran from 21-30, 31-40, 41-50, 51-60, and 61+; shift worked was day, mid, and night; and the years of experience ran from 0-5, 6-10, 11-15, 16-20, 21-25, and greater than 25. The last change was for the answer to Question 4 with what defines a critical incident. This DNP student removed the care of a loved one as a critical incident and added CBE and continuing to provide care when it is believed to be futile as definitions of critical incidents. Since the participants’ age range was an added section, Questions 4 through Question 10 changed to Questions 5 through Question 11; the content remained unchanged.
Appendix G

Recruitment Flyer

SEEKING NURSES FOR A SURVEY

Demographic questions
Professional Quality of Life Survey
Debriefing survey questionnaire

APPROXIMATELY 5 MINUTES TO START, SCAN THE QR CODE

ELIGIBLE UNITS & PARTICIPANTS
All nurses from ED, ICU, PCCU, ONC, Caritas, Ortho, and MS who provide care to patients during Code Blue Events.

ABOUT
You are being invited to participate in a survey that calculates the levels of compassion satisfaction, burnout, and secondary traumatic stress you experience from participating in Code Blue Events in the hospital.

ADDITIONAL INFORMATION
Participation in this survey is voluntary, and you may withdraw at any time. All participants will remain anonymous, and participation will have no effect on your employment status.

PROJECT LEADER INFORMATION
If you have questions, please contact David L. Boyd at david.boyd@providence.org

This project meets the guidelines for an Evidence-based Change Project as determined by the University of San Francisco and the Providence Saint John’s Health Center's IRB.
# Appendix H

## Staff Edu-gram

### CODE BLUE DEBRIEFING EDUGRAM

**Debriefing After Code Blue Events**

**Begins July 2022**

## What is Critical Incident Debriefing

- A process led by a designated debrief facilitator to stop and reflect on what just occurred during a critical incident.
- A way to process the emotions related to a code blue event to help decrease emotional trauma.
- It is a way to support ourselves and each other. It is not a place to blame or solve problems. It is not psychotherapy or crisis intervention.

## Why To Debrief

- Promotes the psychological wellbeing of nurses and other caregivers.
- Helps to foster a culture of safety.
- Can improve caregiver to caregiver relationships.
- A way to prioritize caring for ourselves, and the stress and trauma we experience as nurses.

## Defined Terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical Incident</td>
<td>Events that cause nurses a strong emotional response, e.g., code blue event.</td>
</tr>
<tr>
<td>Critical Incident debriefing</td>
<td>For this project: debriefing immediately after a code blue event.</td>
</tr>
<tr>
<td>Compassion Fatigue</td>
<td>Feeling of anger, frustration, and exhaustion caused by caring for patients over time</td>
</tr>
<tr>
<td>Compassion Satisfaction</td>
<td>The joy, happiness, and satisfaction derived from caring for patients</td>
</tr>
<tr>
<td>Burnout</td>
<td>Emotional exhaustion, depolarization, cynicism &amp; feelings of hopelessness</td>
</tr>
<tr>
<td>Secondary Traumatic Stress</td>
<td>Distress for exposure to actual trauma, or the suffering of others, when witnessed over and over</td>
</tr>
</tbody>
</table>

## When and Who Should Debrief

- Immediately after a Code Blue Event or as soon as possible and before the end of the shift.
- The debrief facilitator will arrange a time and place to hold the debrief.
- Nurses, CNAs, Physicians, Respiratory Therapists, HUCs, Chaplains, Security, and any Caregiver who wants to Participate.

## What to Expect

- The ED and ICU clinical supervisors or the RRT nurse will facilitate the debrief.
- A short 5-10 min meeting where everyone who chooses to can listen process and share what they are feeling.
- The facilitator may ask specific questions to illicit conversation. All are welcomed and encouraged to share.

## Available Resources

<table>
<thead>
<tr>
<th>Resource</th>
<th>Phone/Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Suicide Prevention Line</td>
<td>988</td>
</tr>
<tr>
<td>Physician Support Line</td>
<td>888-409-0141</td>
</tr>
<tr>
<td>Lyra Counseling (Providence Employees)</td>
<td>844-311-6223</td>
</tr>
<tr>
<td>Behavioral Health Concierge</td>
<td>833-724-9355</td>
</tr>
<tr>
<td>House Supervisor &amp; Code Lavender Program</td>
<td>310-829-8268</td>
</tr>
<tr>
<td>Spiritual Care Services</td>
<td>310-829-8500</td>
</tr>
</tbody>
</table>

**Project Lead:** David L. Boyd
david.boyd@providence.org
Appendix I

Wellness Badge Card with QR Code to the ProQOL Survey

CARING FOR YOURSELF IN THE FACE OF DIFFICULT WORK

Our work can be overwhelming. Our challenge is to maintain our resilience so that we can keep doing the work with care, energy, and compassion.

10 things to do for each day

1. Get enough sleep.
2. Get enough to eat.
4. Pray, meditate or relax.
5. Support a colleague.
6. Focus on what you did well.
7. Learn from your mistakes.
8. Do some light exercise.
9. Vary the work that you do.
10. Do something pleasurable.

For more Information see your supervisor and visit www.psychosocial.org or www.proqol.org

(Swift, 2010)

SWITCHING ON AND OFF

It is your empathy for others helps you do this work. It is vital to take good care of your thoughts and feelings by monitoring how you use them. Resilient workers know how to turn their feelings off when they go on duty, but on again when they go off duty. This is not denial; it is a coping strategy. It is a way they get maximum protection while working (switched off) and maximum support while resting (switched on).

How to become better at switching on and off

1. Switching is a conscious process. Talk to yourself as you switch.
2. Use images that make you feel safe and protected (switch off) or connected and cared for (switch on) to help you switch.
3. Find rituals that help you switch as you start and stop work.
4. Breathe slowly and deeply to calm yourself when starting a tough job.

(Swift, 2010)
Appendix J

Debrief Facilitator Education Outline

1. What are Critical Incident Debriefs
   a. Formal opportunities to pause & allow space to process
   b. Formal process to promote improved Psychological Well-being

2. Why to Debrief after Code Blue Events
   a. Performing CPR & the code blue events are traumatic
   b. Staff rarely take time to process & care for themselves after code blue events

3. When to Debrief
   a. Preferably immediately after a code blue event or ASAP & within the shift

4. What to Expect

5. The Role of the CID Facilitator
   a. Adjourn caregivers after the code blue event
   b. Promote an environment of psychological safety, introductions (use first names)
   c. Set guidelines, redirect, Facilitate/ don’t lead
   d. Close event, thank participants, encourage completion of survey

6. Trouble Shooting
   a. Conduct CID timely
   b. Be present, Silence is ok, Identify participants in need of mental health care

7. Scripting
   a. Use provided scripting

8. Use of ProQOL and Debriefing Survey Questions

9. Caritas Processes
   (Leff, 2021 & Watson, 2021)
Appendix K

Debriefing Form

<table>
<thead>
<tr>
<th>Facilitator:</th>
<th># of MDs</th>
<th>Duration of Debrief</th>
</tr>
</thead>
<tbody>
<tr>
<td># of RNs</td>
<td># of RTs</td>
<td></td>
</tr>
<tr>
<td># of CNAs</td>
<td># of other caregivers</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Facts of CI</th>
<th>Describe the details of the critical incident</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Connection May use one or all statements (Check the phrase used)</td>
<td>□ What was it like taking care of this patient?</td>
</tr>
<tr>
<td>Grief Response</td>
<td>□ What was the most distressing aspect of caring for this patient?</td>
</tr>
<tr>
<td>Ways to cope with grief May use one or all statements (Check the phrase used)</td>
<td>□ What was the most satisfying aspect of caring for this patient?</td>
</tr>
<tr>
<td>Lessons Learned May use one or all statements (Check the phrase used)</td>
<td>□ What feelings/emotions are you experiencing since the code?</td>
</tr>
<tr>
<td>□ How do you take care of yourself so you can continue to provide care for other patients and families?</td>
<td></td>
</tr>
<tr>
<td>□ What will you do today to support yourself as you process this situation?</td>
<td></td>
</tr>
<tr>
<td>□ What lessons did you learn from caring for this patient?</td>
<td></td>
</tr>
<tr>
<td>□ What will you remember most about this patient/family/case?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Conclusion</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Thank you for participating in this debrief.</td>
<td></td>
</tr>
<tr>
<td>Can I help you with anything else?</td>
<td></td>
</tr>
<tr>
<td>Please let me know if you remember something else that you want to debrief about, or you can reach out to your manager, spiritual care, or employee for assistance additional support.</td>
<td></td>
</tr>
<tr>
<td>We care about you, we want to support you, and we want to ease your way.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Available Resources</th>
<th>Phone Number</th>
<th>Time Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Suicide Prevention Line</td>
<td>800-273-8255</td>
<td>24hrs</td>
</tr>
<tr>
<td>Physician Support Line</td>
<td>888-409-0141</td>
<td>24hrs</td>
</tr>
<tr>
<td>Lyra Counseling/ Providence Employee</td>
<td>844-311-6223</td>
<td>24hrs</td>
</tr>
<tr>
<td>Behavioral Health Concierge</td>
<td>833-724-9355</td>
<td>7am-8pm PST</td>
</tr>
<tr>
<td>TeleSpiritual Health</td>
<td><a href="mailto:telespiritualhealth@providence.org">telespiritualhealth@providence.org</a></td>
<td></td>
</tr>
<tr>
<td>Credible Mind Website</td>
<td><a href="https://choosewell.crediblemind.com">https://choosewell.crediblemind.com</a></td>
<td></td>
</tr>
</tbody>
</table>

(Permission to use this survey granted by the Creative Commons Public Domain Dedication Waiver)

Appendix L

Gap Analysis

**Gap Analysis**

**Area under consideration:** Implementing critical incident debriefing after code blue events to decrease, secondary traumatic distress and burnout.

<table>
<thead>
<tr>
<th>Desired State</th>
<th>Current State</th>
<th>Action Steps</th>
</tr>
</thead>
</table>
| To have a formalized CID process | 1. No formal process for CID                                                   | 1. Implement CID pilot project  
2. Evaluate data from pilot to determine spread and sustainability |
| Standardization of when to conduct a CID | 1. Some units have informally used CID for individual code blue events  
2. CID is reactionary in opposed to proactive | 1. Change current process to automatically include an CID after each code blue event |
| Defined CID leader and defined expectations of participation | 1. No formally designated caregiver to facilitate the CID | 1. Train all the current ED, ICU clinical supervisors & Rapid response nurses as CID facilitators |
| Education available to help inform caregivers of the CID process | 1. Currently the topic of CID is not talked about  
2. Currently no education available  
3. Staff not aware of concepts | 1. Provide education to caregivers  
2. Use Edu-grams, huddle presentations, & educational video |
## Appendix M

### Gantt Chart

<table>
<thead>
<tr>
<th>ID #</th>
<th>Critical Incident Debriefing Project, Providence Saint John’s Health Center</th>
<th>Responsible Party(ies)</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>Status &amp; Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Planning</td>
<td>DNP St.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>1.2</td>
<td>Scholarly Inquiry of the Literature</td>
<td>DNP St.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>1.3</td>
<td>CNJU permission</td>
<td>DNP St.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>1.4</td>
<td>Complete Gray Analysis</td>
<td>DNP St.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>1.5</td>
<td>Establish Budget</td>
<td>DNP St.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>2</td>
<td>PSJHC IRB Waiver</td>
<td>DNP St.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>2.1</td>
<td>PSJHC Nursing Research Council Approval</td>
<td>DNP St.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>2.2</td>
<td>PSJHC IRB Approval</td>
<td>DNP St.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>2.3</td>
<td>Report out to Code Blue Committee</td>
<td>DNP St.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>2.4</td>
<td>Meet with Clinical Sup &amp; RRT RNs</td>
<td>DNP St.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>2.5</td>
<td>Meet with Internalists</td>
<td>DNP St.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>2.6</td>
<td>Collect Pre-implementation Survey</td>
<td>DNP St.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>2.7</td>
<td>Education for HCPs &amp; PSJHC</td>
<td>DNP St., Superusers, Department managers</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>2.8</td>
<td>Education for CID Facilitators July</td>
<td>DNP St., Superusers</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>2.9</td>
<td>Implement Plot Project CID for CBE in July</td>
<td>CID Facilitators, HCPs</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>3</td>
<td>Study</td>
<td>DNP St.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>3.1</td>
<td>Weekly Check-ins with Facilitators</td>
<td>DNP St.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>3.2</td>
<td>Check-in with ICU &amp; PCCU HCPs</td>
<td>DNP St., Managers</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>3.3</td>
<td>Close Survey</td>
<td>DNP St.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>3.4</td>
<td>Collect &amp; Analyze data</td>
<td>DNP St.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>4</td>
<td>Act</td>
<td>DNP St.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>4.1</td>
<td>Evaluate the data</td>
<td>DNP St.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>4.2</td>
<td>Evaluate the project's success</td>
<td>DNP St.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>4.4</td>
<td>Report out to PSJHC Nursing Research Council</td>
<td>DNP St.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>4.5</td>
<td>Recommend formal implementation of CID at PSJHC</td>
<td>DNP St.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>4.6</td>
<td>Final Evaluation or project</td>
<td>DNP St.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>4.7</td>
<td>Compose, Present, and Upload Final Project for USF &amp; PSJHC</td>
<td>DNP St., USF Faculty</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>4.8</td>
<td>Project End / Graduation</td>
<td>DNP St.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

**Definition of Abbreviations:**
- Chief Nursing Officer (CNO), University of San Francisco (USF), Institutional review board (IRB), Providence Saint John’s Health Center (PSJHC), critical incident debriefing (CID), code blue event (CBE), rapid response team (RRT), registered nurse (RN), intensive care unit (ICU), progressive cardiac care unit (PCCU), DNP Student (DNP St.)
Appendix N

CNO Approval Letter

Dear Dr. Maxworthy, & USF Executive Leadership Faculty,

I am writing to confirm that David L. Boyd has my authorization and support to evaluate and implement his DNP practice change project related to implementing critical incident debriefing at Providence Saint John’s Health Center. He will need to obtain approval from the Providence research committee and obtain all required approvals as determined by the Providence Health System’s IRB.

Sincerely,

Giancarlo Lyke-Edrosolo DNP, RN, CENP, FAONL
Chief Nursing Officer
Providence Saint John’s Health Center
2121 Santa Monica Blvd. | Santa Monica, CA 90404
Giancarlo.Lyke-Edrosolo@providence.org
Office 310-829-8413
Inspired Caregivers * Innovative Practice * Excellent Care
Appendix O

IRB Approval
Doctor of Nursing Practice
Statement of Non-Research Determination (SOD) Form

The SOD should be completed in NURS 7005 and NURS 791E/P or NURS 749/A/E

General Information

Last Name: Boyd
First Name: David
Semester/Year: Fall 2021
Course Name & Number: Nurs-791E
Chairperson Name: Dr. Mary Lynne Knighten
Advisor Name: Dr. Mary Lynne Knighten

Project Description

1. Title of Project
   Using Critical Incident Debriefing after Code Blue Events to Increase Compassion Satisfaction and Decrease Compassion Fatigue and Burnout in an Acute Care Hospital

2. Brief Description of Project
   Clearly state the purpose of the project and the problem statement in 250 words or less.

   Two years into the COVID-19 pandemic, health care professionals (HCP) rendering care in the hospital setting continue to experience extreme levels of stress, burnout, and secondary trauma. Severe staffing shortages and an increase in the number of critically ill patients only add to the distress and psychological trauma in HCPs. While many factors contribute to stress, burnout, and secondary trauma, providing care for patients requiring cardiopulmonary resuscitation during a code blue event creates a stressful, high-intensity environment (Mayer & Hamilton, 2018). Despite being exposed to these traumatic events; HCPs at Providence Saint John’s Health Center (PSJHC) go straight from performing CPR to providing care to other patients without ever stopping to process what occurred during the code blue event. Without an opportunity to debrief, these code blue events can cause increased stress, burnout, and secondary trauma (Mayer & Hamilton, 2018). This project seeks to use critical incident debriefing (CID) after code blue events to increase Compassion Satisfaction (CS), decrease Burnout (BO), and decrease Secondary Traumatic Stress (STS). The CID will occur immediately after the code blue event, where all HCP involved in the event can meet to debrief.
### Aim Statement

This project aims to determine if health care professionals value the use of critical incident debriefing immediately after code blue events, and to see if CIDs increase Compassion Satisfaction from a baseline score of low to moderate or moderate to high. Additionally, this project seeks to determine if using CIDs decreases Burnout and Secondary Traumatic Stress from a baseline score of high to moderate or moderate to low in HCPs at Providence Saint John's Health Center that participate in code blue events over three months.

### 3. AIM Statement: What are you trying to accomplish?

- What do you hope to accomplish with this project? Aims should be SMART, specific, clear, well-defined, and at a minimum describe the target population, the desired improvement, and the targeted timeframe.

- To improve (your process) from (baseline)% to (target)%, by (timeframe), among (your specific population)

**Complete this statement:**

This project aims to determine if health care professionals value the use of critical incident debriefing immediately after code blue events, and to see if CIDs increase Compassion Satisfaction from a baseline score of low to moderate or moderate to high. Additionally, this project seeks to determine if using CIDs decreases Burnout and Secondary Traumatic Stress from a baseline score of high to moderate or moderate to low in HCPs at Providence Saint John’s Health Center that participate in code blue events over three months.

### 4 Brief Description of Intervention (150 words).

To implement critical incident debriefs at PSJHC, HCPs who participate in code blue events will be given a chance to complete the Professional Quality of Life Scale Version 5 (ProQOL5) as a baseline survey. See Appendix A. After completing the baseline survey, each of these HCPs will receive detailed education including the definitions of CIDs, CS, BO, STS, and the process for implementing CIDs. The HCPs identified as the leaders to implement the CIDs include the intensivists, rapid response nurses, and the intensive care unit (ICU) clinical supervisors. In addition, these HCPs will receive detailed training on facilitating a CID. After these HCPs receive this education, the CIDs will be conducted with the code team after all inpatient code blue events for three months. Upon completing this pilot, the HCPs will retake the ProQOL5 survey along with a list of debriefing satisfaction questions (See Appendix B) to measure if the CIDs were valued and affected the CS, BO, and STS experienced by HCPs related to code blue events.

### 4a. How will this intervention be implemented?

- Where will you implement the project?

  Implementation will occur at Providence Saint John’s Health Center.

- Attach a letter from the agency with approval of your project.

  Included in this document is a letter of support from the chief nursing officer (See Appendix C). Additional approval from the Providence Health Systems research department is in progress. Estimated date of approval 1/11/2022.

- Who is the focus of the intervention?
The focus of the intervention is: The ICU clinical supervisors, rapid response nurses, intensivists, bedside nurses, nursing assistants, respiratory therapists, patient transporters, chaplains, and public safety officers, who respond to code blue events in the inpatient setting.

- How will you inform stakeholders/participants about the project and the intervention?

This DNP student will introduce this project to key stakeholders through the Code Blue Committee. Key individuals such as the ICU clinical supervisors, rapid response nurse, intensivist will receive training on leading a critical incident debriefing. Bedside health care providers will receive an introduction to this project by presentations, Edugram, huddle topics, recruited superusers, and each department’s manager communications.

5. Outcome measurements: How will you know that a change is an improvement?

- Measurement over time is essential to QI. Measures can be outcome, process, or balancing measures. Baseline or benchmark data are needed to show improvement.
- Align your measure with your problem statement and aim.
- Try to define your measure as a numerator/denominator.
  - What is the reliability and validity of the measure? Provide any tools that you will use as appendices.
  - Describe how you will protect participant confidentiality.

This project will use a pre/post-implementation survey to determine whether a change has occurred. All HCPs who respond to code blue events will be asked to complete a survey before implementing critical incident debriefs. The pre-implementation survey will serve as the baseline data, and the post-implementation survey will provide the data to determine if a change has occurred. The survey will include a list of demographic and debriefing satisfaction questions and the ProQOL5. An evaluation of the education and CID process, including the needs assessment questions will be conducted to determine HCP satisfaction with the process along with the PROQOL5 following the intervention. In addition, all documents will collect the last four numbers of the participants’ cell phone numbers to match the pre/post-intervention surveys and provide confidentiality. All data included for publication or manuscript will be de-identified and used only in the aggregate form.

According to Stamm (2010), the ProQOL5 scale remains valid based on over two hundred publications and over 100,000 articles referenced using the ProQOL5 scale. This scale measures three different concepts, Compassion Satisfaction, Burnout, and Secondary Traumatic Stress. Participants must answer all questions on the scale, and results are quantified with a score of 22 or lower representing a low level, a score of 23 to 41 a moderate level, and a score of 42 or higher a high level for each concept being measured. Each categories’ score must be calculated separately from the other scores, and the higher the score for CS suggests the participant has satisfaction in their role as a caregiver. For BO and STS, the higher the score indicates increased compassion fatigue and STS (Stamm, 2010). Additional support for using this scale comes from Galiana et al. (2017), who verified the validity of the ProQOL5 with translation into Spanish and Portuguese. Galiana’s study found the scale to be valid even with translation. Using the ProQOL5 scale to monitor an individual over time remains acceptable, further supporting this scale’s use for this project (Stamm, 2010).
DNP Statement of Determination

Evidence-Based Change of Practice Project Checklist*

The SOD should be completed in NURS 7005 and NURS 791E/P or NURS 749/A/E

Project Title:

Using Critical Incident Debriefing after Code Blue Events to Decrease Compassion Fatigue

<table>
<thead>
<tr>
<th>Mark an “X” under “Yes” or “No” for each of the following statements:</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>The aim of the project is to improve the process or delivery of care with established/accepted standards, or to implement evidence-based change. There is no intention of using the data for research purposes.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>The specific aim is to improve performance on a specific service or program and is a part of usual care. All participants will receive standard of care.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>The project is not designed to follow a research design, e.g., hypothesis testing or group comparison, randomization, control groups, prospective comparison groups, cross-sectional, case control). The project does not follow a protocol that overrides clinical decision-making.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>The project involves implementation of established and tested quality standards and/or systematic monitoring, assessment or evaluation of the organization to ensure that existing quality standards are being met. The project does not develop paradigms or untested methods or new untested standards.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>The project involves implementation of care practices and interventions that are consensus-based or evidence-based. The project does not seek to test an intervention that is beyond current science and experience.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>The project is conducted by staff where the project will take place and involves staff who are working at an agency that has an agreement with USF SONHP.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>The project has no funding from federal agencies or research-focused organizations and is not receiving funding for implementation research.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>The agency or clinical practice unit agrees that this is a project that will be implemented to improve the process or delivery of care, i.e., not a personal research project that is dependent upon the voluntary participation of colleagues, students and/or patients.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>If there is an intent to, or possibility of publishing your work, you and supervising faculty and the agency oversight committee are comfortable with the following statement in your methods section: “This project was undertaken as an Evidence-based change of practice project at X hospital or agency and as such was not formally supervised by the Institutional Review Board.”</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

Answer Key:

- If the answer to all of these items is “Yes”, the project can be considered an evidence-based activity that does not meet the definition of research. IRB review is not required. Keep a copy of this checklist in your files.
- If the answer to any of these questions is “No”, you must submit for IRB approval.
DNP Statement of Determination

Evidence-Based Change of Practice Project Checklist Outcome

The SOD should be completed in NURS 7005 and NURS 791E/P or NURS 749/A/E

Project Title:

Using Critical Incident Debriefing after Code Blue Events to Increase Compassion Satisfaction and Decrease Compassion Fatigue and Burnout in an Acute Care Hospital

✓ This project meets the guidelines for an Evidence-based Change in Practice Project as outlined in the Project Checklist (attached). Student may proceed with implementation.

☐ This project involves research with human subjects and must be submitted for IRB approval before project activity can commence.

Comments:

This QI project is worthwhile in attempting to address the burnout and compassion fatigue being experienced by acute care nurses and other healthcare providers. The ProQOL5 is a valid and reliable tool, which is currently being used by Providence Health System and lends itself well to this project. Dr. Knighten

Student Last Name: Boyd
Student First Name: David
Semester/Year: Fall 2021
Student Signature: David L. Boyd MSN, RN.
Date: 12/31/2021

Chairperson Name: Dr. Mary Lynne Knighten
Chairperson Signature: ____________________________
Date: 12/31/2021

DNP Second Committee Member: Dr. Sara Horton-Deutsch
Name: ____________________________________________

DNP Second Committee
Member
Signature: __________________________ Date: ________________

1/01/2022

DNP SOD Review Committee
Member Name: ____________________________________________

DNP SOD Review Committee
Member
Signature: __________________________ Date: ________________

12/31/2021
Appendix P

PSJHC IRB Approval

PROJECT DETERMINATION

Date:       June 2, 2022

To:         David L. Boyd MSN, RN, FNP-BC
             david.boyd@providence.org
             Giancarlo Lyle-Edrosolo DNP, RN
             giancarlo.lyle-edrosolo@providence.org
             Mary Lynne Knighten DNP, RN, NEA-BC
             mknighaten@usfca.edu

From:       Madeliene Carlos, CIM, CIP
             Manager, Behavioral and Minimal Risk Panel

Project Title: “Using Critical Incident Debriefing After Code Blue Events to Support Nurses”

This represents the IRB determination for the above referenced project.

The IRB has determined that this project, as submitted, does not meet the definition of human subjects’ research and does not require IRB review as defined in the federal regulations.

The determination is based upon the information submitted only, revisions must be submitted to the IRB prior to implementation.

The project may proceed as described in the documents submitted for review.

This determination does not exempt you from following hospital policies and procedures as they relate to conduct of this project. It is your responsibility to ensure compliance with those policies.

If you have questions related to this determination, please contact:
Madeliene Carlos, CIM, CIP | Manager, Behavioral and Minimal Risk Panel
Madeliene.Carlos@providence.org

If you have questions related to QI/PI/EBP review, please contact us at:
PSJHirbDetermination@providence.org
Project Leads/Student Faculty-Advisors/Providence Sponsors must comply with all the following:

1) Conduct your project in accordance with the information submitted to and reviewed by the IRB.
2) All revisions to this project must be submitted to the IRB prior to implementation.
3) Students cannot directly access any Protected Health Information (PHI) through Epic or any other database, this must be completed by the Providence Sponsor.
4) All PHI and confidential PSIH information must remain on a PSIH campus and on a PSIH secure computer.
5) PHI and confidential PSIH information must not be recorded on personal computers or other electronic devices including USBs, smartphone (including taking pictures of data), emailing information to a personal e-mail account.
6) Paper copies of PHI cannot leave the PSIH facility.
7) Project results that leave PSIH for inclusion in a poster/paper presentation/publication must be in aggregate (summary statistics) form only and/or be de-identified. There must be no way to link the data to a patient, either alone or in combination with other information.
8) Failure to comply with PSIH integrity, compliance, privacy and security standards and requirements will result in appropriate corrective action.
9) This project may be audited.

**PHI Includes:**

1) Names
2) All geographical subdivisions smaller than a State, including street address, city, county, precinct, zip code, and their equivalent geocodes, except for the initial three digits of a zip code, if according to the current publicly available data from the Bureau of the Census: (1) The geographic unit formed by combining all zip codes with the same three initial digits contains more than 20,000 people; and (2) The initial three digits of a zip code for all such geographic units containing 20,000 or fewer people is changed to 000.
3) All elements of dates (except year) for dates directly related to an individual, including birth date, admission date, discharge date, date of death; and all ages over 89 and all elements of dates (including year) indicative of such age, except that such ages and elements may be aggregated into a single category of age 90 or older.
4) Phone numbers
5) Fax numbers
6) Electronic mail addresses
7) Social Security numbers
8) Medical record numbers
9) Health plan beneficiary numbers
10) Account numbers
11) Certificate/license numbers
12) Vehicle identifiers and serial numbers, including license plate numbers
13) Device identifiers and serial numbers
14) Web Universal Resource Locators (URLs)
15) Internet Protocol (IP) address numbers
16) Biometric identifiers, including finger and voice prints
17) Full face photographic images and any comparable images; and
18) Any other unique identifying number, characteristic, or code (note this does not mean the unique code assigned by the investigator to code the data)
Appendix Q

Updated PSJHC IRB

PROJECT DETERMINATION

Date:  June 29, 2022

To:  David L. Boyd MSN, RN, FNP-BC
      david.boyd@providence.org
      Giancarlo Lyle-Edrosolo DNP, RN
      giancarlo.lyle-edrosolo@providence.org
      Mary Lynne Knighten DNP, RN, NEA-BC
      mknighten@usfca.edu

From:  Madeliene Carlos, CIM, CIP
        Manager, Behavioral and Minimal Risk Panel

Project Title:  “Using Critical Incident Debriefing After Code Blue Events to Support Nurses”

Thank you for submitting the modifications to your project.

Based upon the information submitted, the IRB’s determination remains the same.

(On June 2, 2022, the IRB has determined that this project, as submitted, does not meet the definition of human subjects’ research and does not require IRB review as defined in the federal regulations. The determination was based upon the information submitted only.)

The project may proceed as described in the documents submitted for review.

This determination does not exempt you from following hospital policies and procedures as they relate to conduct of this project. It is your responsibility to ensure compliance with those policies.

If you have questions related to this determination, please contact:
Madeliene Carlos, CIM, CIP | Manager, Behavioral and Minimal Risk Panel
Madeliene.Carlos@providence.org

If you have questions related to QI/PI/EBP review, please contact us at:
PSJHIRBDEtermination@providence.org
Project Leads/Student Faculty-Advisors/Providence Sponsors must comply with all the following:

- Conduct your project in accordance with the information submitted to and reviewed by the IRB.
- All revisions to this project must be submitted to the IRB prior to implementation.
- Students cannot directly access any Protected Health Information (PHI) through Epic or any other database; this must be completed by the Providence Sponsor.
- All PHI and confidential PSJH information must remain on a PSJH campus and on a PSJH secure computer.
  - PHI and confidential PSJH information must not be recorded on personal computers or other electronic devices including USBs, smartphone (including taking pictures of data), emailing information to a personal e-mail account.
  - Paper copies of PHI cannot leave the PSJH facility.
- Project results that leave PSJH for inclusion in a poster/paper presentation/publication must be in aggregate (summary statistics) form only and/or be de-identified. There must be no way to link the data to a patient, either alone or in combination with other information.
- Failure to comply with PSJH integrity, compliance, privacy and security standards and requirements will result in appropriate corrective action.
- This project may be audited.

**PHI Includes:**

1. Names
2. All geographical subdivisions smaller than a State, including street address, city, county, precinct, zip code, and their equivalent geocodes, except for the initial three digits of a zip code, if according to the current publicly available data from the Bureau of the Census: (1) The geographic unit formed by combining all zip codes with the same three initial digits contains more than 20,000 people; and (2) The initial three digits of a zip code for all such geographic units containing 20,000 or fewer people is changed to 000
3. All elements of dates (except year) for dates directly related to an individual, including birth date, admission date, discharge date, date of death; and all ages over 89 and all elements of dates (including year) indicative of such age, except that such ages and elements may be aggregated into a single category of age 90 or older.
4. Phone numbers
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7. Social Security numbers
8. Medical record numbers
9. Health plan beneficiary numbers
10. Account numbers
11. Certificate/license numbers
12. Vehicle identifiers and serial numbers, including license plate numbers
13. Device identifiers and serial numbers
14. Web Universal Resource Locators (URLs)
15. Internet Protocol (IP) address numbers
16. Biometric identifiers, including finger and voice prints
17. Full face photographic images and any comparable images; and
18. Any other unique identifying number, characteristic, or code (note this does not mean the unique code assigned by the investigator to code the data)
Appendix U

PSJHC IRB Extension Approval

PROJECT DETERMINATION

Date: October 20, 2022

To: David L. Boyd MSN, RN, FNP-BC
    david.boyd@providence.org
    Giancarlo Lyle-Edrosolo DNP, RN
    giancarlo.lyle-edrosolo@providence.org
    Mary Lynne Knighten DNP, RN, NEA-BC
    mknighten@usfca.edu

From: Madeliene Carlos, CIM, CIP
      Manager, Behavioral and Minimal Risk Panel

Project Title: “Using Critical Incident Debriefing After Code Blue Events to Support Nurses”

Thank you for submitting the modifications to your project.

Based upon the information submitted, the IRB’s determination remains the same.

(On June 2, 2022, the IRB has determined that this project, as submitted, does not meet the definition of human subjects’ research and does not require IRB review as defined in the federal regulations. The determination was based upon the information submitted only.)

The project may proceed as described in the documents submitted for review.

This determination does not exempt you from following hospital policies and procedures as they relate to conduct of this project. It is your responsibility to ensure compliance with those policies.

If you have questions related to QI/PI/EBP review, please contact us at: PSJHIRBDetermination@providence.org
Project Leads/Student Faculty-Advisors/Providence Sponsors must comply with all the following:

- Conduct your project in accordance with the information submitted to and reviewed by the IRB.
- All revisions to this project must be submitted to the IRB prior to implementation.
- Students cannot directly access any Protected Health Information (PHI) through Epic or any other database, this must be completed by the Providence Sponsor.
- All PHI and confidential PSJH information must remain on a PSJH campus and on a PSJH secure computer.
  - PHI and confidential PSJH information must not be recorded on personal computers or other electronic devices including USBs, smartphone (including taking pictures of data), emailing information to a personal e-mail account.
  - Paper copies of PHI cannot leave the PSJH facility.
- Project results that leave PSJH for inclusion in a poster/paper presentation/publication must be in aggregate (summary statistics) form only and/or be de-identified. There must be no way to link the data to a patient, either alone or in combination with other information.
- Failure to comply with PSJH integrity, compliance, privacy and security standards and requirements will result in appropriate corrective action.
- This project may be audited.

PHI Includes:

1) Names
2) All geographical subdivisions smaller than a State, including street address, city, county, precinct, zip code, and their equivalent geocodes, except for the initial three digits of a zip code, if according to the current publicly available data from the Bureau of the Census: (1) The geographic unit formed by combining all zip codes with the same three initial digits contains more than 20,000 people; and (2) The initial three digits of a zip code for all such geographic units containing 20,000 or fewer people is changed to 000
3) All elements of dates (except year) for dates directly related to an individual, including birth date, admission date, discharge date, date of death; and all ages over 89 and all elements of dates (including year) indicative of such age, except that such ages and elements may be aggregated into a single category of age 90 or older
4) Phone numbers
5) Fax numbers
6) Electronic mail addresses
7) Social Security numbers
8) Medical record numbers
9) Health plan beneficiary numbers
10) Account numbers
11) Certificate/license numbers
12) Vehicle identifiers and serial numbers, including license plate numbers
13) Device identifiers and serial numbers
14) Web Universal Resource Locators (URLs)
15) Internet Protocol (IP) address numbers
16) Biometric identifiers, including finger and voice prints
17) Full face photographic images and any comparable images; and
18) Any other unique identifying number, characteristic, or code (note this does not mean the unique code assigned by the investigator to code the data)
Appendix S

Work Breakdown Structure

Implementing Critical Incident Debriefing after Code Blue Events

Plan
- Obtain Support From CNO
- Establish Budget
- Establish Units for Implementation
- Complete Gap Analysis
- Determine Sponsor

Do
- Meet with ICU Clin supers & RRT RNs
- Meet with Intensivists
- Report to Code Blue Committee
- Present to Research Committee

Study
- Data Collection
- Analyze Data
- Obtain Facilitator Feedback

Act
- Evaluate Project
- Obtain Caregiver Feedback
- Report Results to Research Committee
- Formal Implementation
# Appendix T

## Responsibility/Communication Matrix

<table>
<thead>
<tr>
<th>Communication</th>
<th>Who (by/to whom)</th>
<th>Frequency</th>
<th>Goal</th>
<th>Route</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Academic Advisors</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dr. Knighten Committee Chair</td>
<td>David bidirectional</td>
<td>Every two weeks</td>
<td>Review project status, discuss barriers and updates, share progress</td>
<td>Email, zoom, phone calls</td>
</tr>
<tr>
<td>Dr. Horton-Deutsch Co-Chair/Second Reader</td>
<td>David bidirectional</td>
<td>As needed</td>
<td>To received feedback from draft prospectus</td>
<td>Email, zoom if necessary</td>
</tr>
<tr>
<td><strong>Project Sponsors (Corporate/System Nursing Leadership)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Giancarlo Lyle-Edrosolo CNO or Rose Pelikan, Executive Director of Critical Care Services</td>
<td>David bidirectional</td>
<td>Weekly</td>
<td>Review project from a systems perspective, strategize about barriers and facilitators, provide updates</td>
<td>Email and conference calls</td>
</tr>
<tr>
<td>Dr. Parshawn Lahiji Associate Director of Critical Care Clinical Supervisors &amp; RRT Nurses</td>
<td>David bidirectional</td>
<td>Weekly</td>
<td>Review project from a clinical perspective, strategize about barriers and facilitators, provide updates</td>
<td>Email and conference calls</td>
</tr>
<tr>
<td><strong>Site Providence Saint John’s Health Center Leadership</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Code Blue Committee</td>
<td>David</td>
<td>Once</td>
<td>Introduce the project plan and request site participation, and report results of the project</td>
<td>Phone conference Virtual Meeting</td>
</tr>
<tr>
<td>Marty Foster Director of Quality</td>
<td>David</td>
<td>Once</td>
<td>Introduce the project plan and request participation</td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Research Council Nursing Shared Governance</td>
<td>David</td>
<td>Twice</td>
<td>Introduce the project plan and request letter of support, and report results and recommendations</td>
<td>Virtual Meeting Face-to-face</td>
</tr>
<tr>
<td>Director and Managers at PSJHC</td>
<td>David bidirectional</td>
<td>Initial &amp; PRN</td>
<td>Discuss project, request participants, coordinate pre- and post-implementation site visits</td>
<td>Phone conference</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------------</td>
<td>---------------</td>
<td>------------------------------------------------------------------------------------------------</td>
<td>------------------</td>
</tr>
<tr>
<td><strong>Providence Regional Nurse Scientist</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dr. Trisha Saul</strong></td>
<td>David Bidirectional</td>
<td>Initially, At Times of Change &amp; PRN</td>
<td>Discuss data collection methodology and analysis plan</td>
<td>Phone conference and face-to-face</td>
</tr>
</tbody>
</table>
Appendix U

SWOT Analysis

<table>
<thead>
<tr>
<th><strong>Strengths</strong></th>
<th><strong>Weaknesses</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Leadership support</td>
<td>• Lack of engagement</td>
</tr>
<tr>
<td>• Aligns with mission &amp; values</td>
<td>• Mental health stigma</td>
</tr>
<tr>
<td>• Nurses &amp; physician’s support</td>
<td>• Participation is voluntary</td>
</tr>
<tr>
<td>• RNs &amp; MDs requesting to implement formal CID process</td>
<td>• Lack of Psychological Safety</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Opportunities</strong></th>
<th><strong>Threats</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Currently a focus of the SoCal Providence Region to implement evidence-based projects</td>
<td>• Regional initiative to launch a new HR platform</td>
</tr>
<tr>
<td>• Magnet® Journey</td>
<td>• Ongoing impact from the pandemic</td>
</tr>
<tr>
<td></td>
<td>• Labor Union Negotiations &amp; a potential strike</td>
</tr>
<tr>
<td></td>
<td>• Survey fatigue</td>
</tr>
</tbody>
</table>
## Appendix V

### Project Budget

<table>
<thead>
<tr>
<th>Type of Expense</th>
<th>Description</th>
<th>Total Proposed Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debrief Facilitators’ Educational Hours</td>
<td>2 hrs for 25 staff 50 hrs @ $65</td>
<td>$3,250.00</td>
</tr>
<tr>
<td>DNP Student’s Hours Teach, Recruitment, &amp; Organizing</td>
<td>4 hrs per week for 20 weeks @ $65.00</td>
<td>$5,200.00</td>
</tr>
<tr>
<td>Recruitment Flyers + Badge Cards Design Costs</td>
<td></td>
<td>$450.00</td>
</tr>
<tr>
<td>Wellness Badge Card</td>
<td>500 @ $1.79</td>
<td>$895.00</td>
</tr>
<tr>
<td>Miscellaneous Office Supplies</td>
<td></td>
<td>$300.00</td>
</tr>
<tr>
<td>iPad Mini, For Survey Incentive Raffle</td>
<td></td>
<td>$500.00</td>
</tr>
<tr>
<td>Starbucks Gift Card Debrief Facilitators</td>
<td>15 @ $5.00</td>
<td>$75.00</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td></td>
<td><strong>$10,670.00</strong></td>
</tr>
</tbody>
</table>
## Appendix W

### Cost Evaluation Analysis

<table>
<thead>
<tr>
<th>Number of Resignations</th>
<th>Average Cost of RN Turnover</th>
<th>Minus the Cost of Project</th>
<th>Savings Per RN</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 RN</td>
<td>$54,000</td>
<td>$10,670</td>
<td>-$43,330</td>
</tr>
<tr>
<td>2 RN</td>
<td>$108,000</td>
<td>$10,670</td>
<td>-$97,330</td>
</tr>
</tbody>
</table>

To determine the cost of a RN turnover, an average was obtained based on the data provided by Kelly et al. (2021) that RN turnover cost between $11,000 to $90,000 per RN. (CDC, 2021)
Appendix X

Recorded Resignations

<table>
<thead>
<tr>
<th>Number of RN Resignations 3-Months Before Implementation April to June 2022 n=32</th>
<th>Number of RN Resignations During Implementation Period July 2022 to January 2022 n=32</th>
<th>Number of RN Resignations 3- Months Post-Implementation Jan to March 2023 n=47</th>
</tr>
</thead>
<tbody>
<tr>
<td>April</td>
<td>May</td>
<td>June</td>
</tr>
<tr>
<td>11</td>
<td>12</td>
<td>9</td>
</tr>
</tbody>
</table>
Appendix Y

PDSA Model

(Model for Improvement

What are we trying to accomplish?

How will we know that a change is an improvement?

What change can we make that will result in improvement?

(Langley et al., 2009)
## Appendix Z

### Survey Responses

<table>
<thead>
<tr>
<th>Total Responses</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Responses</td>
<td>115</td>
</tr>
<tr>
<td>Incomplete Responses</td>
<td>12</td>
</tr>
<tr>
<td>Duplicate Responses</td>
<td>4</td>
</tr>
<tr>
<td>Complete Responses</td>
<td>99</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Complete Nurses’ Responses</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete Nurses’ Responses</td>
<td>99</td>
</tr>
<tr>
<td>Pre-Implementation Survey Only</td>
<td>43</td>
</tr>
<tr>
<td>Post-Implementation Survey Only</td>
<td>20</td>
</tr>
<tr>
<td>Both Pre- and Post-Implementation Survey</td>
<td>18</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total Number of Nurses that Participated in the Surveys</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number of Nurses that Participated in the Surveys</td>
<td>81</td>
</tr>
</tbody>
</table>
Appendix AA

Survey Demographics

Gender

Age

Shifts

Year of Practice
Appendix BB

Survey Question 5

When looking at the debrief questions of the 81 nurses who responded to Question 5—Which of the following events would you consider a critical incident? (Choose all that apply)

Critical Incidents

- Death of a patient
- Injury resulting in significant morbidity
- Mass casualty event
- Code blue event
- A medical error leading to harm
- Continuing to provide care when it is believed it to be futile
- Caring for a critically ill child
- Non-accidental injury

< 5 years | 5 - 15 years | 16 - 25 years | > 25 years | Total
Appendix CC

Survey Questions 6 & 7

Q6:

Participated in a Critical Incident in the Past 12 months

- Yes: 71
- No: 10

Q7:

How Often do You Participate in a Critical Incident

- Once per week: 59
- Multiple times per week: 20
- Once per shift: 1
- Multiple times per shift: 1
Appendix DD

Survey Question 8

Q8:

Did Involvement in Critical Incident Negatively Impact Your Well-being

- Yes: 32
- No: 49

60.49% vs. 39.51%
Appendix EE

Survey Question 9 & 10

Q9:

Q10:
Appendix FF

Survey Question 11

Q11:
Appendix GG

Pre- and Post-Implementation Survey Demographics

Gender

Age

Shifts

Year of Practice
Appendix HH

ProQOL Pre- and Post-Implementation Means

Paired T-test for Participants Completing Pre- and Post-Implementation Survey

<table>
<thead>
<tr>
<th></th>
<th>Mean Pre-Implementation n=18</th>
<th>Mean Post-Implementation n=18</th>
<th>P-value &lt; 0.05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compassion Satisfaction Mean</td>
<td>39.50</td>
<td>39.83</td>
<td>0.381</td>
</tr>
<tr>
<td>Burnout Means</td>
<td>24.56</td>
<td>23.44</td>
<td>0.191</td>
</tr>
<tr>
<td>Secondary Traumatic Stress Means</td>
<td>25.94</td>
<td>24.22</td>
<td>0.148</td>
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</table>
## Appendix II

### All Nurse’s Pre- and Post-Implementation Means

#### Independent T-test Between All Participants

<table>
<thead>
<tr>
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<th>Mean Pre-Implementation n=43</th>
<th>Mean Post-Implementation n=38</th>
<th>P-value &lt; 0.05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compassion Satisfaction Mean</td>
<td>37.047</td>
<td>39.553</td>
<td>0.039</td>
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<tr>
<td>Burnout Means</td>
<td>25.837</td>
<td>23.605</td>
<td>0.028</td>
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<tr>
<td>Secondary Traumatic Stress Means</td>
<td>24.209</td>
<td>24.974</td>
<td>0.505</td>
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</table>
## Appendix JJ

### Debriefing Form Data

<table>
<thead>
<tr>
<th>Debrief Form Data</th>
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<tbody>
<tr>
<td>Total Codes</td>
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<tr>
<td>July to January</td>
</tr>
<tr>
<td>Codes Debriefed</td>
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</table>

### Units where Debriefing Occurred

<table>
<thead>
<tr>
<th>Units Where Debriefs Occurred</th>
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</thead>
<tbody>
<tr>
<td>ICU</td>
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<tr>
<td>ED</td>
</tr>
<tr>
<td>PCCU</td>
</tr>
<tr>
<td>MS</td>
</tr>
<tr>
<td>Onc</td>
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<tr>
<td>CL</td>
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### Staff Attending Debriefs

(Unknown if the Same Staff Debriefed More Once)

<table>
<thead>
<tr>
<th>Type of Staff</th>
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<tbody>
<tr>
<td>Nurses</td>
<td>158</td>
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<tr>
<td>Doctors</td>
<td>32</td>
</tr>
<tr>
<td>RTs</td>
<td>29</td>
</tr>
<tr>
<td>CNAs</td>
<td>6</td>
</tr>
<tr>
<td>Other:</td>
<td></td>
</tr>
<tr>
<td>ED Techs</td>
<td>21</td>
</tr>
<tr>
<td>HUCs</td>
<td></td>
</tr>
<tr>
<td>Chaplain</td>
<td></td>
</tr>
</tbody>
</table>
Appendix KK

Citi Training Certificate

This is to certify that:

David Boyd

Has completed the following CITI Program course:

- Human Subjects Research (HSR) (Curriculum Group)
- Human Subjects Research (HSR) (Course Learner Group)
  1 - Basic Course

Under requirements set by:

University of San Francisco

Completion Date: 01-Aug-2021
Expiration Date: 31-Jul-2024
Record ID: 43822218

Verify at www.citiprogram.org/verify?wfa05f37e-371a-4e1b-a534-ad311cae3ae1-43822218
Appendix LL

Permission to Use ProQOL

Permission to Use the ProQOL

Thank you for your interest in using the Professional Quality of Life Measure (ProQOL). Please share the following information with us to obtain permission to use the measure:

Please provide your contact information:

Email Address
dbboyd@don.usfca.edu

Name
David L. Boyd

Organization Name, if applicable
University of San Francisco / Providence Saint John's Health Center

Country
United States

Please tell us briefly about your project:

Two years into the COVID-19 pandemic, health care professionals (HCP) rendering care in the hospital setting continue to experience extreme levels of stress, burnout, and secondary trauma. Severe staffing shortages and an increase in the number of critically ill patients only add to the distress and psychological trauma in HCPs. While many factors contribute to stress, burnout, and secondary trauma, providing care for patients requiring cardiopulmonary resuscitation during a code blue event creates a stressful, high-intensity environment (Mayer & Hamilton, 2018). Despite being exposed to these traumatic events, HCPs at Providence Saint John's Health Center (PSJHC) go straight from performing CPR to providing care to other patients without ever stopping to process what occurred during the code blue event. Without an opportunity to debrief, these code blue events can cause increased stress, burnout, and secondary trauma (Mayer & Hamilton, 2018). This project seeks to use critical incident debriefing (CID) after code blue events to increase Compassion Satisfaction (CS), decrease Burnout (BO), and decrease Secondary Traumatic Stress (STS). The CID will occur immediately after the code blue event, where all HCP involved in the event can meet to debrief.


What is the population you will be using the ProQOL with?

Health care professional who respond to cardiac arrests in the inpatient setting.

In what language/s do you plan to use the ProQOL?

Listed here are the languages in which the ProQOL is currently available (see https://proqol.org/ProQol_Teas.html). If you wish to use a language not listed here, please select "Other" and specify which language/s.

English

The ProQOL measure may be freely copied and used, without individualized permission from the ProQOL office, as long as:

- You credit The Center for Victims of Torture and provide a link to www.ProQOL.org;
- It is not sold; and
- No changes are made, other than creating or using a translation, and/or replacing "[helper]" with a more specific term such as "nurse."

Note that the following situations are acceptable:

- You can reformat the ProQOL, including putting it in a virtual format
- You can use the ProQOL as part of work you are paid to do, such as at a training; you just cannot sell the measure itself
Does your use of the ProQOL abide by the three criteria listed above? (If yes, you are free to use the ProQOL immediately upon submitting this form. If not, the ProQOL office will be in contact in order to establish your permission to use the measure.)

Yes

Thank you for your interest in the ProQOL! We hope that you find it useful. You will receive an email from the ProQOL office that records your answers to these questions and provides your permission to use the ProQOL.

We invite any comments from you about the ProQOL and the experience of using it at proqol@cvl.org. Please also contact us if you have any questions about using the ProQOL, even if you noted them on this form. Note that unfortunately, our capacity is quite limited so we may not be able to respond to your note: however, we greatly appreciate your engagement.