When the Adrenaline Wears Off: The Arduous Passion of Emergency Resuscitation Nursing

Nurses' Experiences of In-Hospital Resuscitation Events and Clinical Event Debriefing in an Adult Emergency

by

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Abstract

The purpose of this study was to explore nurses' experiences of in-hospital resuscitation events and clinical event debriefing in an adult emergency. Using a qualitative exploratory design, emergency nurses from an urban tertiary hospital located in Western Canada were invited to participate in a semi-structured, digitally recorded, 1:1 interview. Eight participants volunteered to participate. The digital recordings were transcribed verbatim. The transcripts and the researcher's reflective journals were reiteratively read using content analysis. Four themes were identified: (1) emergency nurses' experiences of resuscitation – '*The adrenaline rush,*' (2) emergency room nurses' experiences post-resuscitation – *'When the adrenaline wears off'* and *'The arduous passion of emergency room nursing,'* (3) emergency nurses' perspectives of clinical event debriefing and (4) emergency nurses' recommendations for future practice and resources. Participants expressed devotion to their profession, emergency team, and patients. Participants described negative psychological consequences resulting from providing resuscitation care, which had profound effects on their personal and professional lives. Moral distress and secondary trauma stress arose despite current resources, which were reported to be inconsistently implemented. Participants identified gaps in supportive measures related to resuscitation events. Benefits, barriers, facilitators, and recommendations for clinical event debriefing along with other recommendations for future practices to support emergency healthcare teams were identified. Improved staffing resources, a mentorship program for emergency nurses, multidisciplinary education for resuscitation teams, and public awareness describing emergency department teams' demands were recommended. Implementing supportive measures for emergency personnel is required for their well-being, and in the best interest of the patients, families, and healthcare organization.

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Dedication

I dedicate this thesis to my sister Kristyne,

who continues to inspire despite any challenge.

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CHAPTER ONE: Background of Study

In this chapter, a description of the subject matter and a basis for the research topic is provided. The chapter opens with a problem statement, research purpose, research objectives, and the significance of the research. Definitions, main constructs, considerations, and assumptions relevant to the research will be addressed. Frequently used acronyms are listed followed by a chapter summary.

Problem Statement

Resuscitation events are an inevitable element of emergency department (ED) care and may come with significant personal and professional consequences for healthcare providers (Clark & McLean, 2018; Spencer et al., 2019). Resuscitation events subject nurses and other members of the healthcare team to complex and often profound dynamic and traumatizing experiences with and without opportunities to review in a supportive manner. While clinical event debriefing (CED) is recognized as a means to mitigate negative effects among healthcare providers post-resuscitation (Hammerle et al., 2017; Kessler et al., 2015), debriefing is not routinely implemented in the majority of clinical settings (Clark & McLean, 2018; Riley et al., 2021; Sandhu et al., 2014).

Purpose of the Study

The purpose of this study was to explore nurses' experiences of in-hospital resuscitation events in an adult emergency and their experience, or lack thereof, of CED. This study identified nurses' perceived post-resuscitation needs, which indicated gaps in supportive measures of in-hospital resuscitation events in the ED.

Research Objectives

To achieve the study's purpose, the research objectives were to: 1) explore nurses' experiences of in-hospital resuscitation events and CED in an adult emergency, 2) identify

available and needed resources for emergency nurses after a resuscitation event, 3) describe topics to address, or desired content, of a CED, and 4) determine facilitators and barriers to CED following resuscitation events in an adult emergency.

Significance of the Study

Psychological distress, as a result of providing emergency nursing care and in-hospital resuscitation, can develop into more serious health conditions. Psychological ailments related to providing resuscitation and ED care, according to the literature, are anxiety, burnout, compassion fatigue, depression, moral distress, post-traumatic stress disorder (PTSD), and secondary trauma stress (STS). Given the significant inconsistencies in the delivery and structure of CEDs noted within the literature, findings from this study may serve as the basis for recommendations that may benefit or improve program implementation, debriefing tools, and protocol development. This study provided emergency nurses a space to voice their needs following an in-hospital resuscitation event, which may help influence organizational support for healthcare personnel and standardization of CED programming that has the potential to improve outcomes among healthcare teams, patients, families, and organizations. Considering the prolonged and ongoing professional challenges and difficulties faced secondary to the covid-19 pandemic, there is no better time to engage in efforts to promote healthcare team well-being. There is a sense of urgency and necessity in producing organizational supports for healthcare providers that in-turn may improve staff well-being and positively influence staff retention.

Main Constructs and Definitions

Main constructs, definitions, and clarification of terms pertaining to the research topic are listed in alphabetical order.

Clinical Event Debriefing

The definition of clinical event debriefing (CED) is adopted from a concept analysis by Toews and colleagues (2021),

> An ad hoc, interprofessional, structured gathering that occurs in a clinical setting after a critical event. Optimal clinical debriefing occurs in a psychologically safe environment under the direction of a knowledgeable and skilled facilitator. The purpose of the clinical debrief is to reflect, evaluate, examine, and exchange information regarding clinical practice, professional education, and the emotions of those involved in the critical event. (p. 8)

For this study, simulation debriefing, out-of-hospital debriefing, or Critical Incident Stress Debriefing (CISD) within Critical Incident Stress Management (CISM) was excluded. The aim of this study was to explore in-hospital resuscitation and post-resuscitation experiences of nurses in relation to their dynamic work environments, specifically in the ED. "Event uncertainty in real life has a much greater potential for psychological stress than its counterpart in a laboratory" (Lazarus & Folkman, 1984, p. 90). Although simulation debriefing and resuscitation literature holds a host of valuable information, the aim of this study was to focus on events with real, and sometimes dire, consequences. CISM, sometimes referred to as 'psychological first aid', is an intervention aimed at helping people (not limited to healthcare providers) deal with stressful and traumatic events (Cardinal, 2021). The reasoning behind excluding debriefing under the CISM model was that resuscitation, although it can be traumatic, is not always viewed as traumatic to the healthcare provider. Debriefing in an ED, unlike CISD, does not solely focus on emotions of the event but other aspects such as professional education and process improvement as suggested in the definition above.

Coping

In this study, I used this definition of coping from Lazarus and Folkman's (1984) work "Constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (p. 141).

Nurse Resuscitation Provider

I defined nurse resuscitation provider as a nurse, in the participating ED, who provides care and/or assistance during an in-hospital resuscitation event ('Resuscitation' definition provided below). A nurse working within the participating ED may advance in life-saving training with more experience and time worked. This allows the nurse to be prepared to care for increasingly acute patients, from the minor treatment patient area up to resuscitation events and triaging in-coming patients. Based upon my experiences in emergency nursing, not all nurse resuscitation providers are Advanced Cardiac Life Support (ACLS) trained within the ED, although, all ED nurse providers are required to annually certify Basic Life Support (BLS) training. Nursing roles within a resuscitation event can range greatly, in providing direct patient interventions, to hands-off roles such as the event recorder. The American Heart Association (2020a) outlined the suggested formation for effective high-performance resuscitation team dynamics called "positions for 6-person high-performance teams" which involves the following roles: defibrillator/monitoring, airway, compressor, medications, timer/recorder, and team leader (p. 95). With this suggested formation, the nurse resuscitation provider, trained in ACLS, can competently assume all roles (independently, not collectively) given the appropriate training. The ED resuscitation teams can be comprised of less or more than six individuals with varying levels of training and expertise and is often multidisciplinary. Other important duties that can be done by a nurse resuscitation provider that is not mentioned in the six-person formation can be a nurse phlebotomist, obtaining necessary supplies, calling family to notify of patient condition,

among many other duties that are required to best assist the patient, family, and healthcare team during a resuscitation event.

Psychological Stress/Distress

Psychological stress and psychological distress are used interchangeably within this study. The definition of psychological stress/distress is a "…relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being" (Lazarus & Folkman, 1984, p. 21). This broad term, psychological stress/distress, will be used to incorporate the psychological phenomena associated with burnout, compassion fatigue, secondary trauma stress, and other mental constructs that are beyond the scope of this study.

Resuscitation

For this study, resuscitation efforts refer to adult in-hospital cardiopulmonary arrest (IHCA) and acute respiratory compromise, such as events requiring emergent placement of ventilator support, and cardiopulmonary resuscitation (CPR) efforts. All interventions in keeping with the Advanced Cardiac Life Support (ACLS) training, as per the American Heart Association (AHA), were included in this definition. Examples may include, but are not limited to, advanced airway management, cardioversion, compressions, defibrillation, hemodynamic instability rescue efforts, rescue medication administration, shock states (anaphylactic, cardiogenic, hypovolemic, neurogenic, septic), transcutaneous pacing, and trauma. The definition of resuscitation for this study was included in the Letter of Invitation to Participate in Research (This document will be addressed in the following Chapters and can be found in Appendix D) and discussed prior to the participant's consent.

Researcher's Assumptions

It is necessary to acknowledge the personal biases and assumptions that may influence the research prior to and during this study. I have worked as a Registered Nurse since 2013. I have practiced nursing in the following areas: medicine, emergency, and critical care nursing. I have participated in numerous successful and unsuccessful resuscitation events throughout my career. My personal experience presented minimal opportunities to review resuscitation events. The limited times I was part of a CED were overwhelmingly positive. Here is a list of my assumptions:

1. *Multiple truths exist.*

   This study was guided by a constructivist approach. Constructivism focuses on understanding the perceived meaning to individuals and acknowledges that multiple truths exist (McEwen & Wills, 2019). Knowledge is subjective and constructed by the individual. One participant's accounts of an event are just as valid as another's.

2. *Resuscitation is an event that can evoke a wide range of emotions that range from low to extremely high intensity.*

   Participating in a resuscitation event as a healthcare provider can create various thoughts, feelings, and physical reactions, varying from one healthcare provider to the next. One individual may not feel strongly towards an event, while another may feel overwhelmed by intense reactions, or emotions, which can affect their functioning, as well as their physical and mental health. I acknowledged that resuscitation is not an ordinary event and that a wide range of emotional reactions were possible.

3. *Stress can have positive and negative outcomes*.

   Lazarus and Folkman (1984) stated that stress is an individual appraisal of the relationship between person and environment. I believe that stress should not be viewed

as 'good' or 'bad' but as a catalyst for individual coping mechanisms that can have positive and/or negative consequences.

4. *Clinical event debriefing (CED), when executed appropriately, is a nonharmful intervention.*

There remains debate within the literature whether psychological debriefing has positive, negative, or benign consequences for participants. Controversy in psychological debriefing practices stemmed from a Cochrane Review by Rose et al. in 2002 proclaiming debriefing as potentially harmful, which was later amended and clarified to read "no current evidence that single session individual psychological debriefing is a useful treatment for the prevention of post traumatic stress disorder after traumatic incidents" (Rose et al., 2010, p. 38). The studies used to draw the conclusion of debriefing as harmful were of low quality and did not include emergency healthcare personnel (Twigg, 2020). Recent literature on CISD and emergency service workers contradicts the notion of harm towards participants (Twigg, 2020). It is also important to note that psychological debriefing, such as CISD, is distinct from CED. A literature review conducted by Coggins et al. (2020) stated there were no incidents of participant harm resulting from CED. Spencer and colleagues (2019) found that CED was not associated with PTSD risks. In Sjöberg and colleagues' (2015) study, CED was never viewed as a negative event by participants. Consequently, my beliefs align with the most recent literature available, that CED is overall a helpful intervention. CED has been a beneficial intervention that has helped me cope with resuscitation events in my clinical practice. CED will be described in further detail in the literature review in Chapter Two.

5. *A multidisciplinary approach to resuscitation and post-resuscitation is essential for optimal outcomes*.

I acknowledge the need for all team members to work collectively to form the best possible outcomes. Top performing hospitals encouraged clinical diversity in debriefing and leadership practices, whereas lower performing hospitals did not (Anderson et al., 2021). Inclusion of all team members is championed over siloed approaches.

In Canada, nurses represent the largest regulated healthcare provider group providing direct patient care in hospitals (Barton et al., 2018). This thesis research focused on the nurses' experience of resuscitation and post-resuscitation, but I also acknowledge the multidisciplinary nature of resuscitation team dynamic. The literature search was primarily focused on the nursing experience, however, multidisciplinary studies including nurses were included. Limiting the literature to nursing specifically would not align with resuscitation and debriefing's multidisciplinary nature and real-world practices.

Humans are dynamic and multifaceted. Our experiences and mental constructs can influence our interpretations, meaning, and assessments of events. As a novice researcher, a former emergency nurse, and a current intensive care unit (ICU) nurse, my experiences may have influenced my perception of participant accounts. (Note: I have not practiced nursing in the participating ED or facility). All efforts were made to sideline previous notions, beliefs, and assumptions, although I recognized this is not entirely possible. A means to minimize this bias was the use of a reflective journal during data collection and analysis to highlight preconceived beliefs, attitudes, and notions. Validity concerns will be addressed in Chapter Three.

Contextual Considerations

There are two events that are shared as contextual considerations that may have influenced the participants' engagement and responses within the research study. The Health System Transformation and the Covid-19 Pandemic are explained below.

Health System Transformation

In 2017, the Government of Manitoba introduced a 'Health System Transformation'. This transformation was based on the reported findings of 'The Provincial Clinical and Preventative Services Planning for Manitoba' report (also known as 'The Peachey Report' after Dr. David Peachey who was hired by the province to review the province's healthcare system) (Government of Manitoba, n.d.). Findings of the report showed that the province had a lack of provincial standards, patient wait times were significant, and care delivery was poorly coordinated (Government of Manitoba, n.d.). The purpose of the transformation was to better manage healthcare services to be more effective and efficient for the patient. This included reform to centralized clinical and business services as well as human, capital, and financial resource allocation (Government of Manitoba, n.d.). The transformation was well underway during data collection of this thesis research.

Emergency healthcare providers were disproportionally affected by the Health System Transformation. The Health System Transformation included clinical consolidation of EDs (MHSAL & Manitoba Finance, 2017). Non-tertiary or community based EDs were slated for closure or to be transformed into Urgent Care centers (Wright, 2019). Later, it was determined all non-tertiary ED sites would transition to Urgent Care centers, versus some selected for closure. This resulted in physician disengagement, early resignations of ED staff, and decreased staff morale in EDs set for closure and transformation (Wright, 2019). During the transition, tertiary EDs were set for expansion and resulted in sharp increases in high acuity patients and patient flow issues (Wright, 2019). Positions were consolidated and some eliminated (Greenslade & Reimer, 2020). ED healthcare workers of the region had to make the decision to stay at their current facilities, move to another ED/Urgent Care, or accept lay offs. As a result of this transformation, the ED healthcare provider may have had to consider commute challenges,

scheduling changes, childcare concerns, stress of adapting to a new facility, co-worker relationship changes, among many other life adjustments. This recount of the Health System Transformation is meant to serve as a recognition of the substantial changes experienced by healthcare providers in the recent period in which this study was conducted. The restructure of the healthcare system is to be appreciated and acknowledged in context of the participants responses.

Global COVID-19 Pandemic

On January 30th, 2020, the World Health Organization declared Covid-19 a global pandemic (WHO, 2020). Healthcare professionals within the province were amidst the trials and tribulations of a Health System Transformation when a global pandemic further challenged the delivery of healthcare services and operations. The pandemic presented challenges of proper personal protective equipment (PPE), medical supply issues, staffing levels, insufficient bed capacity, cancellation of nonurgent services, redeployment of providers to critical areas, provincial lockdowns, visitor restrictions, economic variability, uncertainty of illness trajectory, and continually evolving information and communications. The Covid-19 pandemic tested the flexibility and adaptability of healthcare delivery within the province. Although global efforts were, and still are, concentrated on prevention and treatments of Covid-19, the consequences of such a forceful variation were still being experienced. The global pandemic has put a strain on ED providers, which may be reflected in the participants' experiences.

Abbreviations

The following list consists of common abbreviations used within this thesis, listed in alphabetical order.

ACLS – Advanced Cardiac Life Support
ACP – Advanced Care Plan
AHA – American Heart Association
CED – Clinical Event Debriefing
CISD – Critical Incident Stress Debriefing
CISM – Critical Incident Stress Management
CPR – Cardiopulmonary resuscitation
ED – Emergency department
EFC – Emotion-focused coping
ICU – Intensive care unit
IHCA – In-hospital cardiac arrest
LFTTSC - Lazarus' and Folkman's Transactional Theory of Stress and Coping
PCP – Post-code pause
PFC – Problem-focused coping
PHIA – Personal Health Information Act
PPE – Personal protective equipment
PTSD – Post-traumatic stress disorder
STS – Secondary-trauma stress
WHO – World Health Organization

Chapter Summary

Nurses of the ED manage resuscitation events with and without the opportunity to review or debrief. These events can be traumatic in nature and illicit varying responses, including psychological distress. CED is a means to review events and mitigate negative psychological consequences of healthcare providers but is not a routine intervention in most hospitals. The research objectives were to: 1) explore nurses' experiences of in-hospital resuscitation events and CED in an adult emergency, 2) identify available and needed resources for emergency nurses after a resuscitation event, 3) describe topics to address, or desired content, of a CED, and 4) determine facilitators and barriers to CED following resuscitation events in an adult emergency.

Healthcare providers, within the participating region, have experienced many substantial changes that may affect their psychological and occupational well-being. The province has recently gone through a healthcare reform as well as the repercussions of a global pandemic. This has posed many challenges for ED nurses that may be reflected in their experiences. It is important to note that participant responses are unique to the individual and there may be a varying range of post-resuscitation responses that are all determined to be valid. Researcher and study assumptions were addressed.

CHAPTER TWO: Literature Review

In this chapter, a review of recent literature pertinent to the subject matter is provided. Examination of the current literature underscores the gaps that presently remain, and what this thesis aimed to address. Lazarus and Folkman's Transactional Theory of Stress and Coping (LFTTSC) was the conceptual framework that guided the study, and I will explain it further in relation to the research topic.

Literature Search Strategy

The literature search was orchestrated in consultation with a University of Manitoba librarian and comprised healthcare databases regarding the most recent literature available. Databases included Cumulative Index to Nursing and Allied Health Literature (CINAHL), EMBASE, Medline, and Scopus. Full text manuscripts, written in English, from the years 2010 to the present were searched using the search terms: emerg* AND debrief*; resus* AND emerg*; resus* AND debrief*; resus* AND coping; resus* AND debrief* AND emerg*. To expand the search in PsycINFO, "emergency department" AND coping was added, and to narrow the large quantity of articles retrieved in Scopus, emerg* AND debrief* AND resus* were limited to title and abstract. All searches produced 766 articles. Of the 766 articles retrieved, exclusion criteria of manuscripts with primary focus on simulation, pediatrics, Critical Incident Stress Management (CISM), Critical Incident Stress Debriefing (CISD), out-of-hospital resuscitations, and non-hospital personnel were eliminated. With this exclusion criteria and elimination of duplicates, 43 articles were included in this review.

Of the 43 selected resources, studies were conducted in Australia, Canada, Italy, Jordan, Scotland, Sweden, the United Kingdom, and the United States of America. Most studies pertained to nursing perspectives. Other disciplines mentioned, in conjunction with nursing,

included administration, allied support staff, healthcare aides, medical residents, physicians, social workers, spiritual care providers, respiratory therapists, and ward clerks.

The Effects of Providing Resuscitation Care

A fictional, yet feasible, scenario of a nurse's experience of resuscitation and post-resuscitation will be used to help illustrate the key concepts identified in the literature review.

> *"I've got your medications Mr. Russell" you state as you walk into the patient's room. He cheerfully replies, "Good morning." You have developed an effective nurse-patient relationship while he has been waiting for a ward bed to become available. He explains he hasn't felt good this morning. You go to grab the blood pressure machine and you hear an odd noise. You turn back to see Mr. Russell slumped over in his bed. You check for a response and Mr. Russell is not responding. You call a 'code blue'. You do not feel a pulse and immediately initiate CPR. 40 minutes of resuscitation efforts ensue, the resuscitation team leader calls, "Time of death 09:17am". You look down at your shaky, exhausted hands and think, just an hour ago I was joking with Mr. Russell about what his daughter would say about his overgrown facial hair. Is there something I missed? Could I have prevented this arrest? Why did he arrest? His daughter will be so distraught. I can't think about this right now, my other patients need me.*

Resuscitation cases were described as emotionally challenging (Walker et al., 2020), to which even experienced healthcare workers can be affected (Sjöberg et al., 2015). Working in acute areas, healthcare providers are subject to a greater number of resuscitation events (Riley et al., 2021). EDs pose as a unique environment to work, due to the high risk of occupational stressors and traumatic events (Przednowek et al., 2021). Given the unit demands of an ED, it is not unheard of that a healthcare provider is expected to go from one high fidelity case straight to the next, which may lead to psychological stress and symptoms of burnout (Timms, 2019). Some

events that can contribute to ED occupational stress are unexpected deaths, trauma, and violence (Morrison & Joy, 2016). Reports from nurses described struggling with moral dilemmas and feeling that their efforts may prolong suffering, causing conflicting emotions of human compassion, such as being able to provide a dignified death (Olsson et al., 2021). This suggests that the context of an event can play an influential factor in the nurse's perception of the event. Having frequent exposure to resuscitation events makes ED healthcare providers particularly susceptible to moral distress and compassion fatigue (Hammerle et al., 2017). Direct quotes shared from a study by Olsson and colleagues (2021) from an ICU nurse highlighted the culture and expectations of resuscitation providers, *"those of us who work as ICU nurses are supposed to be hardened."* Another nurse stated, *"You do what you're supposed to do and then you move on to the next thing, no time to think…"* (p. 3329). The above quotes depicted the nurses' dedication and the lack of consideration placed on a debriefing or review process.

Psychological distress, as a result of these occurrences, can develop into more serious, long-term health conditions. Psychological ailments related to resuscitation events and ED care mentioned within this literature review were anxiety, burnout, compassion fatigue, depression, moral distress, post-traumatic stress disorder (PTSD), and secondary trauma stress (STS). "It is becoming more common for ED staff to experience anxiety, irritability, and absenteeism" (Hammerle et al., 2017, p. 1).

Secondary trauma stress (STS) for ED and resuscitation providers has become more prevalent in the recent literature. Figley (1995) defined STS as "the natural, consequent behaviours and emotions resulting from the knowledge about a traumatizing event experienced by a significant other; it is the stress resulting from helping or wanting to help a traumatized or suffering person" (as cited in Morrison & Joy, 2016, p. 2895). It was also noted that STS was not limited to certain parts of the world but was a term associated with ED nurses globally. An

integrative review by Riley and colleagues (2021) reported nurses recalling events, months and even years, after the incidents. ED nurses are known to be at risk for STS due to the many stressors involved in providing ED care (Morrison & Joy, 2016; Ratrout & Hamdan-Mansour, 2020). A high percentage (75%) of ED nurses reported at least one STS symptom within the week (Morrison & Joy, 2016). The most influential stressors of these reports resulted from resuscitation events and death of a patient. Another staggering percentage reported by Ratrout and Hamdan-Mansour's (2020) indicated 94% of nurses had experienced STS in varying degrees. These researchers also found that nurses who reported higher levels of STS had more incidents of absenteeism (Ratrout & Hamdan-Mansour, 2020). Not only are there personal consequences resulting from providing ED care, economic and patient care consequences also occur for the organization.

Spencer and colleagues (2019) conducted a multidisciplinary study of ED staff and PTSD in relation to in-hospital cardiac arrests (IHCA)s. They found approximately 10% of staff screened positively for PTSD following an IHCA, and nearly half reported symptoms of trauma. These results are concerning, considering IHCAs are an expected element of ED care. It was noted that those who took a break after IHCAs were screened as less acute for characteristics of PTSD than those that did not (Spencer et al., 2019). The results of this study can aid in careful consideration for the future of nurses' occupational well-being. The psychological impacts experienced by nurses from occupational stressors challenged their ability to provide safe and competent care (Ratrout &, 2020; Riley et al., 2021; Sjöberg et al., 2015).

Junior ED staff expressed more acute responses to resuscitation events compared to more experienced staff (Morrison & Joy, 2016; Spencer et al., 2019). Presuming junior ED staff have less experience, training, or knowledge, this may play a factor in the processing of emotions resulting from the event. Morrison and Joy (2016) identified a "duty of care" from more

experienced ED staff towards less experienced ED staff (p. 2903). "Peer support was seen as the most significant factor in mitigating the psychological impact of critical incidents" (Chesham & Dawber, 2019, p. 243). Thus, junior staff members may greatly benefit from formal mentorships and team reflective practices such as CED post-resuscitation.

The findings of this literature review support instituting CED initiatives in the ED. The compounded stresses placed on ED healthcare teams, amidst the drastic changes of the system transformation and the covid-19 pandemic, warrants significant attention from administrators and clinical leaders in promoting the well-being of their staff.

Clinical Event Debriefing (CED)

Post-resuscitation debriefing is recommended by the American Heart Association (AHA) (AHA, 2020b) and is endorsed by the Heart and Stroke Foundation's Advanced Cardiac Life Support (ACLS) training program (AHA, 2020a), which is offered to experienced nurses in the participating ED. Despite the support for CED, it remains a rare intervention in various clinical settings (Clark & McLean, 2018; Conoscenti et al., 2021; Riley et al., 2021; Robinson et al., 2016; Sjöberg et al., 2015). A multidisciplinary survey conducted in The United Kingdom by Robinson and colleagues (2016) showed that 62% of healthcare providers had never been a part of a debrief. A nationwide survey in The United States of America established that only one out of seven hospitals conducted regular CEDs immediately after IHCA (Malik et al., 2020). Although formal CED is not routinely practiced, the need to debrief was so strong that nurses sought out informal avenues to express unresolved feelings, such as convening with coworkers after shift (Olsson et al, 2021; Sjöberg et al, 2015). It is irrefutable that human factors play a role in resuscitation care and the need to review such events was evident in the recent literature. CED was previously mentioned to have many purposes and inconsistencies in delivery, therefore the

subject material will be organized by the five W's and how (the who, what, when, where, why, and how of CED) for clarity.

Who is Involved in a Clinical Event Debrief?

Debriefing is a practice adopted in many disciplines: aviation, simulation and education, psychology, military, corporate organizations, and with more recent emphasis in the medical field (Tannenbaum & Cerasoli, 2013). Each profession may present a different goal or purpose of debriefing, therefore the term 'clinical event debriefing' (CED) is used to associate team debriefings in relation to patient care.

Clinical Event Debriefing (CED) participation is voluntary. Participants of a CED can vary depending on who was present for the clinical event, who chooses to participate, who is able to participate, institutional protocols, unit culture, social influences, among other factors. Whether explicitly or implicitly indicated, a strong position throughout the literature was that CED is a multidisciplinary practice (Anderson et al., 2021; Clements et al., 2021; Coggins et al., 2020; Gilmartin et al., 2021; Hammerle et al., 2017; Holbert & Dellasega, 2021; Kessler et al., 2015; Olsson et al., 2021; Rose & Cheng, 2019). All professionals that were involved in the resuscitation event should be given the opportunity to participate. Disciplines, alongside nursing, mentioned within the literature in CED participation were chaplains, healthcare aides, hospital support staff, nurses, physicians, respiratory therapists, social workers, and unit clerks. Coggins and colleagues (2020) found that more than half of CEDs were prompted by non-physician ED staff. This further highlights the importance of multidisciplinary involvement in the sustainability of CED programming. There were also no located studies that addressed or supported patient's family involvement in CED. CED requires a psychologically safe environment (Cheng et al., 2018; Toews et al., 2021), meaning the CED must feel like a safe space to voice concerns and

share ideas without judgment and negative repercussions. Reciprocal collaboration and active participation of team members may be hindered in the presence of grieving family members.

Debrief leadership is highly influential in the productivity of CED. Reference to experience or education in leading a debrief and the role in debrief effectiveness was prominent in the literature (Clark & McLean, 2018; Rose & Cheng, 2019; Tannenbaum & Cerasoli, 2013). Schmidt and Haglund (2017) stated, "The debrief leaders should be supportive; educated on the structure and goals of the session; model feedback; and include conclusion, goals, and follow-up to prevent the debrief from becoming a discussion without a purpose" (p. 320). The risk of a debrief leader not exhibiting these qualities may result in an ineffective, unsatisfactory experience for those involved. Discussion without a purpose runs the risk of engaging in gossip or blaming of others. Avoiding finger-pointing and blaming is paramount in a productive CED (Gilmartin et al., 2020; Hale et al., 2020; Kessler et al., 2015, Sugarman et al., 2021). A meta-analysis about team debriefing revealed that focus on team performance versus individual performance yielded greater results (Tannenbaum & Cerasoli, 2013). Ineffective debrief leadership was the only negative consequence of CED cited within the located literature.

What is Clinical Event Debriefing?

There was not a widely accepted or standardized definition, implementation, or purpose of a CED. There were many variances noted within the literature. A Scientific Statement by the AHA labeled CED as a "powerful education intervention" (Cheng et al., 2018, p. 94). Debriefing was also deemed as "team reflection" (Rose & Cheng, 2018, p. 781), a "health promotion behaviour" (Holbert & Dellasega, 2021, p. 230), a "quality and education tool" (Kessler et al., 2015, p. 690), a "tool to promote quality improvement" (Gilmartin et al., 2020, p. 4), and a means of feedback (Malik et al., 2020). CED was noted to have many purposes and cannot be limited to a simple description. Many sources focused on debriefing's purpose to be education,

others focused on performance improvements, and others focused on the emotions of staff involved. Combinations of these purposes were also mentioned. It was up to the team and debrief leadership to determine the purpose of that particular CED to produce the most benefit for the team, patients, and department. This research study used the operational definition created by Toews and colleagues (2021) as it brings all these facets together to form a comprehensive approach to CED:

> an ad hoc, interprofessional, structured gathering that occurs in a clinical setting after a critical event. Optimal clinical debriefing occurs in a psychologically safe environment under the direction of a knowledgeable and skilled facilitator. The purpose of the clinical debrief is to reflect, evaluate, examine, and exchange information regarding clinical practice, professional education, and the emotions of those involved in the critical event (p. 8).

There were many inconsistencies in delivery and structure of debriefs. This is not to say these variations were ineffective. Typically, a CED was led by a healthcare professional (Berg et al., 2020) – physicians and nurses were the most common leaders. Other disciplines included chaplains and social workers, although it was noted that other disciplines could lead as well. Coggins et al. (2020) conducted a study to determine CED discussion topics. Broadly categorized, they found the most prominent CED topics were decision making, technical skills, communication, resource utilization, leadership, situational awareness, teamwork, family/social, bad outcomes/distress, preparation/pre-arrival, and space/equipment/environment. Communication and teamwork were noted as important aspects of CED discussion. Discussing communication issues as a team post-resuscitation involves clarifying roles and responsibilities (Berg et al. 2014, Olsson et al., 2021; Porter et al., 2018), acts as an opportunity to reinforce

good practice (Beek & Penn, 2019), and allows for improved interpersonal relationships (Holbert & Dellasega, 2021).

The most referenced goal of CED was to identify opportunities and strategies for improvement (Berg et al., 2020; Couper & Perkins, 2013; Gilmartin et al., 2020; Malik et al., 2020; Rose & Cheng, 2018). Debriefing was regarded as a quality improvement initiative in many studies (Couper et al., 2015; Gilmartin et al., 2020; Kessler et al., 2015). Examples of improvements included correcting equipment issues (Beed & Penn, 2019; Gilmartin et al., 2020) and improving processes or protocols (Gilmartin et al., 2020). CED was also referred to as an educational tool that worked to address knowledge gaps, improve clinical skill-level, and improve departmental educational activities (Gabriel et al., 2021; Gilmartin et al., 2020). CED can result in increased patient safety with positive patient outcomes (Gabriel et al, 2021; Kessler et al., 2015). Aside from CED's potential objective outcomes, studies often noted advantages of emotional processing as an added benefit. CED was a safe space to vent frustrations (Hammerle et al., 2017), reflect on practice (Olsson et al., 2021), and a means to stress management and spiritual growth (Holbert & Dellasega, 2021). In Gilmartin et al.'s (2020) study, 90% of participants felt psychological benefit from CED. It is important to note that CED is not a substitute for psychotherapy and is not meant as a treatment for complex mental disorders. However, it can be the first indication of employees requiring further support. The emotional processing and experiences of staff following resuscitation events has gained more attention within the recent literature. Traditionally, empirical knowledge has been viewed as superior due to its predictability and objectivity (McEwen & Wills, 2019), however, human emotions prove much more complex. Due to resuscitation care involving, and even depending on, human factors for patient outcomes, it would be problematic to overlook such a prevalent aspect of team

functioning. Thus, comprehensive CED should be multidisciplinary and include aspects of education, process improvement, and emotional processing.

When is a Clinical Event Debrief Conducted?

Clinical event debriefing (CED) can be classified by timing in terms of 'hot' and 'cold' debriefing. Hot debriefing occurs within minutes to hours after the event, and cold debriefing occurs day(s) after the event (Couper & Perkins, 2013). There is no timing that is superior to the other, as there are advantages and disadvantages to each. Advantages of hot debriefing include team availability, factual recall of the event, and urgent issues can be addressed immediately (Kessler et al., 2015). Disadvantages include unit demands, limited time available during the shift, and emotional readiness (Kessler et al., 2015). Cold debriefing allows team members time to process the event and their emotions, and to collect data or information pertinent to the patient and event. Disadvantages include challenges of team availability, organizational planning, and event recall (Kessler et al., 2015). Determining the best time to conduct a CED would be dependent on many factors such as the current unit demands, emotional readiness of staff, space, availability, etc. Departmental awareness is required for timing of CED implementation. It may be feasible in the ED to conduct a CED immediately in the room after the resuscitation (hot debriefing), minutes or hours later when the unit has become more stable (hot debriefing), or setting up a CED in several days (cold debriefing). There are some suggestions that CED should be offered regularly (for example every Friday), versus as an ad hoc intervention (Rose & Cheng, 2018; Schmidt & Haglund). EDs have frequent pressing unit demands and this was suggested as a viable option. Regular implemented CEDs can provide ED staff with consistency and aid to team members' expectations of debrief culture.

Appropriate duration of a CED was contestable. CED, within the literature, ranged from five minutes to several hours. Length of time of a CED did not correlate to the effectiveness or

success of a CED. A debrief that is five minutes in length and a CED that is one hour in length may be similarly effective. In Coggins and colleagues (2020) study of CED in the ED, mean length of a CED was just under 11 minutes and were deemed as successful interventions. These CEDs resulted in preventative interventions for equipment issues, discussing family concerns, reviewing patient outcomes, and protocol improvements. The team should be given the opportunity to review and exchange information in a respectful manner that meets their debrief goals and purpose. CEDs that focus on educational review, ACLS protocols for example, may require minutes, where an emotionally challenging case may require more time.

Where is a Clinical Event Debrief Conducted?

There is little research to address the best place to conduct a CED. What was addressed in the literature was that a space must feel psychologically safe for participants to feel comfortable to contribute (Cheng et al., 2018) and recommendations for spaces that can maintain patient confidentiality (Toews et al., 2021). Places CED can be conducted are in the patient's room immediately after the event, the resuscitation room, and unit conference/boardrooms (Kessler et al., 2015).

Why Debrief?

The AHA 2020 Guidelines for CPR and Emergency Cardiovascular Care listed debriefing as one of its top ten "take-home" messages, emphasizing the importance of team feedback (Berg et al., 2020, p. S581). The AHA acknowledged that team debriefing was previously mentioned but now its use is "emphasized" (Berg et al., 2020, p. S581). Top performing centers consider debriefing as a priority (Anderson et al., 2021). Justification for CED implementation and initiatives are endorsed by its positive effects. CED offers a host of benefits in personal, professional, and organizational aspects.

Personal benefits for ED team members that may arise from CED were feelings of social support (Morrison & Joy, 2016) and preserving emotional energy for the long term (Sugarman et al., 2021). McMeekin and colleagues (2017) found that ICU nurses who had CED as an available support had lower post-code stress than nurses who did not. CED provided validation of healthcare providers' feelings and allowed them to normalize their experience (Holbert & Dellasega, 2021). CED also provided a space to give and receive praise (Sjöberg et al., 2015), provide colleague support (Holbert & Dellasega, 2021; Walker et al., 2020). In a study by Holbert and Dellasega (2021), over 80% of participants deemed CED as beneficial and aiding in their coping with the traumatic event. Similar results were noted in Allen and Palk's (2018) study of ED nurses that claimed CED was "beneficial to their resilience and coping" (p. 153). CED was a beneficial tool in managing STS (Morrison & Joy, 2016) and compassion fatigue (Holbert & Dellasega, 2021). These results indicate that CED is an effective strategy to mitigate negative psychological consequences resulting from resuscitation events and is arguably an organizational priority for staff retention, staff well-being, and quality patient care.

Professional benefits resulting from CED included enhanced knowledge base (Couper et al., 2013), enhanced clinical performance and skills (Couper et al., 2013), improved communication and teamwork (Berg et al., 2014; Rose & Cheng, 2019; Sandhu et al., 2014), improved team cohesion (Walker et al., 2020), and morale (Hammerle et al., 2017; Schmidt & Haglund, 2017; Walker et al., 2020). According to a meta-analysis, teams that engaged in CED performed better than those that did not (Tannenbaum & Cerasoli, 2013), and providers perceived CED as necessary and useful in improving future events (Conoscenti et al., 2021). Coming together as a multidisciplinary team may not only provide support but also shared knowledge. Nurses expressed a need to understand why a patient arrested and the reason a resuscitation was unsuccessful (Clark & McLean, 2018). Each member of the CED then

becomes a valued contributor and participate in not only improvement opportunities but collegial support. ED healthcare professionals reported increased code satisfaction (Przednowek et al., 2021), feelings of psychological safety (Berg et al., 2014), and an improved sense of their role within the team (Berg et al., 2014) from CED implementation. Providing ED teams with CED may create a culture of learning and embed a continuous improvement atmosphere, which has great potential to improve patient safety and patient outcomes.

Personal and professional benefits experienced by healthcare providers can influence the overall organization. Assets such as values, partnerships, and human capital are indispensable to the success of healthcare education, training, and the organization (Rider et al., 2019). Healthcare leaders and organizations that advocate for activities that promote staff resiliency can increase staff retention (Holbert & Dellasega, 2021; Schmidt & Haglund, 2017), decrease burnout (Zhang et al., 2020), improve work engagement (Sandhu et al., 2014), increase job satisfaction (Gabriel et al., 2021), and enhance team morale (Schmidt & Haglund, 2017). Adoption of CED programming can align the organizational values of excellence in patient care delivery and continued commitment to growth and development.

How to Conduct a Clinical Event Debrief

There were a multitude of CED methods, frameworks, and tools. Importance was placed on staff training of chosen CED tools and debrief leadership to support appropriate delivery and use (Cheng et al, 2018; Kessler et al., 2015). A systematic review on post-resuscitation debriefing frameworks in the ED by Hale and colleagues (2020) determined that all methods can be effective and there is no one-size-fits-all approach. Rather, each department must assess their own unique needs and barriers to implementation. The most common barrier reported was time constraints (Clark & McLean, 2018; Hale et al., 2020; Gilmartin et al., 2020; Olsson et al., 2021; Spencer et al., 2019; Walker et al., 2020). Other barriers noted, in no particular order, were lack

of understanding of a debrief's purpose or need (Clark & McLean, 2018), lack of trained or experienced facilitators (Clark & McLean, 2018; Spencer et al., 2019; Twigg, 2020), competing clinical demands or workload (Walker et al., 2020), limited administrative support (Twigg, 2020), lack of organizational protocols (Clark & McLean, 2018), and inappropriate settings to conduct a CED (Sandhu et al., 2014; Twigg, 2020). Pre-emptive assessment of barriers to CED implementation can help improve uptake and sustainability of a CED program.

Communication discomforts can greatly hinder the productivity of a CED. Participants must be provided a psychologically safe space to conduct an effective CED, as previously mentioned. This encourages participants to discuss difficult topics openly and respectfully. Participants must feel safe to voice concerns without fear of criticism or judgement. It is also of utmost importance to follow-up on discussions and feedback provided in the CED to reinforce that staff voices are valued and lead to actual clinical change (Kessler et al., 2015). Organizational and administrative involvement is required for the sustained practice of CED within the ED.

Future Considerations for Clinical Event Debriefing with Resuscitation Providers

The literature on the future considerations of CED implementation, improvements, sustainability, and adoption in clinical practice suggested: involvement of clinical staff in CED leadership and program initiatives (Rose & Cheng, 2018), on-going CED training (Cheng et al., 2018), broadening disciplines of debrief facilitators (Anderson et al., 2021), and standardizing CED language and process within the department (Kessler et al., 2015). Including informal leadership in CED programming can aid in sustainability, as shown in Gilmartin and colleagues' (2020) study utilizing senior nurses as debrief champions. Cheng and colleagues (2018) emphasized the importance of properly trained facilitators and on-going development. Rose and Cheng (2018) trained ED charge nurses as debrief leaders due to their clinical awareness, not

being assigned a bedside patient load, and understanding of department operations. This approach proved feasible, as ED physicians are often overloaded with patient demands. This was a viable solution that addressed the most cited barriers to CED, time constraints, and trained facilitators. Training charge nurses, or other healthcare providers can offer team support during non-administrative hours. It also empowers bedside healthcare providers to adopt a leadership position within the ED which otherwise may not have been provided.

There remains a gap in the literature pertaining to the perceived CED needs of the individuals who are providing resuscitation care, particularly to adult populations. There are few studies that investigated how CED influences or changes the perceived experience of resuscitation events. Exploring nurses' experiences post-resuscitation in the presence and absence of CED posed methodological complexities and ethical considerations. Real-time events are sporadic and unpredictable. Any two separate resuscitation events cannot be compared to another due to the inability to control the multifactorial environment. The interviews with nurses relied on their perceptions and self-reports in comparing their own subjective experiences of resuscitation with and without CED. As the human experience is incredibly individualized, it was challenging to compare such a personal account. Lazarus and Folkman's Transactional Theory of Stress and Coping (LFTTSC) (1984) identified the cognitive appraisal of individuals in relation to a stressor and how new information can cause individuals to reappraise the meaning of the event. This conceptual framework, LFTTSC, guided the research and will be discussed in depth.

Guiding Framework: Lazarus and Folkman's Transactional Theory of Stress and Coping

Lazarus and Folkman's Transactional Theory of Stress and Coping (LFTTSC) was the theoretical framework that guided this study (Please refer to Appendix A for a Theoretical Schematization of Stress, Coping, and Adaptation). This framework was appropriate for stress-

inducing topics, such as resuscitation events, as it included many dimensions of stress and its social complexities. LFTTSC emphasizes external and internal motivations and variables that influence stress, coping, and their outcomes. Interpretations of the same situation may be experienced quite differently by separate individuals. Consider a newly graduated nurse and an experienced ED nurse's interpretation of a resuscitation event - the differences in their education, training, exposure, years in the workforce, age, individualized beliefs, and other intrapersonal and contextual variables can influence the significance of the event. Two nurses with similar experience may also have considerably different appraisals of the situation, resulting in considerable variations in their stress and coping. These individualized assessments can create difficultly in developing widely accepted solutions to team interventions. However, resuscitation requires a highly functional team, and it would be unwise to execute an intervention without communication with other team members. CED post-resuscitation is an opportunity to grow within a team. Team members come together, with their individualized variables that influence their stress, appraisal, and coping, to review the event. Finding a means of support and debriefing that is beneficial to a group is challenging. Therefore, this study aimed to explore nurses' desired organizational support and debriefing needs to inform a more comprehensive approach. In-keeping with the intricate nature of resuscitation events and CED, LFTTSC was an appropriate framework to guide this socially complex topic.

LFTTSC has five major concepts: 1) stress, 2) appraisal, 3) coping, 4) person and environment antecedents of stress and coping, and 5) short-term and long-term adaptational outcomes (Lazarus & Folkman, 1984). These concepts will be addressed independently in this chapter. To clinically and collectively understand the major variables associated with the stressor (in-hospital resuscitation events), investigating nurses' perspectives (their appraisal) surrounding the stressor and the effects of their stress (adaptational outcomes) will provide information to

better support ED nurses in their coping strategies. To solidify the nature of the framework in relation to the subject matter, a fictional example will be used to illustrate the research problem. Consider the following fictional case as we move through the concepts of LFTTSC.

> *Armani works in a tertiary hospital in the ED. He has been a nurse for four years. This is his first day working independently in the resuscitation room. He is presently preparing a patient to be transported to another facility. Armani hears paramedics are bringing a new patient in respiratory distress. Within minutes, paramedics arrive, and Armani's immediate assessment tells him the patient needs to be put on ventilator support. Paramedics give a quick report indicating this patient is a long-time smoker with history of lung disease. Oxygenation was poor with maximum oxygen settings. The patient has increased work of breathing, respiratory rate is 45 breaths per minute, and his lips are turning blue in colour (cyanosis). Armani turns to call the respiratory team and the patient slumps over in the bed and becomes unconscious. Paramedics cannot feel a pulse. Armani calls a 'code blue'. Compressions are initiated and fellow coworkers arrive to assist. The resuscitation efforts last one hour and were unsuccessful. Armani recalls that his father is a smoker around the same age. A pit forms in his stomach. When Armani goes home, he cannot take his mind off the case. Armani thinks, 'He was my father's age.' 'Maybe if I called the doctor over as soon as I saw the patient I could have saved him.' 'Should I have called a code sooner?' 'Did I forget anything for my patient who was transferring to another facility?' 'Did I do everything I could?' 'I failed this patient and his family.' 'Is this going to happen to my father?' 'Maybe I am not cut out for this kind of work.'*
>
> *The following days Armani has developed sweaty palms and feelings of palpations when entering the resuscitation room. He has switched tasks with other staff*

members to avoid caring for patients with certain respiratory conditions. He's had trouble sleeping in anticipation before his shifts. He realized he is calling in sick more regularly and is not confident in his ability to care for acute patients.

Stress

Stress is a challenging concept to define, yet an inevitable aspect of life. Historically, there have been many definitions: 'stimulus definitions' (stimuli imposing onto a person), 'response definitions' (reactive to a stimulant - arising within a person) and 'relational definitions' (in relation to context and among systems) (Lazarus & Folkman, 1984). Lazarus and Folkman (1984) argued that stress is not as concrete as once defined, but "consisting of many variables and processes" (p. 12). This theory focuses on the way an individual interprets stress and its meaning. Stress is determined by a transaction between a person and their external environment and their interpretation of what this stressor means to them, and not the actual stressor itself. With the example above regarding Armani, he compared the patient in respiratory failure to his father and appraised the 'threat of loss' of his father. Armani's psychological stress needs to be considered in relation to his personal properties and his own unique appraisal. Stress can have positive and negative manifestations. Lazarus and Folkman (1984) explained "…the question should not be whether stress is good or bad, but rather how much, what kinds, at which times during the life course, and under what social and personal conditions is it harmful or helpful" (p. 182). Therefore, stress, harmful or helpful, is an individualized process and has many influential variables.

Cognitive Appraisal

Cognitive appraisal is a continuous process and is the individual's mental evaluation of meaning and significance (Lazarus & Folkman, 1984). When an individual has an encounter with their external environment, they make an appraisal of the situation in context to themselves.

It is comprised of primary appraisal, secondary appraisal, and reappraisal. These labels are unsuitable as primary and secondary appraisal are of equal importance and can occur simultaneously and in mixed order.

Primary Appraisal

Primary appraisal has three possible determinations: 1) irrelevant, 2) benign-positive, and 3) stressful (Lazarus & Folkman, 1984). Irrelevant is when the encounter has no impact on their well-being, benign-positive is when the encounter preserves or enhances well-being, and stressful includes challenge, harm, loss, or threat (threat is the potential of harm or loss) (Lazarus & Folkman, 1984). Possible primary appraisals are explained using the case example with Armani. Armani may appraise the resuscitation as a great learning experience to propel him forward in his competence and skills as a professional (challenge). Armani may view the loss of a patient as a blow to his self-esteem and confidence as a provider (harm/loss). Armani expressed concern for the potential loss of his father (threat). Threat and challenge may occur simultaneously, where Armani may feel an increased drive to improve as a healthcare provider, as well as worry for the potential loss of his father. These facets can occur simultaneously and are not always independent.

Secondary Appraisal

Secondary appraisal is a complex evaluative process of 'What can be done to manage this situation?' to which effective and ineffective coping strategies arise (Lazarus & Folkman, 1984). Secondary appraisal is the individual's means of managing the situation by conceptualizing their options going forward and the likelihood of achievement in those options. As previously mentioned, primary and secondary appraisals do not occur in a predetermined order. Secondary and primary appraisals occurring simultaneously may look like 'what is at stake?' and 'which path do I take?' Armani has expressed harm loss and/or threat and challenge. From these

appraisals, Armani consciously or subconsciously decides if he has the ability to cope, or does this situation exceed his resources and his ability to cope.

Reappraisal

"Reappraisal refers to a changed appraisal on the basis of new information from the environment…an appraisal that follows an earlier appraisal in the same encounter and modifies it" (Lazarus & Folkman, 1984, p. 38). For example, Armani takes part in a debriefing session immediately following the resuscitation efforts. The physician expresses the poor prognosis of the individual. The physician reminds the team that they did everything they could with what they were given and even if the patient were brought to them sooner, based on their comorbidities, the patient would likely not have survived. This information may cause Armani to reappraise and determine that he is not an incompetent healthcare provider and that he could not have manipulated the patient's outcome. He may then interpret the encounter as a challenge, or benign-positive, in that the patient did not have to suffer any longer.

All members of a resuscitation event/CED are engaging in the process of cognitive appraisal/reappraisal and their coping strategies will be determined based on the level of significance the individual places on the event. This can illicit a range from no psychological distress to high levels of psychological distress. CED may provide more opportunities for reappraisal, as new information regarding the event is more likely to occur in this professional setting. Discussion of decision-making pathways, providing education, and peer support during a CED are all examples that have the potential to influence a person's reappraisal with the prospects of effective coping strategies.

Causal Antecedents

Causal antecedents are important determinants of cognitive appraisal and consist of personal variables and environmental variables (Lazarus & Folkman, 1984). Personal variables

include commitments and beliefs. Environmental variables include situational factors such as novelty, predictability, event uncertainty, temporal factors, ambiguity, and timing in relation to life cycle. The two variables, person and environment, are interdependent. Hence, for a commitment or belief to influence appraisal, an environmental encounter is needed. LFTTSC (1984) acknowledges the relationship between environmental factors and characteristics of an individual in their relational perspectives of stress and coping, which infers that individuals have the potential to contribute to and diminish perceived threats resulting from the appraisal of these antecedents.

Personal Variables

An individual's commitments and beliefs influence appraisal. Both are discussed separately.

Commitments. Commitments are an expression of what is important to a person and determine what is at stake in a stressful encounter (Lazarus & Folkman, 1984). Armani expresses commitment to his father by placing meaning to the resuscitation event and threat of loss of his father in a similar fashion. "The greater the strength of a commitment, the more vulnerable the person is to psychological stress in the area of that commitment" (Lazarus & Folkman, 1984, p. 58). The evaluation Armani placed on the event is influenced by the extent that the outcome harms or threatens his commitment. A commitment's influence on appraisal can guide people to motivation or avoidance (Lazarus & Folkman, 1984). Armani has developed avoidance because of his appraisal to the event, as evidenced by switching certain patient assignments, avoiding situations, and absenteeism.

Beliefs. Beliefs are pre-existing notions that help shape the understanding of the appraisal's meaning and can shift the way a person relates to the environment or to others (Lazarus & Folkman, 1984). An example evident in Armani's case is his beliefs about control

which influenced his appraisal. This refers to an individual's assumption of control in a situation and its outcomes. Armani expressed a belief that he could control the patient's outcome if he had notified the physician earlier. Armani also changed the way he related to others and his environment by delegating tasks relating to respiratory conditions to other staff. As a result of Armani's appraisal, he is questioning his confidence and belief that he has the knowledge and skills to care for patients with acute respiratory distress. "Regardless of their accuracy, situational appraisals of control over the environment, and/or oneself, influences emotion and coping" (Lazarus & Folkman, 1984, p. 80). Although Armani may be a capable provider, he believes he is not. Armani's delegation of tasks and avoidance of certain patients may decrease his psychological distress in the short-term, which influences his coping process.

Although not mentioned in Armani's case, existential beliefs, such as faith, fate, and universal order for example, create meaning and can be used to dampen or regulate an emotional response (Lazarus & Folkman, 1984). Armani could appraise the situation as benign-positive by giving meaning to the patient's death, such as attributing the outcome to a Higher Power's will. A nurse with the same years of experience and training, with their own individual set of beliefs and commitments, may interpret the even quite differently. Personal variables are individually determined and may greatly impact the individual's appraisal of events.

Environment Variables

Environment refers to external factors influencing an individual's appraisal. The relationship, or transaction, that occurs between a person and their environment is bidirectional (Lazarus & Folkman, 1984). This means the person and their environment are not viewed as separate entities but are abstractly joined in a relational meaning. Encounters that create potential for threat, harm, or challenge can be attributed to situational factors such as novelty,

predictability, event uncertainty, temporal factors, ambiguity, and relation to timing in the person's life cycle (Lazarus & Folkman, 1984). Each situational factor will be addressed briefly.

Novelty. Novelty refers to situation or knowledge a person has, or has not had, in an experience and is associated with harm, danger, or mastery (Lazarus & Folkman, 1984). Armani is newly trained to the resuscitation room and experienced his first resuscitation case as the primary provider. The novelty of the situation played a role in his appraisal and confidence in mastery of the event. A person may also be unclear about the significance of an event. Armani could be confused about the resuscitation and unsure how he feels or what this means to him.

Predictability. Predictability as a situational factor refers to some sort of warning regarding the situation or event. "Predictability implies that there are predictable environmental characteristics that can be discerned, discovered, or learned" (Lazarus & Folkman, 1984, p. 85). Armani had a 'warning' when paramedics called in to the ED, alerting the department of the arrival with a patient in respiratory distress. Armani saw the new patient's physical manifestations indicating their critically ill nature, however, Armani may or may not have been able to predict the patient's arrest, with more training or experience, for example. In the following days, Armani is apprehensive and cannot predict when he will be subject to a similar event.

Event Uncertainty. Event uncertainty refers to probability of events. To put this into perspective, you may be told there is a 15% chance the cancer will return after a chemotherapy treatment. In Armani's case, working in the ED as a resuscitation trained nurse increases his probability of being exposed to resuscitation events. If you are not a healthcare provider, you may never see a resuscitation event. Preparing for these events and alternative outcomes may not always be possible. Confusion, rumination, fear, helplessness, resulting from uncertainty, can alter cognitive appraisal, consequently making it difficult to cope (Lazarus & Folkman, 1984).

Armani experiences anticipation of another resuscitation event, which aggravates his stress. He does not know when another resuscitation event will occur. As a healthcare provider in the ED, it is likely he will experience these events again. This stressful appraisal has resulted in his coping mechanism of avoidance.

Temporal Factors. Temporal factors refer to imminence, duration, and uncertainty. Imminence is how much time there is before an event, duration is how long the stressful event persists, and uncertainty is not knowing when the event is going to happen (Lazarus & Folkman, 1984). Temporal uncertainty, different than event uncertainty, refers to the level of knowledge or information regarding timing of event. Armani determines if there is enough time to collect necessary information for evaluation of the upcoming event and if he determines there is not, then this leads to psychological distress. Paramedics reported to the department that a critical patient was on route. Armani knew they were on their way but may be unsure how long it would be until their arrival. Armani had minimal time between patients, resulting in a lack of preparation and a sense of urgency. In terms of duration, the event lasted one hour which can increase or decrease one's distress depending on their appraisal. One may interpret longer duration as more time to come to terms with the situation and understand their role, or one may determine the prolonged event duration to worsen their stress. Performing resuscitation duties for one hour could help Armani come to terms with his role and the event, or it might heighten his stress response as time goes on. Also, 'too much' anticipation time may allow for reflection, suffering, grief, and/or avoidance (Lazarus & Folkman, 1984). Armani may hear the paramedics report that a respiratory case is on route in approximately 20 minutes, and the longer anticipation time may aggravate his stress response.

A resuscitation event would be interpreted as an "acute-time-limited" event under the class of "chronic-intermittent" events (Lazarus & Folkman, 1984, p. 101). Resuscitations can be

a one time event (acute-time-limited), or in Armani's case, his career likely requires frequent exposure to such events (chronic-intermittent). Indicating that one resuscitation or chronic exposure to resuscitations can evoke stress responses. These durational patterns have different implications on stress and appraisal for the individual. According to General Adaptation Syndrome, long exposure to severe stress can result in exhaustion (Lazarus and Folkman, 1984). Lazarus and Folkman (1984) expressed the need for more research in regards to duration as a variable and its effect on stress.

Ambiguity. The cornerstone of ambiguity is a "lack of situational clarity" (Lazarus & Folkman, 1984, p. 103). The is a lack of information, or the information available is unclear or insufficient, which can affect the individual's appraisal. Ambiguity is different than uncertainty in that uncertainty involves the person's confusion of the meaning with the environmental configuration versus ambiguity's lack of situational clarity (Lazarus and Folkman, 1984). As an example, uncertainty for Armani could mean seeing the patient in the resuscitation room and not knowing how to proceed. Ambiguity for Armani would be not having received report from the paramedics regarding the patient and having to provide care with insufficient information. Ambiguity can be threatening, and Armani may seek more information, education, or practice to remedy this environmental stressor.

Timing in Relation to Life Cycle. Neugartan, a researcher on the aspect of timing who created multiple works from 1968-1979, suggested that people have a concept of a normal life cycle and expectations that follow this ideal (as cited in Lazarus & Folkman, 1984). Armani may think his father is too young to die and that there are certain milestones, he himself, or his father, need to accomplish before his father's death. Events occurring too early or too late, according to the individual, can have affects on social support, preparation for a new role, and sense of satisfaction (Lazarus and Folkman, 1984). For example, Armani may interpret the threat of his

father's death occurring before the birth of his daughter as stressful. He may view having a lack of parental support as a great loss with the death of his father occurring 'too early'.

Healthcare professionals providing resuscitation care are impacted by their personal variables (commitments and beliefs) and environmental variables (situational factors - novelty, predictability, event uncertainty, temporal factors, ambiguity, and timing in relation to life cycle) and are deemed as causal antecedents to their cognitive appraisal. Cognitive appraisal will determine strategies of coping, whether they are effective or ineffective means of coping.

Coping

Similar to the concept of stress, coping has had many interpretations and definitions over time. Coping is defined by Lazarus and Folkman (1984) in Chapter One of this thesis. They offered a new definition of coping as a process rather than trait-focused or tied to its outcome. Coping is recognized as a continuous appraisal and reappraisal of the person-environment relationship, wherein emotional processing takes place (Lazarus & Folkman, 1984). Coping is *all efforts* to manage stress and may have positive or negative consequences. This is not to say one coping strategy is superior to another. The evaluation is dependent on context, person, and occasion, within short-term and long-term assessments (Lazarus & Folkman, 1984). There are emotion-focused forms of coping and problem-focused forms of coping (Lazarus & Folkman, 1984). Some examples of emotion-focused coping (EFC) can include avoidance, selective attention, distancing, and creating positive value from negative events. An example of EFC is Armani's avoidance of patient's presenting with respiratory conditions. Problem-focused coping (PFC) is similar to problem-solving, however, there may be internal (directed-at-self) and/or external efforts (directed-at-environment) (Lazarus & Folkman, 1984). Armani may request assistance from other staff to help with his previous and current patients which would be an example of altering environmental pressures and resources in directed-at-environment PFC. An

example of PFC directed-at-self, Armani may also express a heightened level of aspiration towards helping his patient which motivates Armani to seek out more opportunities for solutions in patient care. PFC and EFC strategies can occur concurrently. EFC and PFC both can facilitate and impede the coping process (Lazarus & Folkman, 1984). To illustrate this notion, refer to the next example. Armani may use disengagement with patients with similar conditions (EFC) in attempts to decrease his stress, which helps him perform and accomplish his assigned tasks, subsequently appearing detached or emotionless towards his patients. "The greater the threat, the more primitive, desperate, or regressive emotion-focused forms of coping tend to be and the more limited the range of problem-focused forms of coping" (Lazarus & Folkman, 1984, p. 168). Cognitive appraisal can become affected and interfere with information processing, which may result in more EFC, such as engaging in rash decisions merited by feelings.

Coping resources are something one draws upon or acquires (Lazarus & Folkman, 1984). Coping resources are health and energy, positive beliefs, problem-solving skills, social skills, social supports, and material resources. Brief examples are provided for each coping resource mentioned. Health and energy play a role in coping, whereas an ill, fatigued, or debilitated person may have less energy to cope than a robust healthy individual. Individuals may cope quite well despite these factors but generally, it is easier to cope when one is feeling well. Belief systems and positive thinking can be drawn on as a coping resource under positive beliefs. For example, Armani believing there is an afterlife for his patient undergoing resuscitation may help him cope with the loss of his patient. During the resuscitation, if Armani felt like he didn't know the next best step, he may utilize problem-solving skills and remember to refer to the protocols and work his way through the problem. Social supports involve solving problems with others, and social skills refers to effective communication with others. An example of these could be having the social awareness to ask for a team debriefing post-resuscitation and seeking social

support such as counselling options. Material resources refers to goods and services. "Monetary resources greatly increase coping options..." (Lazarus & Folkman, 1984, p. 164). If Armani has the means to pay for a counselling service, he is more equipped to coping solutions than someone who cannot afford it. Finances can also be viewed as an environmental constraint to coping. Constraints refer to factors that restrict a way an individual engages with their environment (Lazarus & Folkman, 1984). Aside from environmental constraints, personal constraints also influence coping. These are culturally derived values, beliefs, and norms. "...knowledge of a person's resources is not sufficient to predict coping" (Lazarus & Folkman, 1984, p. 170). Armani may have counselling available to him, but he may view himself as 'weak' if he accesses this resource, or he may not trust that the resource will not affect his employment. Rather than focusing on the resources and constraints of an individual's coping, Lazarus and Folkman (1984) view coping as a process. Individual context analysis is necessary to interpret the meaning of the stressor that influence internal and external behaviours in coping. For coping to be effective, there must be a 'good match or fit' of coping efforts and other variables, such as values, goals, commitments, beliefs, constraints, coping styles, and options (Lazarus & Folkman, 1984). Resuscitation providers may interpret the same event in vastly different contexts with different personal and environmental variables influencing their coping, in turn affecting their adaptational outcomes.

Adaptational Outcomes

Appraisal and coping affect adaptational outcomes, in turn influencing an individual's satisfaction or quality of life (Lazarus & Folkman, 1984). Adaptational outcomes require short-term and long-term assessments. What is deemed as successful in the short-term may not be evaluated the same in the long-term. Armani may deem his resuscitation skills with dissatisfaction in the short-term but may become a confident and skilled provider in the long-

term due to these difficult experiences. Short-term/immediate effects, as referenced in Appendix A, refers to physiological changes, feelings, and quality of encounter outcome. Armani exhibits palpitations and sweaty palms when entering the resuscitation room and has negative feelings associated his performance. The quality of the encounter was appraised poorly as Armani was dissatisfied with the outcome of the stressful event. Three basic forms of long-term outcomes are social functioning, morale, and somatic health. The relationships among these outcomes are complex and functioning well or poorly in one area of social functioning, morale, or somatic health, does not guarantee performance in others. For examples, a physically ill individual may appraise their quality of life quite positively.

Social Functioning

Social functioning encompasses work and social living along with the various roles we carry in our lives. Armani's case explains he is a healthcare provider and a son. He may also be a husband, a father himself, among other roles. Each role/relationship carries a social identity with sets of responsibilities and expectations which are developed, altered, and maintained throughout life encounters (Lazarus & Folkman, 1984). Social functioning is influenced by many factors. The characteristics of an individual and their environment affect their relationship choices and functions, as well as their interpretation of experiences and their expressed behaviours (Lazarus & Folkman, 1984). Armani may become closer with the other resuscitation trained healthcare providers now that he is engaging with them more often. He may develop or adopt coping skills based on his mentors in the resuscitation room. This is a socially designed arrangement, created by advancement of practice in the ED, which has influence on coping and illustrates the complexity and variation of social functioning. Healthcare providers hold many roles in their lives in conjunction with their work personas. Refusing to acknowledge the existence of outer

influences manipulating adaptational outcomes would negate the social complexity of human functioning and the coping process.

Morale

A person's psychological well-being, subjective happiness, and satisfaction are referred to as the adaptational outcome of morale (Lazarus & Folkman, 1984). An individual assesses their performance and success in achieving their goals in relation to the encounter's outcome. It is not the outcome that influences their distress but their expectations of the encounter. Armani's expectation was to save the patient's life. When unsuccessful, he interpreted the outcome in a negative manner, which contributes to his feeling of dissatisfaction and distress. If Armani's goal was to do his best with the training he was given and he self-determined he performed well and achieved his desired goals, then he may interpret the encounter as successful or beneficial, and consequently feel satisfied. Morale is about how Armani feels about himself and the conditions of his life.

Somatic Health

It is widely assumed that emotions, stress, and coping are factors in bodily changes, such as illness (Lazarus & Folkman, 1984). Lazarus and Folkman (1984) refer to two models of illness: The Generality Model and The Specificity Model. There remains great debate between the two models and their relationships between stress, coping, and somatic illness, however, to date, these are the models that relate cognitive appraisal and coping processes to health outcomes. Lazarus and Folkman (1984) created an illustration of the two models to summarize the theoretical concepts of factors that influence illness (Please refer to Appendix B, The Generality Model (Figure B1) and The Specificity Model (Figure B2)). The Generality Model theorizes that the psychological disequilibrium created by the immune response and/or metabolic consequences of the stressor result in specific illness susceptibility. According to the generality

model, if an individual is exposed to multiple stressors, such as frequent traumatic events as seen in the ED, which are deemed as stressful to the individual, they are susceptible to illness as a health outcome. Specificity focuses on the environment as a causal influence in illness with emotional response as a catalyst for somatic illness (Lazarus & Folkman, 1984). The Specificity Model theorizes that threat appraisals can lead to coping patterns, that then may lead to illness. A healthcare provider that copes with stress by drinking alcohol, then develops liver cirrhosis, is an example of the specificity model. As opposed to the limited simplicity of the two models, Lazarus and Folkman (1984) acknowledge that a person and their health outcomes must be viewed more broadly and incorporate physiological, social, and psychological factors.

Somatic syndromes and illness resulting from negative stress can manifest in all body systems. Examples of somatic symptoms are issues with sleep, pain, gastrointestinal upset, and cardiovascular compromise (Gupta, 2013). PTSD has been associated with medically unexplained somatic syndromes (Katon et al., 2001 as cited in Gupta, 2013). As noted in the literature review, healthcare professionals involved in resuscitation are at risk for PTSD (Spencer et al., 2019) and STS (Morrison & Joy, 2016). Somatic symptoms of healthcare professionals can be misinterpreted, which risks improper treatment. An organizational program, such as CED, may act as a means of identifying further support needed for these at-risk employees.

The Individual and Society

An individual's relationship with society, their social environment, cultural and social norms, have influence on the relationship with stress, appraisal, and coping (Lazarus & Folkman, 1984). Society and the individual have a bidirectional relationship, wherein society can shape a group or individual's thoughts, feelings, actions, and relationship with stress, and an individual or group can influence society and social change. Cultural and social norms are imbedded into society. Cultural patterns and rules can influence an individual's acceptability and outward

expression of emotion (Lazarus & Folkman, 1984). Armani may have been raised that men do not show emotion and emotion is 'weak'. This can influence his beliefs and acceptability of outward emotional expression. Armani's experience with the patient in respiratory distress resulted in distancing from certain patients and may cost him a sense of identity as a competent resuscitation provider. This could be met with disapproval by coworkers. Thus, the social value placed on his behaviours can determine his adaptational outcome. Armani could struggle with low morale, impaired social functioning, and even health issues as a result. Therefore, culture and social structure influence the individual's relationship with stress.

Social environments can exacerbate or remedy stress (Lazarus and Folkman, 1984). Armani's environment affected his appraisal of stress; however, the social environment also provides resources and supports that are important for his coping. Armani's team may conduct post-resuscitation debriefings that hold social value and support team members. Armani's coworkers are an example of his social network, although, having a social network does not always guarantee socially valued relationships. It is simply not enough to have resources available, especially if people do not value or use them. Since there are several ways to conduct a CED, this study aimed to determine what means of support and resources are valued to participants. 'Perceived social support' refers to the nature of the social relationships and the value placed by the individual (Lazarus & Folkman, 1984). Conducting a CED that the participants deem as valuable would be a perceived social support under LFTTSC. The assumption of social resources and support are that "…people will have better adaptational outcomes if they receive, or believe that they will receive, social support when it is needed" (Lazarus & Folkman, 1984, p. 259). The ED is a dynamic, often chaotic, workplace and has many social pressures as well as support and resources.

Treatment and Stress Management

According to Lazarus and Folkman (1984), treatment and management of stress is concerned with lessening levels of stress and improving coping. They refer to treatment in two options: one-to-one therapy, and stress management in formal programs. Treatments attempt to help the client discover origins of poor coping and move forward with effective coping strategies. Stress management therapies are targeted at a general population versus tailored for a particular individual's needs. Various therapies within the two categories will not be reviewed in this thesis. There is no one treatment or therapy that will gel all facets of cognitive, behavioural, and emotional processes that guarantee better morale, social functioning, and health. However, Lazarus and Folkman (1984) noted that:

> Therapies that seem to have the most influence and lasting power are those that are both flexible and multifaceted or multimodal…It should not seem surprising that when treatment involves more than one modality- that is, cognition, behaviour, and/or feeling- it should have a greater prospect of setting corrective processes in motion. (p. 353)

People are socially complex and dynamic in their relationships with their environments and evaluation of treatment success is methodically challenging. CED is not a treatment, however, providing a CED program tailored to all individuals of the resuscitation team is challenging, but a challenge all treatment programs face. CED may add to a multimodal approach of lessening stress for the ED nurse.

LFTTSC highlights the interplay between the person and their environment. Therefore, "treatment that is centered on changing these environments when possible is just as appropriate as treatments designed to change the person" (Lazarus & Folkman, 1984, p. 354). Group programs create an external environmental-person relationship that is bidirectional. CED is a form of group program targeted at a team of individuals who were impacted by the same

stressor. CED practices involve exchange of information that can be quite valuable to future events and to individual participants. Group programs may be useful when there is a lack of knowledge, skill, or experience and the therapy focuses on filling these gaps (Lazarus & Folkman, 1984). Armani is new to the resuscitation room and his lack of experience may play a role in his stress appraisal. Explanation and education can fill these gaps and his reappraisal of his environmental encounter may produce more functional adaptational outcomes. CED can act as a space for reappraisal, coping, and perceived support. Presently, there is a lack of organizational opportunities, or a lack of uptake of opportunities, for healthcare providers to review resuscitation events. Well-being of resuscitation nurses has been referenced to be at risk, therefore, it is of utmost importance to leadership and administration to protect their healthcare providers.

LFTTSC was chosen to guide this study based on its dynamic stance on the relationships and interplay of the person and their environment. The appraisal of stress and coping is highly individualized, however, to create and improve organizational coping options for nurses, it is imperative to consult with the population who is meant to access them. Interviews with nurse resuscitation providers of the ED provided insights to their occupational stressors and their perceived needs for stress management and coping. Lazarus and Folkman (1984) noted that despite psychological distress and impaired functioning from singular or multiple events, people generally do not seek help after one stressful encounter but for "frequent overwhelming or disruptive stress" (p. 357). This suggests that despite psychological distress resulting from one traumatic resuscitation event, healthcare providers may be unlikely to seek help. To a healthcare provider working in the ED, resuscitations are likely to be more frequent events that may be central to the individual's role. Resuscitation events have the potential to have cumulative effects with the ability to impair functioning or well-being in ED nurses and other healthcare providers.

Using LFTTSC framework to guide this study generated insights to ED and CED supports by acknowledging the multifactorial nature of nurses' stress, appraisal, and coping. The framework appreciates varying viewpoints resulting from one event, which will be evident in a team intervention such as resuscitation care. Aspects such as age of the nurse, level of experience, patient factors, and social influences, have the potential to affect a participant's appraisal of stress and coping. Chapter Three describes how this theoretical framework guided the research methods.

Chapter Summary

Working in the ED poses many challenges, such as repeated exposure to resuscitation events, which may take a psychological toll on ED nurses. Negative psychological consequences resulting from providing resuscitation care have the potential to develop into anxiety, burnout, compassion fatigue, moral distress, STS, and PTSD. An organizational means to manage the negative psychological consequences of resuscitation may be implementing a CED program. CED is supported by the AHA and Heart and Stroke Foundation. CED is included in ACLS education yet is underutilized in the clinical setting. There is no widely accepted implementation, standardization, or definition of debriefing. There are many CED tools, frameworks, and purposes found in the literature, which all have reported successful implementation. Hot debriefing and cold debriefing refer to timing of implementation and have advantages and disadvantages. The department must assess which means of debriefing is appropriate to their debriefing goals and purpose, and then standardize the language and process to aid in sustainability of their initiative. Some suggestions to improve or sustain a debriefing initiative is to involve multidisciplinary members in program leadership, on-going training, debrief champions, assessing barriers and facilitators prior to project implementation, and to train ED charge nurses as debrief facilitators. CED is multidisciplinary and all providers involved in the

resuscitation should be invited to participate. Having an experienced or educated debrief facilitator is important to the productivity of the debrief. The focus is on team, versus individual, feedback and knowledge sharing. A comprehensive CED includes process improvement, professional education, and emotional processing. A psychologically safe environment is paramount to open discussion and to encourage respectful exchange between team members. Benefits of CED inhabit personal, professional, and organizational facets. Gaps noted within the literature were lack of representation of adult ED resuscitation with CED versus pediatric literature. The theoretical-practical gap of simulation debriefing to clinical CED practices, and the perceived needs of resuscitation providers post-resuscitation. This research study aimed to address these gaps and determine how CED can support ED nurses.

Lazarus and Folkman's Transactional Theory of Stress and Coping (LFTTSC) was described in detail and was an appropriate framework to guide this research, as it recognizes the multifactorial complexities of stress, appraisal, coping, and personal and environmental variables on individual outcomes. Working in the ED and providing resuscitation care is complex and stressors may be interpreted quite differently with adaptive or maladaptive outcomes. Stress is highly individualized, and coping is a process.

CED has the potential to be a group program and a 'perceived social support' that is valued by individuals of the ED. It is an organizational means to help resuscitation providers manage occupational stress in a team structure. CED is not a form of treatment but can be the first indication of healthcare providers needing additional mental support.

CHAPTER THREE: Research Method

This chapter addresses the method of the research study and explains the choice of a qualitative exploratory approach. Description of the research design, sampling technique, research setting, data collection, data analysis, methodological rigor, ethical considerations, and dissemination plan will be discussed.

Study Design

This study used a qualitative exploratory design guided by Lazarus and Folkman's Transactional Theory of Stress and Coping (LFTTSC). Exploratory research aims to discover the dimensions of a phenomenon or the relationships between phenomena (Polit & Beck, 2021). The philosophical underpinning of the research follows a constructivist paradigm. A constructivist approach acknowledges that multiple truths can coexist as individuals construct their interpretations of reality within their own context (McEwen & Wills, 2021; Polit & Beck, 2021). This study aimed to honor and explore the nurses' experiences within their social context. The goal of the research was to gain understanding on how the phenomenon of resuscitation and post-resuscitation was experienced by nurses and what they perceived as a valuable resource to their coping. Exploratory research is risky due to the unknown outcome. One cannot know beforehand if the research will produce new information, however, exploratory research can be the birth of discovery and innovation (Swedberg, 2020). Without this 'risk', research would be limited to replication. The study's design is best suited for clinically rich and complex topics, such as the experience of providing resuscitation. Quantitative approaches would not accurately depict the complexity of the interconnectional properties. To quantify a participant's descriptions would limit the acquisition of rich contextual perspectives and be a disservice to the nurses' experiences. As noted in the literature review in Chapter Two, CED is inconsistently practiced,

yet reported to be beneficial. An exploration as to why, is essential to narrow the theoretical-practical gap.

Sampling Technique

Emergency nurses are a specialized group of individuals that possess a unique set of skills. There are approximately 4000 ED nurses in Canada (NENA, 2023). To gain rich, well-informed context from participants, the sampling technique was purposive. This involved recruiting participants (ED nurses) that had knowledge and/or experience regarding the topic under study. A drawback of purposive sampling is it may not be a representative sample of the population under study (Polit & Beck, 2021); however, it is a favoured technique for gaining thick descriptions conducive to qualitative exploratory methods.

The study aimed to recruit 10 to 15 ED nurses who worked at the participating ED and who volunteered to be a part of the research. Eligibility requirements included the following: 1) the participant voluntarily consented to being a part of the study, 2) the participant had experienced at least five adult resuscitations in a professional capacity in the past six months at the participating adult ED, 3) the participant was actively practicing as a nurse with professional licensure provided by the province's regulatory body, and 4) the participant voluntarily consented to be audio-recorded during a one-time interview.

Data saturation is achieved when the addition of new participants yields redundant information, versus new findings (Polit & Beck, 2021). A systemic review done by Hennink and Kaiser (2022) concluded that data saturation within qualitative methods can be achieved in relatively narrow samples of even nine to 17 interviews. Although sample sizes solely based on numerical guidance is not always reliable, rich data was achieved due to the propitious research setting and participants' ample clinical experience surrounding the phenomenon under study. Data saturation was reached with a sample of eight.

Setting and Recruitment of Study Participants

The research setting was located in an urban city, and it was a tertiary hospital with an adult ED. Recruitment of study participants involved collaborating with stakeholders (the hospital director and the ED managers). The recruitment plan began with informing the stakeholders about the research study, purpose, objectives, significance, and dissemination plan (Permission to Access Participants Letter available in Appendix C). To inform and recruit potential participants of the study, permission from the ED Director to blind carbon copy email potential study participants on behalf of the researcher was requested (Letter of Invitation to Participate in Research in Appendix D). The Letter of Invitation to Participate in Research was sent via blind carbon copy employee emails along with Participant Consent Forms (as shown in Appendix E). Additional recruitment strategies included leaving recruitment posters throughout the ED and staff's respective breakrooms (Recruitment Poster available in Appendix F). An honorarium for participation was a grocery store gift card worth $50. Justification for the monetary value of the gift card was based on the hourly wage of a nurse working within the region of interest. The top wage scale, for a Nurse II in the region, was $47.185 as of April 2022 according to the province's nurse union.

Data Sources and Data Collection

Three sources of data were used in this study: 1) verbatim transcripts from digitally recorded semi-structured interviews, 2) researcher's reflective journal, and 3) study participant demographics.

Participant Interviews

Interested nurses were encouraged to notify me by email or phone of their willingness to participate in the study. Consent forms were available to review with the first recruitment email as they received a copy of the Letter of Invitation to Participate in Research and the Consent

Forms (Please refer to Appendix D & E). An in-person interview was arranged at first contact. At the one-time interview, prior to commencing, the consent forms were available for review and questions encouraged. The signed paper copy of the consent form was securely stored in a key-locked portable case, and the participant had on-going access to the consent form from their previous emails. Immediately following the interview, the signed documents were placed in a locked drawer in my home office until they were scanned into a digital file at the earliest convenience. The digital consent forms were kept on a password-protected computer in a password-protected file. The hard copy consent forms were shredded and destroyed as soon as a digital copy was made. The digital consent forms are to be destroyed as per the University's research protocol, approximately February 2029. All participants were reminded that their participation in this study remained confidential and personal information was not to be reported to their employer. They were advised that an executive summary, without participant identifiers, would be provided to the ED management and all willing participants who indicated on the consent form they wanted to receive this document. Participants were informed that direct quotes from the interviews may be shared in disseminated findings and will be de-identified. For example: Participant #1. By using verbatim quotes, confidentiality cannot be explicitly guaranteed, however all efforts were made to protect the identity of the participants.

The digitally recorded interviews were transferred into a computer file as soon as possible after the interview. Once the digital interview file was created, the hand-held recording device's audio was deleted. All digital files of the interviews were provided a de-identified participant code and sent to a transcription service, called 'Transcription Heroes' through their secure online encrypted connection, accessible through their website. When the transcripts were returned to me, all efforts were made to remove identifiable features from the transcripts. These

de-identified files were then stored in a password-protected file on a password-encrypted computer and a Microsoft Teams folder only accessible to me and my advisor.

All interviews were conducted with the voluntary participant in-person and one-to-one with me as the interviewer. This was a one-time interview. All interviews were recorded with a digital audio recording device which was stored in a locked drawer in my home office.

The interview format was semi-structured with open-ended questions and took approximately one hour in length (Semi-Structured Interview Guide is available in Appendix G). A semi-structured interview allowed me to obtain the desired information about the nurse's experience of resuscitation and post-resuscitation whilst providing participants freedom to describe their experiences in their own words (Polit & Beck, 2021). Protecting participants from coercion required careful consideration. I entered the study with the self-awareness that I may be considered to hold a position of authority over the participants as I identified myself as a graduate student (Polit & Beck, 2021). Means to combating coercion of participants is addressed in the following subsections, as well as the voluntary recruitment process, and the freedom to withdraw from the study without explanation or consequence.

Reflective Journal

Another data source was my reflective journal. The purpose of this journal was to document my thoughts, ideas, observations, and insights. Researchers use reflective journals to help them make sense of what is being said, make notes to improve future interviews, to comment on the interviewer's own feelings, and to gain insight of their influence on the participant (Polit & Beck, 2021). An Observation/Reflective Journal Guide (Please see Appendix H) was used immediately following the interviews. The reflective journals offered me the opportunity to pay attention to researcher bias, and document interesting observations. The reflective journal aided in conceptualization of theme development and helped distinguish

participant subjectivity from researcher observation. Reflective Journal notes were taken after the interview was completed and the participant was not present. Only myself, and my academic, were privy to these de-identified journal notes. This journal was stored on a password-protected computer on a password-protected file in my home office.

Participant Demographics

In the opening of the interview, the following participant demographics were obtained: age, self-identified gender, years worked as a nurse, years worked in the ED as a nurse, casual/part-time/full-time employment status, and an approximate number of in-hospital resuscitation events experienced in last six months. These descriptions of the sample were collected to provide insights in relation to LFTTSC framework. For example, novelty is known as a factor in stress and coping. An individual with less nursing experience may or may not interpret their encounter differently than a senior nurse. Assessing for patterns were examined in relation to LFTTSC and these reported sample descriptions. However, with the small sample size of eight participants, patterns associated with age, gender, full-time/part-time/casual status, posed challenges.

Ethical Considerations

Due to the sensitive and stressful nature of resuscitation events, disclosure of the participant accounts had potential to evoke emotional and psychological reactions during and following the interview process. Potential for emotional reactions were communicated to participants throughout the interview. Within the emailed consent forms that were provided in the initial invitation to participate, participants were informed of possible acute distress, and were encouraged to evaluate their ability to participate. Prior to the recorded interview, during review of the consent, a hard copy of resources pertaining to psychological well-being was provided to all participants (Participant Resources provided in Appendix I). This document was

provided to all participants by email prior to first meeting, and a hard copy given at the time of signed consent. Participants were also reminded that they may decide to withhold from participating in the study without any negative consequences at anytime before the executive summary was created. No participants withdrew from the study.

In preparation for emotional and psychological reactions that could arise in the interview, a distress protocol was developed to protect participants (Distress Protocol is available in Appendix J). This protocol pauses or stops the interview based on my interpretation of observed behaviors of participant distress. The protocol determines pathways of action. The two pathways of acute distress are 1) acute emotional distress *without* imminent danger and 2) acute emotional distress *with* imminent danger. Each pathway provided steps to protect participant safety and well-being. It included questions surrounding the interview's effect on their daily functioning, suicidal ideation, follow-up measures, and the notification of my professional duty to notify authorities in the event of harm to self or others. No actions were required pertaining to the Distress Protocol for this study.

The ethical considerations of this study were informed by the Course on Research Ethics (CORE) Tri-Council Policy Statement (TCPS2) – the official research ethics policy for the Canadian federal research agencies. Components of the Tri-Council Policy Statement include, but are not limited to, assessing risk and benefit, consent process, privacy and confidentiality, fairness and equity, and conflict of interest (CIHR, NSERCC, & SSHRC, 2018). The values presented by these statements and acts are reflected in this study's conduct and the materials presented within this thesis.

Data Analysis Plan

Data analysis began during the first participant interview. The primary method for data analysis in this study was qualitative content analysis. The definition of qualitative content

analysis is derived from Hsieh and Shannon (2005) as "a research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns" (p. 1278). This involved extracting, organizing, and synthesizing the study's data to identify core consistencies and meaning. The digitally recorded interviews were transcribed verbatim; I read and re-read the transcripts that underwent a method of inductive coding, and I uploaded de-identified transcripts into a qualitative data analysis software called NVivo. Inductive coding involves allowing the data to derive codes versus having preset codes prior to analysis (Dovetail Editorial Team, 2023). This requires careful reading and rereading of the data to identify underlying concepts (Polit & Beck, 2021). Interpreting the transcripts involved an iterative process of finding patterns, concepts, and meaning from participants' accounts. Codes, categories, sub themes, and themes were created, reviewed, and remodelled, and evolved over time and subsequent interviews. I was the only person assigning codes to maintain consistency, however I consulted with my advisor and we worked closely together in data analysis and documenting the findings. Data analysis included an interpretation of similarities and differences between participants' years of experience. Other demographics did not present any discernable patterns that varied. The reflective journal aided in explanation of the participant accounts and ensured that I was assigning codes that were true to participant's meanings and expressions. This reflective journal was particularly useful when I mistakenly did not record the first interview.

Data analysis was guided by the LFTTSC framework illustrated in Chapter Two. Lazarus and Folkman (1984) explained there are three strata of data analysis – physiological, psychological, and social (Please refer to Appendix K). The primary level of data analysis for this research study was focused on social data analysis by developing an understanding for the social support needs of the participants. Findings were reflective of participant's reports.

Participant interviews yielded psychological needs and social needs, as will be discussed in Chapter Four.

Rigor

For findings to be incorporated into practice, evaluating the quality of the research is essential (Noble & Smith, 2015). Qualitative research is frequently scrutinized for lacking scientific rigour (Noble & Smith, 2015); however, we must recognize that humans are extraordinarily capable of expressing rich detail of thoughts and feelings into comprehensible language. Despite historic issues in validation, we cannot abandon the benefits of subjective reports that allow for in-depth comprehension, inequivalent to other data sources (Lazarus & Folkman, 1984). Trustworthiness is the term used for the degree of confidence in data and analysis of qualitative research and is assessed by authenticity, credibility, confirmability, dependability, and transferability (Polit & Beck, 2021). These criteria of trustworthiness are addressed in the methodologic strategies of the research design.

Authenticity

Authenticity refers to the extent the researcher "fairly and faithfully show a range of realities" which "enables readers to develop a heightened sensitivity of the issues being depicted" (Polit & Beck, 2021, p. 570). This refers to the how I convey the feeling and emotions of the participants to the reader. There is no equivalent measure in quantitative data evaluation, which poses the advantage of qualitative research in the ability to portray deep meaning for heightened understanding (Connelly, 2016). Prior to data collection and interpretation, I established commitments of transparency, reflexivity, participant driven inquiry, and insightful interpretation, and pledged to put forth all efforts to maintain true to participant depictions. Transparency was provided to participants and the readership by means of expressing my credentials as a graduate student and novice researcher as well as my professional experience.

The credentials of my academic advisor were also provided to the participants and the readership, allowing study participants and readers to draw their own conclusions. It is of great significance to me to honour and communicate the lived experiences of participants within dissemination materials. De-identified participant quotes were used to preserve participant interconnection to the findings and to maintain authenticity. Sharing participant quotes can retain uniqueness and is an adequate indicator of trustworthiness when represented with clarification of the connection to the researcher's interpretation (Williams & Morrow, 2009). Participant quotes have the potential to captivate readership and develop a deeper understanding of the participant's lived experiences, which may strengthen the readers' appreciation of authenticity.

Credibility

Credibility refers to the level of confidence in the truth of the data and data interpretations (Polit & Beck, 2021). The credibility of this study is demonstrated by the use of the reflective journals, audit trails, and acknowledging researcher biases. The reflective journals encompassed methodological and theoretical considerations as one strategy to enhance the credibility of findings. An audit trail is a systematic collection of documents and/or materials that can help aide an independent auditor to understand decision pathways and come to their own conclusions regarding the data (Polit & Beck, 2021). The data analysis software, NVivo, facilitated organization of themes and codes derived from participant transcripts in a clear manner. Meticulous record-keeping enhanced the understanding and flow of my decision trail and encouraged transparency. The academic advisor was involved at each stage of the research process.

I engaged in self-awareness and reflexivity strategies. Reflexivity is the "critical self-reflection about one's own biases, preferences, and preconceptions" (Polit & Beck, 2021, p. 801). I acknowledged that having worked as a nurse in the ED and ICU may contribute to

researcher bias. To accurately depict the participants' accounts and maintain neutrality, the reflective journal and code categorization via NVivo acted to clarify how themes emerged and alerted me and my advisor to unconscious bias and assumptions.

Dependability

Dependability is "the stability or reliability of data over time and conditions" (Polit & Beck, 2021, p. 569). Due to the variety of interpretation of individual accounts, validation strategies can be obtained through multiple perspectives on the same phenomenon. This is referred to as person triangulation (Polit & Beck, 2021). This is intended to form a multifaceted understanding of the topic versus a singular view of findings. Findings are also compared to the available literature. Data triangulation added to the dependability of the research with the use of my transcripts and my reflective journal.

Confirmability

Confirmability is enhanced with efforts to represent the viewpoints of participants as opposed to inventions made by the inquirer (Polit & Beck, 2021). Lazarus and Folkman (1984) acknowledge that stress, appraisal, and coping are individualized processes, therefore self-report was the primary source of data collection. This creates difficulty in measurement, however, limiting data to numerical values can lose rich context that provides quality to study findings. Therefore, the use of the qualitative research design and semi-structured interviews allowed for the rawest form of participant data. Semi-structured interviews allowed me to maintain a structure, yet also provided the participants freedom to direct the flow of conversation and topic discussion. This style of interviewing offers more control to the participant which allows for novel discussion that may be unknown to the inquirer (Adeoye-Olatunde & Olenik, 2021).

The semi-structured interview guide was reviewed by the thesis committee. A bracketing interview of the Semi-Structured Interview Guide was conducted, which involved interviews

with nonparticipants who met study criteria and who were knowledgeable in reflexivity strategies (Polit & Beck, 2021). This allowed me to revise, adapt the interview guide and provided insight to my assumptions and perspectives. For example, I was able to develop and improve probing questions to avoid leading questions.

During the data analysis process, the academic advisor (with previous experience as a critical care nurse who participated in resuscitation events) and I engaged in debriefing data, assessing areas of researcher bias, reflexivity, possible errors of interpretation, and data saturation. We independently coded several transcripts and then met to compare and contrast codes, categories, subthemes, and themes.

Transferability

Transferability is the extent to which the findings can be extrapolated to other settings or groups (Polit & Beck, 2021). All eight participants had experienced at least five resuscitation events within the last six months of their interviews to generate current and relevant data. In Chapter Four, I provide thick description of participants' accounts that allows for readers' conclusion of extrapolation to other settings (e.g., other EDs or ICUs) or groups (e.g., multidisciplinary healthcare teams, paramedics). Comparison of study findings to current literature from various countries provides transferability within the study, which will be discussed in Chapter Five.

Dissemination Plan

Knowledge translation is arguably the most important step in conducting research. If findings are not disseminated, all efforts of the participants and researchers are not fully appreciated and cannot influence practice changes. Sibley and colleagues (2017) labelled knowledge translation as "moving health research into action" (p. 2). To disseminate knowledge learned from this study, a multi-faceted approach will be taken. An infographic was created

based on the study findings (Shown in Chapter Four). To contribute the study's findings to the existing literature, I will present as manuscripts for publication to a peer-reviewed journal. To make findings accessible to the University faculty, students, and the public, an approved manuscript of this thesis will be uploaded to M-Space, which is an open platform for digitally accessible intellectual output of the University's community members. Findings will also be presented at the Manitoba Center for Nursing and Health Research graduate poster competition that takes place annually. Participants of the study who expressed interest and agreed to receive the study findings will be provided an executive summary. Trusted relationships with stakeholders are noted to facilitate knowledge translation (Sibley et al., 2017), therefore, it is important to share the findings with the site of interest's leadership, ED management, and the director that authorized the use of the study setting Clinical leadership and staff will be offered a short informative presentation of findings with an interactive workshop. A short informative presentation of study findings will also be offered to other ED and acute care facilities within the health region of the study's setting. A separate discussion, with ED leadership and management, of study findings including a brainstorming activity related to mitigating ED nurse stress, may introduce viable and feasible solutions for ED nurses and resuscitation teams in this particular setting. Findings the organization may find of particular value are the relatively low-cost recommendations of a mentorship program and a debriefing program, which according to the previously noted literature, highlighted positive reports of nurse retention. Almost and Mildon's (2022) statement regarding nursing retention in Canada argues that "Short-term strategies to relieve nurses' feelings of disrespect are a good place to start…" (p. 14). Organizations that prioritize the perceived needs of their employees pertaining to occupational stress have the potential to support retention.

To disseminate the study's findings to a wider audience, I plan to submit abstracts to Canadian nursing conferences, such as the International Conference on Emergency Nursing, Principles, and Practice (ICENPP) based in Toronto, Canada, and The Canadian Council of Cardiovascular Nurses' (CCCN) annual spring conference can aid in mobilizing knowledge across Canada. Disseminating the study findings in this manner will reach a multitude of clinical leaders and front-line providers, which may mobilize policy and clinical changes.

Chapter Summary

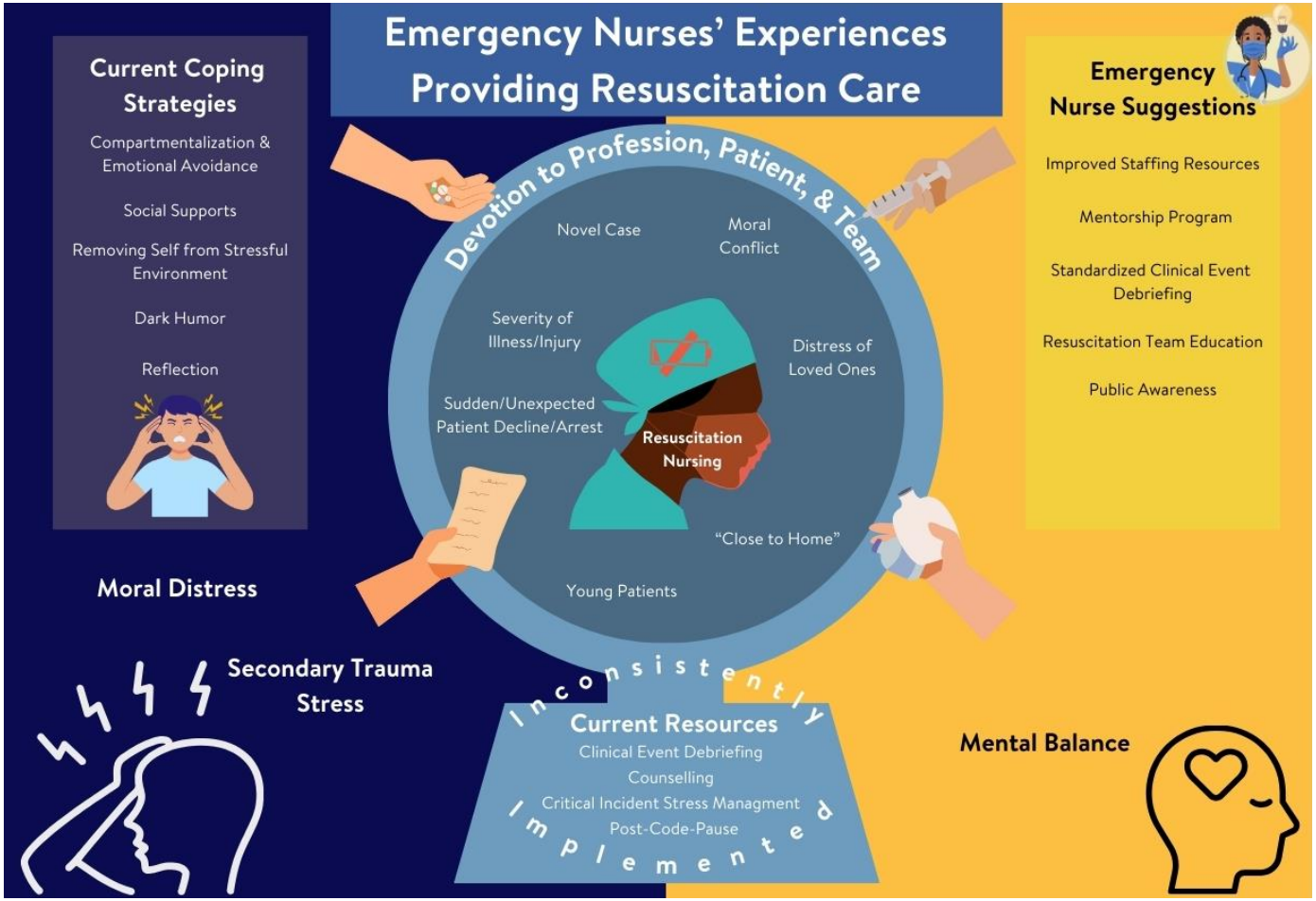
This study used a qualitative exploratory approach following the philosophical underpinnings of a constructivist paradigm. The research is guided by LFTTSC framework. Data sources included the 1) digitally recorded, one-to-one interviews with verbatim transcripts, 2) researcher's reflective journal, and 3) study participant demographics. Transcripts and reflective journals were analyzed utilizing content analysis. Strategies to ensure trustworthiness of the research was addressed using indicators of credibility, dependability, confirmability, transferability, and authenticity. Findings will be disseminated in a multi-level approach – via an infographic, executive summary, peer-reviewed publications, presentations, and interactive workshops.

CHAPTER FOUR: Findings

In Chapter Four, I present the study findings. Prior to discussing the themes, a description of the sample will be shared. The findings are described according to four themes: 1) Emergency nurses' experiences providing resuscitation: Devotion to profession, patient, and team - *'The arduous passion of emergency resuscitation nursing*', and Impactful resuscitation patterns - '*The adrenaline rush*', 2) Emergency nurses' experiences post-resuscitation: "*When the adrenaline wears off'*- Moral distress and secondary trauma stress, Resources currently available to emergency nurses post-resuscitation, and coping patterns, 3) Emergency nurses' perspectives of clinical event debriefing (CED), and 4) Emergency nurses' recommendations for future practice and resources. Please refer to Appendix N: Table Summary of Study Findings, for a synopsis of the themes (Figure N1, N2, N3). The following page consists of Figure 1: Infographic derived from the study '*When the Adrenaline Wears Off: The Arduous Passion of Emergency Resuscitation Nursing*': Nurses' Experiences of In-Hospital Resuscitation Events and Clinical Event Debriefing in an Adult Emergency.

Figure 1

Study Infographic



Note. Infographic derived from the study '*When the Adrenaline Wears Off: The Arduous Passion of Emergency Resuscitation Nursing*': Nurses' Experiences of In-Hospital Resuscitation Events and Clinical Event Debriefing in an Adult Emergency.

Description of Sample

Every participant was asked to voluntarily provide information about the following demographics: age, gender, years worked as a nurse, years worked in an ED, employment status (part-time, full-time, casual), and an approximation of how many resuscitation events experienced in the last six months (Please refer to Appendix L: Description of Sample for a table of the demographic items). All eight participants were in their 30's, with an average age of 34 years. Seven participants identified as women and one identified as a man. The average years worked as a registered nurse was 8.5 years. The average years worked as a registered nurse in an ED were 7.25 years. Six participants out of eight spent the entirety of their nursing career in the ED. Seventy-five percent (6/8) of participants were employed by the ED part-time. All participants were employed by the participating ED. The approximate number of resuscitation events the participants reported being a part of in the six months leading up to their interviews ranged from 10 to 30. Participants' transcripts, demographic surveys and my reflective journals were de-identified using a code from Participant #1 to #8.

Emergency Nurses' Experiences Providing Resuscitation

This theme consists of the following two categories: Devotion to profession, patient, and team – *'The arduous passion of resuscitation nursing'* and impactful resuscitation patterns - *'The adrenaline rush'*. Participants often shared more than one memorable resuscitation event. Participant accounts with some examples of direct quotes in support of LFTTSC are linked in a table format for a comparative assessment in Appendix M: Findings Supporting Lazarus and Folkman's Transactional Theory of Stress and Coping.

Devotion to Profession, Patients, and Team – *'The Arduous Passion of Emergency Resuscitation Nursing'*

Participants enthusiastically conveyed their passion for the nursing profession. This was evident in their described commitment to the patient and family unit, and their dedication to the speciality of emergency nursing, and their team members. Canadian nurses are bound by the Code of Ethics, an aspirational and regulatory document outlining nurses' values and ethical responsibilities. The Canadian Nurses Association (2017) Code of Ethics' purpose emphasizes the "nurses' commitments to persons with health-care needs and persons receiving care" (CNA, 2017, p. 2). This commitment was evident with all eight participants. They conveyed their passion for the patient's well-being and the quality of care they deliver. The participants' excerpts below illustrate this value and dedication:

> *"...even though it was overwhelming, it was great, because I just thought – oh yeah, emergency nursing, this is it, this is what we're supposed to be doing – you know, saving lives regardless of who they are, or who we are"* (Participant #1, p. 4).
>
> *"[Participant] had a passion that came through in their interview to be a better nurse for their patients"* (Participant #1 Reflective Journal, p. 1).
>
> *"We'll fight and fight and fight, especially when it's our patients"* (Participant #8, p. 6).
>
> *"...now they're in the ward and they're doing really well, and that's that little bit that you just hold onto where you're like, 'This is why I do it. The adrenaline and I love it.' And you feel so competent and important, and necessary"* (Participant #5, p. 7).

A strong sense of commitment to the patient's family was expressed as well. One participant shared the difficulties of navigating the family's desire to thoroughly inspect their deceased child's extensive injuries, and the potential repercussions of witnessing such a visual.

> *I feel like it's really important to me that they get really good emotionally appropriate like supportive care when they're having to go through these things… I want them to get the care that they - that I would want my family to get or that I would want to get if my family member passed.* (Participant #4, p. 5)

The devotion of participants to their ED team and the speciality of emergency was evident in the interviews. Despite the challenging resuscitation experiences shared, all participants expressed a passion for ED nursing. One participant shared what they deemed as a negative experience and immediately followed with, *"Emerg. is my heart"* (Participant #4, p. 13). Another participant echoed this concept, *"I love emergency nursing. And as an emergency nurse, this is what I'm supposed to be doing…regardless of identity, social aspect of things or whatever, we're treating this person"* (Participant #1, p. 4). Every participant spoke with vehemence not only for the profession but for their team. Phrases to describe the team consisted of: *"unbelievable"* (Participant #3, p. 4), *"everybody's there to help"* (Participant #1, p. 16), *"trust within each other"* (Participant #3, p. 4), *"team mentality"* (Participant #5, p. 5), *"team dynamic is superb"* (Participant #1, p. 7), and *"that's your family at work"* (Participant #4, p. 12). These descriptions illustrate the strong connections that have developed in the participants' ED setting. Participants described work relationships that possess deep understanding of shared experience that are not easily replicated. Participant #5 states, *"We have this ride or die allegiance to our colleagues, because we have this trauma bond that you don't have with anybody else"* (p. 5). The importance of supporting new and/or junior nurses in the ED was emphasized by the more experienced nurse participants. There was a sense of responsibility to be mentors for less experienced nurses, and experienced nurses who were new to the ED.

> *I just think it's important for people coming into the department, coming into the profession, to have mentors and teachers and people on the floor who are safe*

> *people for them. … I feel a lot of responsibility, because I had a couple of really good people like that.* (Participant #5, p. 7)

Despite the challenges that accompany life-saving professions, the strength of commitment to ED nursing and their coworkers remains a driving force of passion in their professional lives.

Impactful Resuscitation Patterns – *'The Adrenaline Rush'*

Impactful resuscitation patterns consisted of moral conflict, severity of illness/injury, young patient, 'close to home'- representing commonalities to participant's self or the participant's loved one(s), novelty of a first case, sudden/unexpected patient decline/arrest, and distress of patient's loved one(s). These impactful resuscitation patterns are explained below. Some resuscitations shared in the interviews fall into more than one impactful resuscitation pattern.

Moral Conflict

Moral conflict refers to the ED nurses' interpretation and experience whilst providing resuscitation care that produces conflict relating to their personal beliefs and values. Moral conflict was a major subcategory within impactful resuscitation patterns because it was discussed by 75% (6/8) of the sample, making this subcategory the most significant among impactful resuscitation patterns. "In appraisal, beliefs determine what is fact…and they shape the understanding of its meaning" (Lazarus & Folkman, 1984, p. 63). For example, a participant shared their experience providing care without knowing the patient's wishes:

> *I think we often say we can [resuscitate], but should we? And so you look at these cases and you're like, OK, I know this person can't speak for themselves, I know we don't have anybody who can speak on their behalf to direct us to what they need to do, or what they would like us to do.* (Participant #5, p. 3-4)

This participant expressed their belief that the patient should make decisions regarding their goals of care, however the patient's wishes could not be articulated as they were unable to communicate on arrival to the ED. This patient did not have a documented advanced care planning (ACP) status despite having significant disease processes.

Other impactful resuscitations events that elicited moral conflict were regarding perceptions about the system failing the patient (Participant #6, p. 4), being unable to obtain a positive outcome despite the team's best efforts (Participant #1, p. 15), perceptions of prolonging patient suffering (Participant #5, p. 4), perceptions that family and/or patient did not fully comprehend what resuscitation and post-resuscitation care encompasses (Participant #4, p.2-3), and when resuscitation care was deemed as inappropriate or futile (Participant #5, p. 4; Participant #8, p. 2). These appraisals made by participants were described as stressful and morally conflicting.

Another form of beliefs that affect stress according to LFTTSC is the 'belief about personal control'. This involves the individual's belief of their ability to control the environment though mastery or confidence (Lazarus & Folkman, 1984). Belief about personal control is illustrated by the following quote regarding a patient's death, *"I felt like that was my patient and I could have done differently, maybe if I saw signs earlier"* (Participant #6, p. 3). Information was later discovered, in an informal debrief, that regardless of the nurse's assessment skills or subsequent actions, the patient's outcome would not have changed. The participant blamed themselves and believed they had a responsibility to control the outcome, which resulted in a stressful appraisal. Therefore, it is the individual's belief that influences their stress, regardless of external information. Faith or religious beliefs were not mentioned by any participants.

Below are participant quotes illustrating moral conflict:

"We're doing it because we're supposed to, because we don't have a designated ACP [Advanced Care Plan] status, but its futile. … there is no way that they're going to survive this" (Participant #5, p. 4).

"…we're supporting his airway and we're doing all the stuff we need to, but ultimately, we're just delaying the inevitable, which is kind of a challenge sometimes… it's a weird head space to be in. To be like, I know what I am supposed to do and I know what we're doing and I know why we're doing it, but until when?" (Participant #5, p. 2).

"OK, so we just have to do everything [resuscitation care], because we can't withhold care on an assumption. It's always better to over treat than to under treat when you don't know, but what's that going to look like?" (Participant #5 p. 4).

"…[the patient] was very mangled …his [parent] wanted to look at every inch of his body and I was like, 'I don't know if you know what you're getting into here'…it was a little bit difficult to navigate supporting the family, in like however they need to grieve, while still like trying to protect them" (Participant #4, p. 2-3).

"…the doctor looked at [the patient] and said, 'This is not survivable'. Did - we knew he was in [lethal cardiac rhythm] and called it. And so, my question was like, do we not give it some – like it felt weird to not even do one round of, like CPR…" (Participant #4, p. 7).

"Why are we trying this hard, when that's not going to – to have somebody, if they survive, just be miserable, and they're like, 'They should have let me die'" (Participant #5, p. 4).

"I find that sometimes family has like a disconnect … they think in their minds that they want every single thing to happen for their family member. They're like oh yeah, like of course I want CPR, of course I want intubation, of course I want all the resuscitative

measures, but they don't understand what that looks like and what the reality of that is" (Participant #4, p. 3).

"It was a little bit difficult to navigate supporting the family in like however they need to grieve, while still like trying to protect them" (Participant #4, p. 3).

"I felt like we basically killed that guy. Just not us personally, but the system" (Participant #7, p. 4).

"…we ran the code for longer than we probably should've" (Participant #8, p. 2).

Severity of Illness/Injury

The severity of illness or injury was described by participants as an element that made resuscitations impactful and memorable. The severity of the illness or injury was the second most discussed resuscitation pattern noted by participants.

*Disclaimer: The following statements share details of a trauma cases. Discretion is advised.

"The traumatic ones are always a little bit more memorable" (Participant #4, p. 2).

"I think that the severity of injury often like sticks around for us and make it memorable" (Participant #4, p. 3).

"I think for me what made it so memorable was just in all honesty how gruesome it was. It was just blood on the floor, blood everywhere, on all of us. And I felt like it was just so quick. And I feel like it's one that I won't forget" (Participant #6, p. 2).

"…it's just insane, they had to do a thoracotomy, so they – the usual thoracotomy would just be one side of the chest, right? – this one was across the whole chest. I could see the lungs, I could see the heart, and we're trying to manually decompress the heart as well" (Participant #1, p. 2).

"It's the traumas that always stand out to me" (Participant #3, p. 2).

"I've seen 1,000 terrible things but for whatever reason this guy just stood out to me" (Participant #3, p. 3).

"I've never - the severity of the [injury] was – I have not seen [an injury] to that severity" (Participant #5, p. 3).

Young Patient

Half of the participants referenced the word 'young' when asked about a memorable resuscitation event. As mentioned previously in Chapter Two, LFTTSC (1984) endorsed the concept that individuals have this notion of 'a normal life cycle' as noted in Neugarten's work from the 1960s and 1970s. Individuals may believe there is a time to graduate from school, a time to have children, and a time to die. Therefore, the idea of a traumatic death or resuscitation occurring to a 20-year-old does not fit our ideals, whereas death may be presumed as a step in the life cycle for an older adult patient. Young patients in resuscitation were deemed as more memorable and distressing compared to resuscitation events among older adults. The participant's appraisal of what a 'young patient' is to them, or how the patient was too young to endure a resuscitation or death, was a strong pattern that influenced the subtheme of impactful resuscitations. The following participant quotes support this notion:

"He just stood out to me just because it was - he was like so young…" (Participant #3, p. 2).

"… the trauma event was very memorable and then furthermore he was like a young man who was like early 20s" (Participant #4, p. 2).

"…she was like super young… and she died and like I just – you're just like what? Like what do you mean?" (Participant #3, p. 9).

'Close to Home'

'Close to Home' refers to the commonalities of the patient to the participant's self and/or loved one(s), which strongly aligns with Lazarus and Folkman's personal variable of 'commitment' as an antecedent of stress. As stated previously, "The greater the strength of a commitment, the more vulnerable the person is to psychological stress in the area of that commitment" (Lazarus & Folkman, 1984, p. 58). The deeper the commitment to the individual, the greater sense of threat, loss, or challenge (Lazarus & Folkman, 1984). The following are examples supporting the pattern of commonalities to self/loved one(s), coded as 'close to home':

> *"…oh my gosh that could've been me, or even like when things relate to my family members or my loved ones, I always feel like I just think about them a little bit more"* (Participant #3, p. 3).
>
> *"If there's little features in the patients that feel similar to me, then I find it affects me more"* (Participant #4, p. 4).
>
> *"… whenever there's kind of like a feature that I feel like I personally identify with, then I do find it a bit harder"* (Participant #4, p. 4).
>
> *"…she mentioned having a patient close to her age, a sudden arrest, being able to find out the patient's outcome, affected her psychological stress surrounding the situation"* (Participant #2 Reflective Journal, p. 2).

These above quotes describe ED nurses' perceptions of the patient's commonalities to self and loved one(s), which affect how they interpret their stress associated with the resuscitation. The participant's appraisal was deemed an important aspect of the ED nurses' resuscitation experience because half of the participants referenced commonalities and commitments as an influence in impactful resuscitation events.

Novelty of Case

'Novelty of Case' refers to the participant's first case of that nature: first death, first resuscitation, first trauma case, or first case of that specific clinical nature. Three out of eight participants recalled and described a resuscitation that was a 'first' in their professional career. *"I've just never seen something like that before"* (Participant #6, p. 2) stated a participant when asked what made the case memorable. Another participant shared their first trauma case, *"... it was just too busy, and I was like – so this is what [trauma case] looks like"* (Participant #1, p. 3). *"So, [the resuscitation case] was definitely a very different one… it was out of the ordinary because there was a lot of stuff going on that we're not used to"* (Participant #5, p. 2). The environmental variable of 'novelty' was addressed by LFTTSC. Lazarus & Folkman (1984) hypothesize that a novel encounter can elicit uncertainty or threat associated with lack of mastery. The novelty of the case influenced participants' stress of all experience levels.

Sudden/Unexpected Patient Decline/Arrest

Sudden or unexpected patient decline or arrest contributed to impactful resuscitation patterns, as shared by participants. In LFTTSC, ambiguity refers to the lack of situational clarity, and predictability refers to having some sort of 'warning' prior to an event (Lazarus & Folkman, 1984). Ambiguity and predictability are environmental variables that influenced participant's stress in the event of a sudden decline or arrest of a patient. Two participants shared their experiences grappling with the sudden decline of their patients: *"We talked and she was able to respond to me, even though she wasn't feeling well, but we - it wasn't necessarily that I was expecting her to pass!"* (Participant #1, p. 5), *"... while we were talking - but he still - was still breathing and had a heart rate, but just a sudden change of alertness and then 30 seconds later he arrested"* (Participant #7, p. 2). Both participants expressed that the sudden decline of their patients left them without time to process the situation. The lack of 'warning' or evidence for the

patient's decline contributed to the participants' stress appraisals, as there was less time to appraise the situation and a lack of preparedness to determine the next action. Sudden, unexpected patient decline/arrest was described using strong emotions by these two participants, from what I interpreted as a self-determined degree of responsibility for the patient's outcome.

Distress of Patient's Loved One(s)

Another impactful resuscitation pattern was 'distress of patient's loved one(s)', which was induced by external environment factors. One participant expressed that the resuscitation was not overtly stressful until the family arrived after an unsuccessful effort. The ED nurse referred to their experience of the family's arrival as the moment the *"empathy starts to kick in"* (Participant #4, p. 4). This participant highlights the element of humanity that was not consciously present during the resuscitation efforts. The following quotes by Participant #4 expresses the association of family involvement post-resuscitation and the influence on ED nurses' perceived stress, *"All I could think of was that little girl not having her mom at the wedding dress shop when she's getting married"* (p. 4), *"It's when you have to like support the family who is grieving, that's when I find it more distressing"* (p. 3). Distress of the patient's family was highlighted by one participant. This pattern was acknowledged due to the depth and emphasis placed on the topic. As an example, in the transcript, the word 'family' was mentioned over 20 times.

To summarize, Impactful Resuscitation Patterns emerged from common and significant experiences described by participants. Many participants shared more than one memorable resuscitation. The seven patterns that emerged from the data, listed in order of prevalence, commonness, and significance were: Moral Conflict, Severity of Illness/Injury, Young Patient, 'Close to Home', Novelty of First Case, Sudden/Unexpected Patient Decline/Arrest, and Distress of Patient's Loved One(s).

Emergency Nurses' Experiences Post-Resuscitation: *'When the Adrenaline Wears Off'*

Participants shared emotional responses and described traumatic encounters associated with providing ED resuscitation care. Some participants used the following terms: 'anxiety', 'depression', and 'burnout' when describing their stressful experiences. One participant was moved to tears reliving their experiences during their interview. The Distress Protocol, available in Appendix J, was developed to safeguard participants from unnecessary psychological distress during their interview. All participants voluntarily completed their interviews and Distress Protocol measures were not required other than pausing the interview, offering tissue and water. The most striking finding in the data was the profound effect providing resuscitation care and ED nursing had on their lives outside of work. The theme entitled, "Emergency nurses' experiences post-resuscitation: *'When the adrenaline wears off'* is comprised of the following subthemes or categories: Moral Distress and Secondary Trauma Stress (STS), Current resources available to emergency nurses, and Coping patterns.

Moral Distress

The most common impactful resuscitation pattern among participants was moral conflict. Moral conflict was previously defined as the ED nurses' interpretation and experience of providing resuscitation care that produces conflict relating to their personal beliefs and values in a resuscitation event. Moral distress has many evolving definitions within the literature, often derived from Jameton's 1984 book on nursing practice and ethical issues. The definition that aligns best with this theme of moral distress for nurses providing resuscitation care is an adapted definition shaped from Hamric (2014) and Lake and colleagues (2021): Moral distress occurs when an individual is unable to take, what they believe to be, morally justifiable action or inaction that is in accordance with their core values and/or obligations, causing compromised moral integrity and psychological distress. Moral conflict, in this study, is represented during an

event, or a moment in time. Moral distress has lasting effects on the on the individual after the event has passed. Moral distress, due to a resuscitation event experienced at work, posed challenges for participants to carry on their daily lives outside of work. For some participants, these affects lasted weeks, even months.

Excerpts from participant's transcripts are listed below that support the subtheme or category of moral distress:

> *"I just couldn't even do dishes, I was just spacing out"* (Participant #7, p. 6).
>
> *"Family couldn't just call it a day and not put their family member through this?"* (Participant #4, p. 9).
>
> *"And it's almost like we're sorry too, we couldn't do anything, but it was just beyond – you know, we could only do so much, we're not God"* (Participant #1, p. 15).
>
> *"I think in emergency we have this very unique scenario where we see a lot of people at their worst, having to make really bad decisions…"*, Participant #5 stated, regarding unaddressed ACP status in patients with advanced chronic disease (p. 3). *"…you can't have those conversations with unconscious people, but you have those conversations with your colleagues"* (p. 4).
>
> *"I don't carry a ton of stuff home with me but then in hindsight, I've kind of stopped saying that because my friends will call me out*" (Participant #3, p. 3).
>
> *"I think that we had even more moral distress when we were going from trauma to trauma to trauma and then we're short staffed and nobody is getting breaks"* (Participant #4, p. 7).

Secondary Trauma Stress (STS)

In Chapter Two, STS was defined using Figley's 1995 definition. It is shortened here to be more specific to ED nurses, STS is "the natural, consequent behaviours and emotions…

resulting from helping or wanting to help a traumatized or suffering person" (as cited in Morrison & Joy, 2016, p. 2895). Accounts of STS that were mentioned by participants were intrusive thoughts, excessive worry, traumatic imagery, feeling *"emotionless"* (Participant #6, p. 2), reporting being unable to cope with events, having palpitations at work, crying episodes, panic attacks, affecting the way they interact with their loved ones, and altering behaviours and activities based on cases that have presented to the ED. Participants labeled their work as *"traumatizing"* (Participant #4, p. 13). A participant shared this statement that illustrates the difficulty of separating work life and home life, *"And then you just kind of hang up your hat and close the door on that room and head home and try not to let the door leak when you're at home, which is hard. ...And so it affects you in that way in little pieces."* (Participant #5, p. 5).

Below are quotes from transcripts and reflective journals that support the finding of STS:

"I don't think I'll ever forget that" (Participant #1, p. 4).

"We just cope until we can't" (Participant #4, p. 6).

"And I just like - will never unsee her face" (Participant #3, p. 9).

"[Participant's] past experiences affected them enough to cry during the interview" (Participant #3 Reflective Journal, p. 1).

"...you kind of like wake up one day, and you're like uh-oh, like this is what burnout feels like" (Participant #3, p. 8).

Describing participant's 'taken-for-granted norms': *"That trauma is a normal part of the job"* (Participant #1 Reflective Journal, p. 1).

"... the world is worried about people who are watching the television and who are at the game watching this man get CPR. Everyone's worried about how that's going to affect people. We see that shit every single day. And like who is worrying about us?" (Participant #4, p. 6).

> *"A nurse is a nurse is a nurse – is just not true"* stated Participant #8 when describing cases ED nurses go through (Participant #8 Reflective Journal, p. 1).
>
> *"I have spent a lot of time with like intrusive thoughts …If we've had like a stretch of three shifts that had been like trauma after trauma after trauma, I like stay in bed for two days… I was crying all the time, I was like having panic attacks going to work…"* (Participant #4, p. 13).

Resources Currently Available to Emergency Nurses

The following available resources are the summation of what was reported by participants. Reported organizational resources available to participants were identified as CED, personal counselling, CISM, and post-code pause (PCP) practices.

Clinical Event Debriefing (CED)

Participants described CED as inconsistent. CEDs were described as *"few and far between"* (Participant #6, p. 9). The participants perceived that there was no standard format, template, or expectation for CED practices. There were two identified means of initiating a CED: a) if a healthcare provider, typically a nurse, asked for one, or b) if the code team physician felt comfortable to lead a debrief and initiated a debrief. Therefore, a CED was only implemented if it was requested, or dependent on the team members involved. There were no specific case criteria mentioned that initiated a debrief, although, participants suggested a CED is more likely to occur if the case is unfamiliar or include *"things we don't see a lot"* (Participant #3, p. 10). Participants expressed that they perceived that CED is overall beneficial, but it is not always done effectively or comprehensively. Later in this chapter, I will describe participants' perspectives of CED.

Personal Counselling Services

Six out of eight participants (75%) explicitly mentioned they were aware of counselling services as an available resource. Although participants were not directly asked of their use of this service, nearly half (three participants) shared that they never used the service. The participants' reasons for not using this service were: the long wait of acquiring an appointment, and they felt other avenues, such as talking to family or coworkers, would be more effective. One participant mentioned seeing posters for this service in their department, and administration recommending it as a resource.

Critical Incident Stress Management (CISM)

The majority of participants (7/8) cited CISM as an available resource. Critical Incident Stress Debriefing (CISD) is one of the interventions incorporated within CISM. CISD includes a mental health professional and is a "psychoeducational group intervention offered after exposure to potentially traumatizing events" (Pender & Anderton, 2016, p. 19). CISD was not implemented as a routine practice, but on an as-needed basis. The initiation criteria of a CISD were reported by participants to be similar to CED implementation: upon request, and an unfamiliar or traumatizing case. Despite most participants being aware of CISM as an available resource, half of the participants stated they have never been a part of CISM or CISD. Participants expressed concerns surrounding logistics of CISDs. For example, gathering the same healthcare team days after the event was rarely feasible, members may not want to come in to work on their day off, or the unit demands did not allow time off the unit. CISM focused on the emotional aspects of providing care, whereas CED can focus on other aspects and details of the case, such as process improvement and professional education. Participants placed high value on improving professionally and to implement efforts associated with improved patient outcomes. CISM coordinators do not have access to all the details of the case which could aid in these

conversations. Only one participant explicitly noted a negative encounter with CISM, however, CISMs were generally viewed as a valuable resource, especially when more time was deemed necessary for emotional processing. Participants viewed CISM and CISD as valuable interventions in addition to CED, not replacing CED.

Post-Code Pause

A post-code pause (PCP) is an approximately 10 to 15 second moment of silence after the clinical event to honor the patient's life and/or to celebrate the life-saving efforts (Copeland & Liska, 2016). Half of the participants described a moment of silence immediately post-resuscitation, which is termed the 'Post-Code Pause' within the literature. Of these four participants, one did not comment on their perspective of PCP, but the other three viewed PCP positively. The participants addressed PCP as a *"humanizing"* (Participant #1, p. 14) experience to honour the patient and as a moment to internally regroup from the chaotic event.

The summation of available resources reported by the study participants were associated or implemented by the ED team or organization: CED, CISM/CISD, personal counselling, and the post-code pause. All resources were viewed in conflicting or ambiguous manners. For instance, although viewed as beneficial, these resources were described as being inconsistent, unused, or insufficient in managing ED nurse stress resulting from resuscitation.

Coping

Coping, according to LFTTSC, are *all* efforts made by the individual to manage stress (Lazarus & Folkman, 1984). Coping is determined by the ED nurse's cognitive appraisal of the stressor and encompasses emotion-focused coping (EFC) and problem-focused coping (PFC) (Lazarus & Folkman, 1984). EFC reported by participants consisted of reconstructing their beliefs of the situation and/or emotional avoidance of the situation. PFC refers to problem solving, primarily of the environment, such as the analytical process of coming up with solutions

for improved resuscitation care delivery. EFC and PFC may be done concurrently, and both have the ability to facilitate and impede an individual's coping process (Lazarus & Folkman, 1984). The coping strategies shared by participants are presented in order of most reported to least reported: compartmentalization and emotional avoidance (EFC), social supports (EFC), removing self from stressful environment (PFC), dark humor (EFC), and reflection (EFC). Each will be stated separately.

Compartmentalization and Emotional Avoidance

All participants expressed utilizing a means of compartmentalization or emotional avoidance to cope with work stressors. Compartmentalization is a form of EFC, and for this study, refers to the ED nurse's ability to cognitively create compartments or *"silos"* (Participant #5, p. 4) to manage their stressors. One participant expressed, *"…work stays at work, home stays at home and everything's in its own little box"* (Participant #8, p. 2). Participants used words and phrases such as "*disassociate"* (Participant #4, p. 4)*, "desensitized"* (Participant #8, p. 2), and *"autopilot"* (Participant #5, p. 3). A participant explained, *"I think I'm probably a little desensitized to it, which is the only way I think to survive in [an ED] for a long time, right?"* (Participant #8, p. 2). Many participants expressed that if they allowed themselves to become emotionally invested for every case, they would not be able to perform their duties as an ED nurse. Therefore, the assumption was made that to be an effective ED nurse you require some level of compartmentalization.

Emotional avoidance is an EFC strategy that, within this study, refers to avoiding stress-provoking thoughts. A participant encapsulates emotional avoidance in the following quote:

> *We spend so much time at work and just being in it, it's hard to – when you're at home, you just want to not talk about it, not think about it, not do anything about it. You'd rather*

just put it away and just either mull it over silently and pretend that you're not - or just ignore it entirely. (Participant #5, p. 8)

"If you cried about every patient that died, you'd cry 24/7" (Participant #8, p. 2).

Accounts such as these emphasize the emotional toll it requires to reflect on the ED nurses' daily work lives.

Emotional avoidance and compartmentalization are grouped together as participants employed both concurrently. As per participants' reports, a level of compartmentalization and emotional avoidance was required to perform resuscitation efforts and other ED duties without emotionally clouded judgements.

I do care for my patients and what not but if you got caught up in like the emotional side of, you know, caring for all of your patients everyday, then you wouldn't get your job done. You'd go home at the end of the day and you would, you'd just cry, you'd become depressed, it would take over your whole life. (Participant #8, p. 2)

"But it's kind of all our coping mechanisms, a little suit of armor when we're doing what we're doing" (Participant #5, p. 11).

"…once I leave the building, I try to shut my mind off" (Participant #3, p. 4).

"… you never have time to really let any of it sink in, because it's probably the fifth trauma that you've dealt with in the last little – you probably were pulled from something else to do this and have to run back as soon as you're not needed there to do something equally as acute. So you don't really have that chance to actually let it sit with you and have any sort of lasting emotional affect" (Participant #5, p. 4).

"[Friend]'d be like oh, how was work? And I'd be like, oh yeah, someone died. And she is like horrified and I'm like oh, that's right, that's not part of somebody's normal day to day" (Participant #4, p. 4).

"We normalize death too much" (a participant quote recorded in Participant #2's Reflective Journal, p. 2).

Social Support

LFTTSC refers to social support as solving problems with others, however, according to the study findings the term 'social support' is referred to as an individual's social network and the support they perceive to aid in their coping. According to one participant's belief *"You need to be supported or you will not last"* (Participant #5 Reflective Journal, p. 1). The term 'social support' was used to refer to a social network that helps people manage stress. Social supports are divided into colleague support and external social support. The term 'external' refers to outside the ED setting. Colleague support is mentioned before external supports due to the expressed impact and benefit participants perceived to attain with colleague interactions. Engaging with external supports was also deemed as a high value coping strategy, however, the interactions were not proportional.

Colleague Support. Colleague support refers to engaging in meaningful communication with coworkers in professional and informal manners. Participants shared they attained immense value from professionally discussing resuscitation cases and informally getting together outside of work. Colleague support included professional and informal avenues. This included informally debriefing on breaks or in one-to-one conversations with coworkers. Professional colleague support presented in the form of asking and answering questions, gaining more information, peer teaching and learning, reassurance, and recognition. A participant expressed their inability to talk to their partner or family about their workday because of their loved one's limited healthcare understanding. A participant spoke to why colleague support post-resuscitation is effective to them, "*... supporting each other and being able to kind of like find comfort in someone who was right next to you at the time"* (Participant #3, p. 4). This quote highlights the implicit understanding of providing resuscitation care as a team and the deep understanding of the shared experience.

Another form of coping described to be effective was supporting each other outside of working hours, as well as gathering and discussing non-work-related topics. Two participants shared that they went out for breakfast after difficult night shifts. Sometimes, work would be discussed, and other times non-work related topics were discussed. A participant shared the implicit understanding of gathering with colleagues for non-work related events, *"I think it's just being with like-people that have been through the same thing and they're like-minded"* (Participant #8, p. 10). Therefore, even when ED personnel gathered for non-work related events, the understanding of shared experiences played a role in their perceived support. Two participants expressed that colleague support was the most beneficial coping strategy for work stressors. Participant quotes regarding colleague support are listed below:

"…just having ongoing conversations with my co-workers and my close friends at work that understand, because it's hard to debrief with family that - They can't understand if you haven't had this type of situation, right?" (Participant #7, p. 6).

"I can't really talk about it in any detail with my [loved ones] because none of them work in healthcare. So you're kind of just like - you look at your colleague…" (Participant #5, p. 4.)

"We know what each other goes through so - we'd have a really shitty night shift or we'd have a stretch of really shitty nightshifts, then we'd go out for breakfast on the last nightshift" (Participant #8, p. 9- 10).

"Sometimes we get into the break room and we just talk about how the shift is going, and it helps to hear what they say and where people are at or things like that" (Participant #1, p. 6).

"…like we know that there's like supports out there, but I really find just shooting the shit with our colleagues is generally the most helpful" (Participant #4, p. 6).

"And just having my safe people at work, who also know the same things and have the same mindset, inside and outside of work, has been helpful…" (Participant #5, p. 5).

"I really wanted to discuss with the doc and, and she was very available for me to talk with her about it" (Participant #3, p. 5).

"We talked about [the resuscitation] and just how it made us feel. And then I realized in that moment that I probably – I wasn't the only one that felt that way after that situation. So that was comforting" (Participant #6, p. 3).

"Mostly just talk with other nurses, either in the break room or privately, or just via text would probably be the main thing that I do [to cope with resuscitation cases]" (Participant #7, p. 4).

External Social Supports. External social supports refer to the ED nurse's social network outside of their work relationships. External relationships were extremely valued but not proportional to the participants' focus on colleague relationships in managing resuscitation-related stress. They were viewed as separate coping strategies almost as if parallel to each other. External support was most valued for the outside perspective that it provided. An effective example of external support is the following participant's case. Participant #5 would call their partner to communicate extending their shift, and the participant valued when their partner would ask, *"…do you think mentally, you're appropriate to stay today?"*(p.5). This individual's external social relationship supported them by providing the opportunity to reflect if working more hours would be emotionally appropriate. Other participants stated that their external relationships would bring to conscious awareness the trauma of the resuscitations they've witnessed and provide a time and space to acknowledge the gravity of the experience. Despite the participants who shared that their external social relationships consisted primarily of non-medical personnel, the efforts made by their loved ones, to listen and engage, was noted to be beneficial. Participant quotes regarding external supports below:

> *"… [talking to friends] helps you to put things into perspective maybe a little more"* (Participant #3, p. 8).
>
> *"I'll call my mom on the way home from work, that tends to be like a good outlet"* (Participant #4, p. 5).
>
> *"I have a really supportive partner"* (Participant #5, p. 5).
>
> *"My family is supportive"* (Participant #7, p. 6).
>
> When asked how Participant #2 copes with resuscitation cases and ED nursing, they stated they spoke with friends and attended events with family (Participant #2 Reflective Journal, p. 2).

Another form of external social support noted in the interviews was *"therapy"*. The participants were not probed further on professional mental health resources and are not discussed within this thesis.

Removing Self from Stressful Environment

'Removing self from stressful environment' was a coping mechanism that encompassed different time frames from taking a break post-resuscitation, decreasing hours worked in the ED, and finding a different job. An example is a participant who expressed the need to remove themself from the department post-resuscitation. The case was so overwhelming to the individual that they deemed it was necessary to leave the department to release their emotions. *"... I looked at myself in the mirror and I bawled my eyes out for five minutes straight. And then I was ready, I you know, tidied myself up and then I went back onto the floor"* (Participant #1, p. 5).

Some participants mentioned the connection between their declining mental health, as a result of work stressors, having a direct influence on their decision to work less hours or take another position all together. Participants' work stressors included resuscitation efforts but may not have been limited to resuscitation events. Half of the participants removed themselves from the stressful environment by means of another job opportunity, whether it was taking another job temporarily, or becoming casual in the participating ED.

> *"I just knew that I needed to step back a bit. But I knew that I didn't want to like entirely let [ED nursing] go, so having the option to work casually there is kind of a good fit for me"* (Participant #3, p. 8).
>
> *"I've like had to take breaks from [Hospital Emergency] ... I worked in [other nursing discipline] for a little bit for a break..."* (Participant #4, p. 12-13).

The importance of a work-life balance was listed as a reason for actively looking for other job opportunities. One participant expressed how they did not want to leave the

department, but another opportunity presented itself and they realized that leaving the ED brought to their attention how negatively affected they were by the frequent resuscitations and cases. Another nurse's statement illustrates the dire need for support of ED nurses, *"I don't see [ED nursing] as a career of longevity"* (Participant #4, p. 6). This example demonstrates that ED nurses may not be acutely aware of the negative affects it has on their mental health.

Participants also mentioned other methods that were similar to 'Removing self from stressful environment' to help them cope from ED nursing and resuscitation events, such as physical activities, social events, and being in nature.

Dark Humor

Dark humor was reported to be used by ED nurses to *"make light of the situation"* (Participant #6, p. 7) which allowed ED nurses to carry on with their other duties. A participant explained that dark humor was a quick way to *"wind down"* (Participant #6, p. 7) from a case, given that the demands of the ED may not allow much time to decompress. Three participants that referenced dark humor as a coping mechanism were clear that they intended no malice towards the patients, yet presented concerns that the coping strategy *"…. blurs the line of professionalism"* (Participant #4, p. 6). These participants acknowledged that dark humor was an effective means to decrease acute stress and all participants carried themselves as extremely compassionate individuals who are devoted to their patients.

Below are participant quotes that support dark humor:

"I know nurses are like very well known for having like really dark humour and I do find that, that helps… So I think that like the dark humour is definitely a huge coping mechanism within the emergency department" (Participant #4, p.5).

"…we have a really dark sense of humour, that's coping and defensive" (Participant #5, p. 6).

"Unfortunately, the thing that comes with emergency is dark humour, we try to make light of the situation" (Participant #6, p. 7).

Reflection

Reflection refers to the ED nurse's internal processing of work stressors and resuscitation events. Nurses expressed reflection in forms of journaling, taking personal time to themselves, and mentally reviewing the shift on the commute home. The reflection activities mentioned above act as a means of processing the event and allows the individual space to reappraise the stressful events. Individuals may reappraise the resuscitation event to have a decreased level of threat. For example, a participant shared that after a tough resuscitation they used it as a catalyst to improve their nursing knowledge and skills, seemingly giving purpose to the patient's poor outcome. Another example is, in the event of an unsuccessful resuscitation, a participant shared that they focus on all the patients that had positive outcomes, which helps them focus on the positive aspects of the job. Reflection was noted as a coping theme because of the range of emotions that can arise from reflection. It can be taxing for some and relieving for others.

Quotes of participant reflection are below:

"I just took the day to myself….and just spent a lot of time journaling and processing…." (Participant #7, p. 4)

"I'm a kind of person who likes to reflect on things myself …" (Participant #1, p. 8).

Unit Culture

An individual's relationship with society influences their stress and coping. Perspectives noted by LFTTSC are; society can shape persons and groups, society can be affected by persons and groups, and society as a means of adaptation and response to their environment (Lazarus and Folkman, 1984). Alongside our global view of society, the ED can be considered a society the participant functions within. The ED nurse experiences, affects, and adapts to their unique unit

culture specific to their department. Unit culture was cited by some participants as a constraint and a facilitator to coping. For example, 'colleague support', was expressed as a facilitator to participant coping. Unit culture as a constraint to coping was also noted. Participants shared similar views of ED societal expectations and nuances derived from working as a nurse in the ED. *"It's this idea sometimes working in emerg, that you're supposed to be tough, move on, there's other things to do. There's going to be lots of things that you're going to see"* (Participant #6, p. 9). This socially constructed view was expressed by all experienced (greater or equal to 8 years experience) participants, however, most participants believed it was not necessarily an appropriate response. As previously shared by a participant, *"We normalize death too much"* (Participant #2 Reflective Journal, p. 2). This socially constructed belief adopted by ED nurses may hinder seeking out other coping mechanisms. "*...I guess most of us just feel like we're supposed to just be fine with it"* (Participant #5, p. 8).

Participants also shared there is *"no culture"* (Participant #6, p. 7) for CED and CISM, which has hindered adoption of the practices. A nurse also foreshadowed that social hierarchy constraints within healthcare professions could hinder CED program adoption. The example shared was the potential challenge of physician buy-in to a nurse-led CED program. Participant reports of societal influence to coping and stress were embedded in the transcripts.

Emergency Nurses' Perspectives of Clinical Event Debriefing (CED)

Participants acknowledged CED as an available resource in the ED. The following consists of the participants' perspectives on their current CED practices and their beliefs surrounding this practice. The findings are conveyed as benefits of CED, barriers to CED, facilitators to CED, and desired content of an effective CED.

Benefits of Clinical Event Debriefing (CED)

Personal and professional benefits of CED were cited by participants.

Personal Benefits

The personal benefits of CED identified related to the individual's emotional processing of the resuscitation event. Participants communicated that CED provided a safe space to acknowledge the difficulty or hardship of the event and receive validation or reassurance in return. CED provided an opportunity for participants to share the experience, versus carrying the emotions internally, leading to reports of validated feelings and feeling less alone. *"…that debrief was enough for me to just go through what happened and say – oh yeah, that was overwhelmingly, like that was crazy. And everybody acknowledged that, so that's cemented what I was feeling. OK, I wasn't feeling this alone..."* (Participant #1, p. 8). CED was also viewed as an appropriate transition from the chaos of a resuscitation, allowing nurses to emotionally check-in with themselves and their team members. *"And I felt like there was no transition. It was just, 'OK we're done. Let's go.' That's it. … I don't feel like it's healthy to just keep going. Take just a minute just to assess what just happened"* (Participant #6, p. 6). Team members' perspectives and knowledge helped provide a sense of closure for the case and allowed for an opportune space to give and receive recognition, that otherwise may not be communicated. In the reflective Journal for Participant #2, I noted their *"best debrief"*(as quoted by the participant) they've ever been a part of included *"emotions, recognition, improvements"* (p. 1). CED also permits clarification for miscommunication or misunderstandings, resolving concerns before moving onto the next case.

> *[Debriefing] is a form of closure where you don't want to carry on misunderstandings from this code. Because then that would affect the next code… rather than having all these misunderstandings or having all these feelings that you can't get off your chest. It's better to talk to someone or debrief and talk about it*. (Participant #1, p. 11)

The only negative CED encounter shared was a perception of 'blaming' or *"nitpicking"* (Participant #8, p. 5) during a CED. This participant shared that the behaviour was redirected by a respected and skilled facilitator which ended in a positive outcome for future cases. All participants viewed CED as a positive intervention. CED was largely communicated as an emotionally beneficial shared experience for ED nurses.

Professional Benefits

The identified professional benefits of CED focused on improvement. Improvement referred to patient outcomes, resuscitation processes, and developing self as a professional. One participant stated a CED they were a part of focused on the value of thoracotomies. *"So that was good for my own knowledge"* (Participant #7, p. 3). Some participants expressed the desire for more information within a multidisciplinary debrief, *"I would have probably liked to address maybe what [the code team] thought. Maybe what the docs maybe thought. Or maybe like a differential diagnosis of what happened"* (Participant #6, p. 3). *"…[debriefing] gives us the opportunity, we ask like 'oh, would a thoracotomy have helped this patient?' And the doctors can just give us a little bit more of insight of what they're thinking. … So, I do think that's it's like a really good opportunity to ask questions"* (Participant #4, p. 7).

CED was regarded as a multidisciplinary intervention for the improvement of resuscitation care delivery.

Barriers to Clinical Event Debriefing (CED)

Barriers to CED are divided into beliefs and external factors. Beliefs refer to the presumptions and preconceived notions surrounding CED. External factors refer to elements outside of the individual or team's control that act as barriers to CED.

Beliefs

Beliefs encompass individual, as well as societal, presumptions or preconceived notions. Multiple participants reported not needing a CED if the case was *"straightforward"* (Participant #5, p. 8). What is deemed as a straightforward resuscitation case is individual-dependent. It was communicated that physician direction was a main indicator of CED implementation. Therefore, the initiation of a CED would depend on the physician's belief. When asked what sparks a debrief, Participant #7 stated *"Oh, the physician"* (p. 4).

An example of differing beliefs for the perceived need of a CED would be a new ED nurse in their first resuscitation, compared to a seasoned ED physician. Their level of experience can influence stress appraisal. Physicians were the main debrief leader in the participating ED. It was reported that certain physicians would initiate a CED, while others would not. Other ED nurses with more experience (greater than seven years nursing) stated they have requested CEDs or CISMs, but nurses with less experience (less than 5 years nursing) did not discuss requesting CEDs.

The collective beliefs that act as barriers to CED, according to participants, were unit culture and ED nursing mentality. Societal norms can influence the individuals', as well as the groups', stress and coping (Lazarus and Folkman, 1984). *"I really think the people can be one of the biggest barriers [to debriefing]"* (Participant #4, p. 11). The unit culture of the participating ED was reported, by participants, to posses a culture of enduring hardship and carrying on to the next case, as if there were no emotional consequences endured. *"…the culture I guess, that would be the main barrier [to debriefing] …"* Participant #7, p. 5). Interestingly, despite this communicated societal expectation, the majority of participants admittedly being psychologically stressed and concurrently support the idea of regular CED practices.

Implementing a new practice requires engagement of team members. Two participants shared concerns for hierarchy within the ED negatively affecting engagement within CED practices. The two examples brought forth were fear of speaking up in a CED, and poor buy-in from physicians if a nurse was leading a CED. *"I think there is a problem though where, you know, services might not necessarily …might not buy-in to some random emerge nurse running a debrief"* (Participant #8, p. 8). *"It is harder to speak up when there's that many people, I would say, as opposed to just a few people that you're closer with"* (Participant #7, p. 3).

External Factors

Many external factors posed as barriers to CED practices. External factors refer to circumstances outside of the individual or team's control. The external factors mentioned by participants were time, physical space, department acuity/demand, staff resources, and a lack of organizational guidelines regarding CED practices. Lack of time was the number one reported barrier to CED practices. When asked what the barriers are to CED in the ED, a participant succinctly stated *"Resources, staff, time, being absolutely inundated with acute patients"* (Participant #5, p. 10). Acute patients require considerable resources. Therefore, if a patient requiring resuscitation efforts arrives to the ED, time and staff must be appropriately allocated to address, the often fatal illnesses and injuries, and life-saving interventions. *"… other resuscitations, it might be three nurses max. But [a described trauma case] we have five and above nurses, just because we – like everything needs to be done"* (Participant #1, p. 2). Time, staff resources, and department acuity and demand are often inter-related.

Physical space was determined as another barrier to CED. *"Where do you do it? Do you do it in the room that you just had [the resuscitation] in? Do you have a room where you can go to?"* (Participant #6, p. 9). Some participants suggested CEDs are to occur in the room, directly after the resuscitation event. However, one participant brought the concern of the Personal

Health Information Act (PHIA). If other patients, family members, or even the successfully resuscitated patient, were to hear the CED discussions, confidentiality, and willingness to discuss errors within the resuscitation, could affect the exchange. When asked about barriers to CED post-resuscitation, a participant exclaimed, *"It's probably the way our resus rooms are – because they're open, right?"* (Participant #1, p. 13).

The third most cited barrier to CED, next to time and department acuity/demand, was the absence of an organizational guideline for CED practices. Participants expressed the need for a structure for CED. *"More staff buying into the whole debrief thing, and then there actually being like a structure for it"* (Participant #8, p. 7). Suggestions consisted of a standardized format, policy guidelines, a designated debriefing tool, among other recommendations that will be discussed within the section titled 'Emergency Nurse's Recommendations for Future Practice and Resources'.

Facilitators of Clinical Event Debriefing (CED)

Facilitators of a CED were reported as: physician or nurse initiation (Individual-dependent), the type of case (Case-dependent), and the appropriate implementation (Logistics). Reported facilitators for a CED also serve as indications for future practice.

Individual-Dependent

Debrief initiation stems from the awareness or comfortability to ask for a CED or lead a CED, according to the participants. As described above, individual beliefs can act as 'barriers to CED', however, the individual can also act as a catalyst to CED practices. An example provided was a senior nurse, such as the charge nurse, may identify the need for a CED or CISM and request the practice. Physicians who have incorporated CED in their ED 'toolkits' are the ones initiating the practice more regularly. *"You will find that there is some team members who are more inclined to do a debrief and so they'll like initiate it more…"* (Participant #4, p. 7).

However, this leaves the responsibility of implementing CED to a select few professionals' discretion, which may not accurately reflect the team's needs.

Case-Dependent

Certain resuscitation cases and circumstances were more likely to inspire a CED. Participants stated if more junior staff were present during the resuscitation, it was an opportunity to have a CED. *"…there were also a lot of junior resus. staff in there. And I think that played a part in [initiating a debrief]"* (Participant #5, p. 9). *" I think that our newer nurses who are in [the resuscitation room] and haven't had these experiences before, I think that they need to be prioritized to have debriefs as well"* (Participant #4, p. 10). More notably, it was the type of resuscitation case that was deemed to initiate a CED or a CISM. These cases presented as: *"unexpected"* (Participant #4, p. 9), long duration, had unfavourable outcomes, young patient deaths, and tragic trauma cases. *"I find if it is someone who had unexpectedly died tragically, if it was an accident and they were per say younger, I find, then, we tend to do some sort of debrief if the resuscitation has gone on a long time."* (Participant #6, p. 4).

Logistics

The logistical facilitators to CED, identified by participants, are elements of CEDs that have been effective or have functioned well. Some participants commented on the difficulty of gathering team members after a resuscitation event, and the CED was most likely to occur if done immediately after the event (also known as a 'hot debrief' (Kessler et al., 2015)). *"I think [debriefs] should happen immediately"* (Participant #6, p. 5). *"I think that we should be doing more debriefs on the spot. I just find it sometimes like a really nice opportunity to ask some questions"* (Participant #4, p. 7). A benefit to hot debriefing, is the whole resuscitation team remains present for participation. Making CED a consistent practice and expectation was another suggestion to facilitate CED practices. *"I think all resuscitations should [have a debrief]"*

(Participant #4, p. 9). As previously mentioned in the 'Barriers to CED', there is no standardization, template, or tool used to guide a CED. There currently is no policy for CED at the participating facility.

Recommended Contents of a Clinical Event Debrief

Participants expressed desired content of a CED, as well as what they would like to see more of, in regards to CED implementation. The participants' reported descriptions are presented utilizing the framework 'The Five E's of Clinical Debriefing' by Toews and colleagues (2021). The Five E's of Clinical Debriefing are education, emotions, environment (physical and psychological safety), evaluation, and experienced/skilled facilitator. "The five E's create the foundation for a comprehensive and supportive approach to clinical debriefing" (Toews et al., 2021, p. 8). The content of a CED can be situation-specific and may require more emphasis on certain areas (or E's) than others, depending on the perceived needs of the providers (Toews et al., 2021).

Education

CED was viewed as a learning opportunity to strengthen and expand practice. One participant stated their primary purpose for a debrief was *"to learn"* (Participant #7, p. 5). Suggestions for education within a CED included: trauma nursing education, identifying pre-code determinants, reviewing ACLS protocols, reviewing resuscitation equipment use, understanding rationale for decisions and interventions that occurred during the case, discussing the value of interventions provided, cementing the priority of patient's issues, an opportunity to ask questions to expand knowledge base, and reinforcing proper protocols and processes. Excerpts to support education as desired content in CED below:

> *"… to learn communication and processes so that we're all on the same page for the next code"* (Participant #7, p. 5).

"I just find [debriefs] sometimes, like a really nice opportunity to ask some questions" (Participant #4, p. 7).

Five out of eight participants (62.5%) referred to education as desired content of a debrief.

Emotions

Addressing emotions in a CED was valuable to all participants. Addressing emotions in a CED were expressed as: reflection of the event, providing a space to process the event, an opportunity to share feelings and receive reassurance, supporting new, junior, or affected staff, developing respect for what ED staff endure, acknowledging efforts of coworkers, providing/receiving recognition, clarifying misunderstandings, gaining team members' perspectives, and gaining closure to the event. Some participants reported feeling less alone after CEDs, and relief after sharing the experience, which allowed participants to carry on their shift or end their shift with less burdensome or less intense emotions.

"And everybody acknowledged that, so that's cemented what I was feeling. OK, I wasn't feeling this alone..." (Participant #1, p. 8).

"[Participant #2] liked [debrief framework] because it focused on, not only improvements, but recognition" (Participant #2 Reflective Journal, p. 1).

When asked if the participant were to have a debrief after a resuscitation case they shared, what would they have liked to discuss: *"I guess to like validate the fact that we did everything that we could to bring the person back..."* (Participant #3, p. 4).

"I think we should be making more special attention to ensure that we're debriefing and making sure people are OK" (Participant #4, p. 10).

"Psychological benefit was an important take away from a debrief" for Participant #6 (Participant #6 Reflective Journal, p. 1).

Environment

The environment, according to Toews and colleagues (2021) refers to the psychological safety of a space, as well as the physical debriefing location. Three participants commented on physical space of a CED, and all participants commented on a safe environment to engage within (psychological safety). *"So I think that was a good debrief…to have the people who don't have as much resus experience, just in on that conversation in a non-threatening manner"* (Participant #5, p. 9). Participants implicitly stated that psychological safety was a requirement for engaging with the team and having meaningful, effective CEDs. Some participants stated that ideally, CED would occur in the resuscitation room or in a designated debriefing area that is PHIA appropriate.

Evaluation

Evaluation refers to process improvement. All participants described evaluation as an important element of CED, making 'Emotions' and 'Evaluation' the most frequently discussed content desired in a CED. Many examples provided by participants were focused on improving patient outcomes and processes. Evaluation was referenced as: developing efficiencies in providing resuscitation care, improving processes, reviewing which treatments were more efficient/appropriate for the patient (using an intraosseous line versus struggling to obtain an intravenous line was an example), evaluation of communication (team dynamics and communication within the code), identify equipment stocking concerns, discuss possible scenarios that could have impeded the outcome, discuss how to make an already successful resuscitation better, and to discuss errors or barriers to patient care. Participant quotes below endorse the use of Evaluation in CED:

> *" I think there is always room for improvement with every code and so, like the more that we can streamline some things or improve our communication or identify any sort of like*

things that are impeding on effective resuscitation, I think that – that is a great opportunity …" (Participant #4, p. 12).

"*"We talked about what happened during the code and you know how the room was not efficient enough for us to work in and how to improve the room"* (Participant #1, p. 6).

Participant #5 shared some questions that were asked in a debrief that clarified issues during the resuscitation event – *"What were the barriers? Was there anything that we could have done differently? Was it communication? Was it the machine? Was it a staff experience? What were we missing there? What was the component? Because I think it was almost five minutes. And how do we feel it went? Do we think it could have been different?"* (p. 9).

High value was placed by all participants on team improvement for the next resuscitation case, with a goal to positively influence patient outcomes.

Experienced or Educated Facilitator

Three participants identified the need for an educated or experience debrief facilitator as a factor in effective CEDs. Positive encounters were associated with debrief leaders who asked the team open ended questions, allowed opportunity for 'round table' (an open invitation for participants to bring up comments/concerns), focused on team performance versus individual performance, and redirected nonconstructive interaction (such as blaming). All participants shared CEDs that were led by a physician, or the CISM team. *"We need to expand that scope of who's able to actually lead our debriefs"* (Participant #8, p. 7) one participant suggested. It was reported by an experienced participant that broadening the disciplines of debrief leadership may help to narrow the gap of trained facilitators and increase debriefing practices.

To summarize, the desired content of a CED according to participants was a multidisciplinary discussion of how to improve resuscitation care delivery, that includes

emotional processing of the shared experience. CED is also viewed as an opportunity for professional education that involves an educated or experienced debrief facilitator.

Emergency Nurses' Recommendations for Future Practice and Resources

Participants were asked what they believed they needed to manage stress and coping in regards to resuscitation efforts and emergency nursing, in addition to improving CED practices. The premise of the research was to determine what the individuals who are experiencing the stress believe they require, as they would be best suited to inform this research objective. In no particular order, suggestions for and from ED nurses resulted in 1)Improved Staffing and Resources, 2) An ED Mentorship Program, 3)Suggestions for Effective CED practices, and 4) Education for the Resuscitation Team and Public.

Improved Staffing and Resources

Five out of eight participants acknowledged that having more staff resources would help decrease their work-related stress and enhance their ability to have more effective CEDs. The participants, and the health system, have undergone considerable changes regarding the contextual considerations mentioned in Chapter One. Participant quotes supporting this notion:

> *"So, like our staff has improved a lot, which I know is like not a - it's not really a solution, but it has taken away some of those additional stressors"* (Participant #4, p. 7).
>
> *"We're short staffed, we're always short staffed. It's just that we know how to cope with a short staffing system"* (Participant #1, p. 16).
>
> *"I mean I hate to say it but it's like everything always revolves around staffing, I feel these days. But I think that would be super helpful like if we just had the resources to do more things like [one-to-one post-resuscitation conversations/debriefs], like on shift and in the moment …"* (Participant #3, p. 6-7).

> *"But we don't do [debriefs] often. And I think we just don't have the time, we don't have the staff"* (Participant #5, p. 9).

Mentorship Program

Five out of eight participants identified the need for some form of mentorship. Two participants explicitly stated a mentorship program is needed, while others indicated the need to seek out mentors, and being a mentor for others. *"We need a good mentoring program for new nurses going into resus"* (Participant #1, p. 16). Unlike CED practices, a mentorship program would be on a one-to-one basis. Two participants stated that the fear of speaking up in a CED can limit learning opportunities, whereas some nurses prefer a more personal approach. Another participant stated talking to a more experienced co-worker was effective in decreasing stress after a traumatic resuscitation case. Participants suggested the mentorship program consist of pairing a new ED nurse, or newly resuscitation-trained nurse, with an experienced ED nurse. The pairing suggestions were for the novice nurse to have a designated mentor on shift, and/or to have one 'go-to' nurse assigned to them for on and off shift. *"I think like a mentorship program within the emergency department would be huge…Someone who maybe has more experience in this than you"* (Participant #4, p. 10).

> *You've never had an intubated patient before on your own, and you're just like, 'I just need you to go over this with me, I just, I have a question.' To be that safe person with that experience and knowledge, or to know who the best person is to ask for that. I feel a lot of responsibility, because I had a couple of really good people like that.* (Participant #5, p. 7)

A mentorship program is a form of social support that was recommended by participants and has the potential to decrease ED nurse stress levels associated with providing care.

Clinical Event Debriefing (CED)

Suggestions of CED by participants will be presented in a more practical means as nurses' perspectives of CED, including barriers, facilitators, and recommended content, were addressed previously.

An amalgamated summary of participant suggestions for the contents of a CED are as follows: A couple sentence summary of the case (review), patient's presumed cause of death (education/understanding), discuss went well (affirmation, reassurance and recognition), discuss what can be improved (evaluation), ask 'how is everyone doing?' (emotions), round table (open opportunity for those involved to speak/ask questions), and assess the need for CISM (further emotional support). It was suggested that there is a need to expand the scope of who can lead a debrief. Suggestions included ED charge nurses, senior ED nurses, or any resuscitation trained personnel who has experience or feels comfortable leading. A participant stated that any provider trained in how to lead a debrief should be able to. No discussion was conducted on what kind of training is necessary for a debrief leader, but a suggestion that management could decide who would be an ideal fit for training. Another identified need of participants towards debriefing programming was the support of management and administration in protected and respected debriefing time. Organizational support is required to integrate sustained CED practices (Toews et al., 2021). ED leadership has the ability to impact unit culture and support debriefing programs that have the potential to improve nurse stress, patient care, and organizational outcomes. Strategies to mitigate ED nurse stress, also have potential to improve retention of highly skilled ED nurses. The recommendations provided by the study's participants are site-specific, yet have potential to aid other ED debriefing programs across Canada and internationally.

Education

Education for the resuscitation team and for the public was identified as a recommendation for managing ED nurse stress going forward.

Education for the Resuscitation Team

Education suggestions for the resuscitation team was focused on preparation and readiness for resuscitation events. One of the suggestions was to implement multidisciplinary simulation training. The following statement expresses the need for hands-on training to facilitate resuscitation education, *"…just to be able to run a code with [the ED team] and actually simulate how it goes, rather than reading it in the textbook or talking about it or watching it"* (Participant #1, p. 7). Participants explicitly expressed the on-going learning that occurs during resuscitation and nursing in the ED; however, resuscitation simulation training can provide a learning environment that pose no consequence to actual patient outcomes.

Regular review of resuscitation equipment was another suggestion for future practice to help manage nurses' stress. *"…sometimes, because I haven't used the equipment for so long, it's like – how do I do this again?"* (Participant #1, p. 7).

Participants reported a desire for standard orientation for newly trained resuscitation nurses. Some participants expressed the Covid-19 pandemic had resulted in nurses advancing into resuscitation room training more rapidly than prior to the pandemic. This has potential for increased stress for newly trained ED nurses. A nurse shared an example of the difficulty in expressing lack of experience,

> *…because you haven't had a stroke resus. before, so you don't know how to do it and you ask that question and that person is just looking at you like – we do this everyday …But you've never had that experience and that person does not know."* (Participant #1, p. 16)

Suggestions for resuscitation team member education are multidisciplinary simulation

training and regular advanced equipment reviews. These suggestions were reported by a participant with less nursing experience than the majority of participants. These recommendations were deemed significant, due to similar reports of stress from experienced participants, and the desire for more experienced nurses to support less experienced nurses.

Education For the Public

A participant's suggestion for education for the public was geared towards awareness of ED dynamics and provider demands. The following quotes by Participant #4 expressed the sentiment involved with providing care in a busy ED:

> *I think that like maybe the public needs a little bit more perspective in the fact that like we're like literally getting shit-kicked day in, day out…I want people to know that we literally care so much, and that's why we continue to do what we do, and that's why we're like, I think sacrificing ourselves a lot of the time for our patients*. (p. 15)
>
> *We actually care a lot, but we also need to care a lot about 100 other people in the department at one time…I think that patients don't understand whatsoever and it's difficult sometimes to navigate that… I think nurses find it distressing that like we wish that they knew what we're going through*. (p. 15)

Knowledge of how the emergency department is run could provide further understanding for the patients. Many participants expressed the desire to give more time to their patients but feeling limited due to department demand. The same participants who suggested education for the public stated they wanted strategies to express this dilemma to their other non-resuscitation patients and family members currently in the department, without compromising PHIA and without minimizing the non-resuscitation patient's situation.

> *How do you go back from your trauma that you just witnessed to then back to your bedside and you have to continue to take care of your other eight patients, without telling*

> *them that you just went through a very traumatic event and you just supported a family who went through a very traumatic event.* (Participant #4, p. 15-16)

This participant expressed their views on family involvement in resuscitation efforts. *"I'm like a big advocate for family involvement in the actual act of resuscitation"* with the justification that it creates a more *"realistic picture"* of resuscitation and allows the family to assess if their loved one would want the resuscitative interventions (p. 4). Participant #4 stated there is a *"disconnect"* between what family members believe resuscitation to be and what the *"reality of [resuscitation] is"* (p. 4). Other participants did not disclose their views on family involvement in resuscitation, although this topic was not addressed in the semi-structured interview guide.

The reason the recommendation of public education and awareness is significant, is the overwhelming report of nurse stress due to departmental demand and the positive effect this recommendation could have on ED nurse stress.

Chapter Summary

In this chapter, I provided a description of the purposive sample of eight participants. Most participants were women in their 30s who were ACLS-trained nurses. The four themes were: 1) emergency nurses' experiences providing resuscitation: Devotion to profession, patient, and team –'*The arduous passion of emergency resuscitation nursing*' and Impactful resuscitation patterns – *'The adrenaline rush',* 2) Emergency nurses' experiences post-resuscitation: "*When the adrenaline wears off',* Moral distress and Secondary trauma stress, Resources currently available to emergency nurses post-resuscitation, and Coping patterns, 3) Emergency nurses' perspectives of clinical event debriefing (CED), and 4) Emergency nurses' recommendations for future practice and resources.

Impactful resuscitation patterns – *'The adrenaline rush'* consisted of moral conflict, severity of illness/injury, young patient, 'close to home', novelty of first case, sudden/unexpected patient decline/arrest and distress of patient's loved one(s). These cases align with LFTTSC's notion of personal and environmental variables that affect individual stress and appraisal.

Emergency nurses' experiences post-resuscitation encompassed moral distress and secondary trauma stress for the nurse provider. To be an emergency nurse embodies a high degree of devotion to the profession, patient, and team. Organizational resources reported as available to ED nurses are CED, personal counselling services, CISM, and participating in a PCP. The current resources available are generally viewed positively but are not implemented in a consistent, timely, and comprehensive manner. Unit culture has an influence on the ED nurses' appraisal, coping, and adaptational outcomes. Current coping mechanisms employed by participants include compartmentalization and emotional avoidance, social supports in the form of internal (colleague support) and external (outside of work) social networks, removing self from stressful environment, dark humor, and reflection. Short-term, these coping mechanisms are reported to be effective.

CED was overall viewed positively and reported to have personal and professional benefits. Barriers to effective CED practices include individual and collective beliefs that hinder regular implementation. External factors that act as barriers to CED are circumstances outside of individual control, such as the operational demands and logistics of the ED. There are favourable logistics, individual-dependent and case-dependent factors, that act as facilitators to CED. Certain resuscitation cases, and individuals who believe in the benefits of CED practices, act as catalysts for CED practices. Contents of a CED should contain The Five E's of Clinical Debriefing derived from Toews and colleagues (2021): education, evaluation, emotions,

environment (physical space and psychological safety), and an experienced/skilled facilitator. Participants reported the most desired contents of a CED are evaluation and emotions.

ED nurses' recommendations for future practice, to mitigate problematic psychological consequences of providing resuscitation care, included improved staffing and resources, an ED nurse mentorship program, education for the resuscitation team, public awareness of ED demands, and specific suggestions for CED practices that are valued by ED nurses and are expected to improve adoption and implementation.

CHAPTER FIVE: Discussion

This study aimed to explore ED nurses' experience of in-hospital resuscitation and CED in an adult emergency. This study accomplished its objectives and obtained some anticipated, unexpected, and welcomed findings. The purpose of this study was to determine the perceived needs of ED nurses post-resuscitation and to identify gaps in current supports. The study produced information regarding available and needed resources post-resuscitation, and the desired implementation of CED, including barriers and facilitators to the practice. The study also received suggestions for future practice, for and from ED nurses, to help manage post-resuscitation stress. All ED nurses who volunteered to be a part of the study experienced some form of clinical debriefing post-resuscitation, though they admitted to limited exposure of the practice. The consensus of the study's participants was that CED is a valuable resource if implemented appropriately and according to site-specific needs. This chapter provides interpretations of key findings in relation to the current evidence, discusses the implications for clinical practice, study limitations, and recommendations for future research and practice. This chapter is organized using the themes: 1) emergency nurses' experiences providing resuscitation, 2) emergency nurses' experiences post-resuscitation, 3) emergency nurses' perspectives of clinical event debriefing (CED), and 4) emergency nurses' recommendations for future practice and resources.

Emergency Nurses Experiences Providing Resuscitation

Emergency nurses are highly educated, skilled professionals who engage in frequent competencies and regular training beyond their university education. This preparation is necessary to meet the standard of care required for the dynamic cases that can present to the ED at a moment's notice. Every nurse employed by the participating ED are required to have Basic Life Support (BLS) training annually, whereas nurses trained to work in the resuscitation room

require Advanced Cardiac Life Support (ACLS) training every two years (Heart and Stroke, 2023). ACLS training is required when you are training to work in the resuscitation room, however nurses require experience in the ED before advancing to resuscitation room training. ACLS contains simulation practice and testing; however, recertification/training may be done with professionals outside of their current ED team members. Nurses not yet trained in ACLS, may lack simulation opportunity. An emerging point of concern, that is not addressed in their training to provide emergency nursing care, is the emotional, mental, and psychological toll that comes with saving lives. There are many complexities that influence an emergency nurse's stress and mental well-being before, during, and after resuscitation events. Impactful resuscitation patterns, current resources, coping patterns, stress associated with providing resuscitation care, and suggestions for future practice were the topics unearthed by participant's accounts. The experience of providing resuscitation care is synthesized in Appendix N, Figure N1.

Memorable resuscitation patterns consisted of moral conflict during the event, severity of illness/injury in the resuscitation case, the resuscitation of what was determined as a young patient, commonalities of the patient to self and loved one(s), the novelty of the resuscitation case to the provider, the sudden or unexpected decline or arrest of the patient they were caring for, and distress of patient's loved one(s). All these resuscitation patterns evoked emotional reactions from the ED nurses. Moral conflict resulted in the ED nurse grappling with their own values and the actions they were able to take, or unable to take, in the moments of the resuscitation. Moral conflict was the most cited theme of resuscitation patterns shared by participants. The trauma or severity of illness or injury of the resuscitation case and the youth of a patient were the next most common patterns. This may suggest that certain resuscitation cases affect ED nurses disproportionately compared to other cases, or present unique post-resuscitation needs. Departments that encounter more of these cases may have a greater affect on ED nurses

stress and mental wellness. Pediatric emergencies and trauma centers, for example, may require further attention to psychological resource allocation and the perceived needs of their care providers. This study focused on adult resuscitation cases due to limited literature in comparison to pediatric debriefing post-resuscitation. Pediatric debriefing literature can lend valuable information to adult emergency department debriefing implementation and practices.

Certain resuscitations were deemed as 'straightforward' resuscitation cases that did not evoke lasting reactions in the participants. For example, a patient in their early 20's who sustained resuscitation efforts for an injury was deemed more distressing than an older adult who sustained resuscitation efforts for chronic conditions. LFTTSC (1984) offers an explanation that 'timing of stressful events in relation to the life cycle' does not support the death, or near death experience, of a young person in our socially constructed notion of a 'normal' life cycle'. A point of interest is which patients, or what circumstances, evoke empathy in ED nurses. Some ED nurses, while being interviewed, were able to speak plainly about gruesome resuscitation efforts, while other resuscitation cases were more visibly distressing.

Other cases that were deemed distressing were when the participant experienced the family's emotions or recognizing commonalities to themselves in the patient/family unit. The high turnover of patients in the emergency department does not always allow for deep patient-nurse relationships. The length of stay for a patient in an emergency department is systematically designed to be less in comparison to a patient admitted to a medical ward, for example. The critical nature of patient's who require resuscitation may not have allotted the ED nurses time to develop a connection, as some patients arrive in unconscious states and with minimal notice. The patient's family and loved ones bring to the ED nurse's conscious awareness that the patient is not limited to an identity defined by a medical condition, but a dynamic individual who was loved and whose passing will elicit distress for others. A Canadian study conducted by Bourgault

and colleagues (2015) found that ED nurses had low levels of empathy, low levels of well-being, and high levels of psychological distress compared to the general population. They also found that higher empathy scores correlated with higher well-being. Empathy was not distinguished as a primary or secondary cause. Participants in this study reported having lasting distressing emotions and coping strategies that may be interpreted as detached. If detached coping strategies are a factor of low levels of empathy, it may be beneficial to replicate Bourgault and colleagues' (2015) study to a larger study sample in this location. Low levels of empathy may be a result of low levels of psychological well-being. These studies then bring attention to the desperate need for improving ED nurses' well-being. Future studies on ED nurse well-being, coping, and psychological resource use may provide relational understanding to ED nurse empathy.

The novelty of a case and the unexpected or sudden decline of the ED patient were other resuscitation patterns that arose from the data. Both patterns involve an element of the unknown or uncertainty. This study noted that novel cases harboured influence on ED nurse stress, regardless of experience level. Junior and senior ED nurses referenced novelty as a factor in their memorable resuscitations without distinct variation. ED nurses confronted with novel cases, such as their first resuscitation case, or their first time dealing with a certain condition/injury, may experience a lack of knowledge that may result in a stressful cognitive appraisal. According to LFTTSC (1984) mastery can decrease stress, which broadly equates to, the more experience one has, the more confident they may feel in that particular situation. The lack of differentiation of junior and senior nurse's memorable patterns and stress in new resuscitation experiences is contrary to the literature. However, levels of emotional response were not measured in this study. Participants were all similar in age, though not in experience level, and the majority of the participants worked the entirety of their careers in the ED, whether this plays a factor in their emotional responses would require further survey research and a larger sample size. The notion

that senior nurses feel a responsibility to the less experienced ED nurses was noted in this study as well as the previous literature from Morrison and Joy (2016).

Interestingly, there was limited definitive narrative data that linked successful versus unsuccessful resuscitation cases and ED nurses' stress. Resuscitation cases with positive and negative patient outcomes were shared but the patient outcome was not always correlated to the nurses' stress post-resuscitation. Although, one participant admitted to handling the stress of unsuccessful resuscitations by reflecting on positive outcomes and interactions with other patients. Some nurses reported positive feelings when hearing of patient's recoveries in the following days or weeks, while others reported intentionally not seeking out this information. These can both be determined as coping strategies; reappraisal (gaining new information to reappraise the event) and compartmentalization and emotional avoidance (not allowing oneself to become emotionally invested in the patient or the outcome).

The experience of providing resuscitation nursing care presents as a balance of stressful experiences for the provider and devotion to caring for others above their own needs. The topic of professional mental health resources as methods of coping were not directly questioned within the interviews. Some participants did share examples of professional mental health resources used (such as "therapy"). These strategies were not further probed within this study. Future research investigating the efficacy of professional mental health strategies in relation to nurse's occupational stress is warranted.

The theme of 'Devotion to Profession, Patient, and Team' was strongly recognized but was noted to accompany detriment to the nurses' mental well-being. This observed association deserves stark attention and further investigation, as it implies that providing ED resuscitation care with resources, in their current state, is a risk for mental unwellness for the ED nurse. This study aims to bring awareness and understanding of the ED nurse experience in its most

authentic form. The act of providing resuscitation care as an ED nurse should not result in the detriment of the provider's well-being.

Emergency Nurses' Experiences Post-Resuscitation

Moral distress and secondary trauma stress (STS) were described by the participants. The literature review on the effects of providing resuscitation care, frequently cite moral distress and STS, which align with the accounts of the participants within our study. Moral distress lowers workplace engagement (Clark et al., 2022). Hou and colleagues (2021) noted that the level of moral distress was significantly associated with the nurse's intent to leave their current position. As evidenced by one of the noted coping strategies of our study (Removing self from stressful environment), this is a literature-supported result of psychologically distressed ED nurses. Ratrout and Hamdan-Mansour (2020) also noted operational instability with higher levels of absenteeism in nurses who reported higher levels of STS. Levels of STS and moral distress for ED nurses is of growing concern. Wolfe and colleagues (2020) studied emergency nurses using the Secondary Trauma Stress Scale and found high levels of STS with chronic, cumulative trauma that influenced individuals' nursing care at work and social connections outside of work. The participants of this study align with Wolfe and colleagues' (2020) research and are profoundly affected by resuscitation care in their daily lives and relationships. Moral distress and STS of ED nurses pose economic consequences for the healthcare organization, along with the noneconomic costs of nurse mental wellness which has potential to negatively influence patient care.

Coping strategies that surfaced from ED nurse participants were compartmentalization and emotional avoidance, social supports in the form of colleagues and/or external social networks, such as friends and family, temporarily leaving the stressful environment, dark humor, and reflection. Compartmentalization has been noted as a coping strategy in nursing literature.

Examples include, Kellogg and colleagues (2014) study of pediatric burn nurses, Dekeseredy and colleagues (2019) of rural emergency nurses, and Omran and colleagues (2021) of critical care nurses. It is not surprising that the ED nurses of this study who work in an urban adult emergency have developed similar strategies. A concept analysis developed on 'emotional distancing' by Kim and colleagues (2020) defends that emotional distancing in nursing is a necessary process of empathy. According to this analysis, the process of attaching and detaching allows for the therapeutic relationship and nurse prioritization, allowing ED nurse to perform necessary life-saving measures. Compartmentalization and emotional avoidance behaviours were the most cited coping strategy in our study. ED nursing coping strategies would require additional research, with short-term and long-term evaluations. In the short-term, ED nurses of our study deemed compartmentalization and emotional avoidance as an effective and necessary coping strategy. However, the effect of this coping strategy on the ED nurse's psychological wellness in the long term is worth investigating.

'Removing self from stressful environment' is another strategy noted to decrease ED nurse stress. This refers to the ED nurse spending more time away from the department. Nurses reported taking jobs in a less acute ED (non-tertiary center), decreasing their hours worked, changing to a casual position, and taking jobs in other nursing specialities. All ED nurses that took this course of action to decrease their work-related stress identified it was an effective strategy. This alarming finding raises grave concern for retention of tertiary ED nurses. Therefore, effective ED strategies to mitigate nurse stress and improve occupational satisfaction are required to reduce nurse turn-over, job vacancies, and increased strain on current employees. This makes ED employee stress management and wellness strategies one of, if not the utmost, important tactic for hospital administration in recruitment and retention efforts. The current state of ED nursing is unsustainable and insufficient in fostering a career of longevity.

Dark humor was a common coping strategy among ED nurse participants. This strategy is used by nurses to emotionally distance themselves from the trauma of their work (Salladay, 2015). A study done by Bouchard (2016) on ED nurses labelled dark humor as a symptom of compassion fatigue. Salladay (2015) argues that dark humor erodes caregiver passion and sensitivity. In the recent literature (last 10 years), nurses coping with dark humor is sparse and is generally viewed as a negative coping mechanism. It may be difficult to accept the dichotomy of a caring, compassionate nurse engaging in dark humor. However, one article, by Nunes and colleagues (2018) with palliative care nurses, presented nurses coping with dark humor in a positive manner, using it as a protective mechanism that is accepted among peers. Long-term effects of dark humor as a coping mechanism and nurse compassion may be a point of interest in future research. I view dark humor as a means of resilience in a repetitively traumatizing environment. Dark humor is not a display of professional character, but an adaptive skill developed out of necessity. This study presents dark humor as an effective short-term coping strategy of ED nurses.

Despite seemingly disengaged coping strategies, participants' commitment and devotion to the profession, patient, and team was robust. Interpersonal relationships that develop within the ED and resuscitation team are not easily replicated, given the intense nature of their shared experiences. This may account for colleague support being more prevalent as a coping strategy post-resuscitation compared to discussing their experience with loved ones, who may not fully comprehend the resuscitation. External social support, such as friends and family, were deemed important and effective in decreasing ED nurse stress but may be viewed as an additional strategy to consulting with a team or co-worker who fundamentally understand the resuscitation, or who was present for the experience. Social support can "…help to prevent stress by making harmful or threatening experiences seem less consequential, or provide valuable resources for

coping when stress does occur" (Lazarus & Folkman, 1984, p. 246). Surprisingly, bedside nurse-to-nurse relationship literature is sparse. The available literature focused on nurse-patient relationships, toxic work environments, or multidisciplinary teamwork and performance.

Organizational resources currently available to ED nurses consisted of CED, personal counselling, CISM, and PCP. Overall, these resources, in their current state of implementation, are ineffective in mitigating ED nurse stress. The participants reported improper and/or inconsistent implementation of these resources. Participants' statements regarding PCP aligned with Copeland and Liska's (2016) research of implementing the PCP after unsuccessful resuscitation events in the ED. PCP provided the participants of this study an opportunity to respect the patient, as well as provide time to mentally regroup for the team and provider. The participants did not discuss PCP in depth, therefore more information is needed from participants to comment on the benefit and value of this intervention.

A post-code pause provides a moment of silence and self-reflection, whereas CED and CISM are group interventions that involve engaging and interacting with one another. According to Van Osch and colleagues (2017) retention of emergency nurses require support and development of leaders at every level, fostering interpersonal relationships of the team (especially the nurse physician relationship), and feeling valued and respected within the team. Organizational resources, such as CED, can provide opportunities that strengthen team relationships and promote multi-level leadership, in turn, positively influencing retention.

Personal counselling is the only organizationally supported resource mentioned by ED nurses that occurs outside of the workplace on the individual's own time. No comparisons were made to which resources were most useful. Conversely, many participants admitted to not using the personnel counselling as a resource. There are many reasons that can affect an individual's decision for uptake of resources, which were not directly questioned within the interviews. What

determines ED nurse uptake of resources is a suggestion for future investigation, as most of these resources were viewed positively by participants. A suggestion for this contradiction, is that the resources reported by participants were determined to be inconsistently or inadequately implemented. If these resources were implemented consistently and to their full scope, it is likely to have a positive effect on nurses' stress and coping, seeing as these resources were generally viewed as helpful.

The current state of emergency nursing resources is insufficient in managing ED nurse stress. ED nurses are regularly faced with persistent unit demands and are not always afforded time to consciously reflect on the resuscitation. As previously stated by LFTTSC (1984), it is not enough to have resources available if they are not valued by those that are meant to use them. One of this study's aims was to determine perspectives surrounding CED and how it could become a valued and adopted resource. It is evident by participant accounts, that the need for ED nurses to debrief post-resuscitation is so strong that participants pursued non-organizational means to manage their emotions. Participants shared their awareness of individual resiliency activities (such as personal counselling) that puts the responsibility of mental wellness activities on the resuscitation provider, but organizational activities on nurse's mental wellness was not as prominent or prioritized, in this study's sample or in the current literature. Nurse leadership has the potential to impact unit culture and minimize negative psychological consequences for ED nurses (Morrison & Joy, 2016). As noted by Babamohamadi and colleagues (2023), organizational support is required to reduce the physical and mental demands of ED nurses' workload by implementing sustained practices (such as increased staffing levels) that improve ED nurse coping and wellness. ED leadership must support protocols and guidelines and respect protected time for these valued resources.

Emergency Nurses' Perspectives of Clinical Event Debriefing

There are many inconsistencies and variations in the delivery and structure of debriefing. Participants shared there was no standard format, template, policy or guideline for CED practices. According to a survey conducted by Malik and colleagues (2020), only 14 percent of respondents stated that debriefing was done frequently at their facility. Conoscenti et al. (2021) found an overwhelming consensus (85%) that debriefing was determined as necessary and valuable in improving performance. CED was viewed positively by all participants as an ED nurse resource post-resuscitation, however improvements in implementation are required. The literature review done in Chapter Two suggested future considerations of CED practices which included involvement of clinical staff in CED leadership and program initiatives (Rose & Cheng, 2018), on-going CED training (Cheng et al., 2018), broadening disciplines of debrief facilitators (Anderson et al., 2021), and standardizing CED language and process within the department (Kessler et al., 2015). The participants suggestions aligned with the literature suggestions. Suggestions from participants to improve CED practices involved honouring a multidisciplinary approach, broadening the disciplines able to facilitate debriefs, training for debrief leadership and programming, and standardizing CED implementation. EDs implementing debriefing programs must employ means to identify their site-specific barriers and facilitators, to better aid in the success of their programs. Pre-emptively mitigating the identified barriers, and fostering the facilitators, prior to program implementation will provide an improved foundation for sustained program adoption. Implementing a means of feedback, through a survey for example, can help determine what is important to the healthcare professionals and can promote engagement within CED practices. Kessler and colleagues (2015) created a manuscript titled, *Debriefing in an Emergency Department After Clinical Events: A Practical Guide,* which is a valuable resource that holds similarities to the study participant's suggestions. The following suggestions are based

on participant reports and molded into a site-specific practical guideline, which has potential to aid other tertiary EDs in CED implementation:

CED should be a standardized practice in the ED after clinical events, such as resuscitation. The aim of the proposed recommended debriefing program is to hold a CED after every resuscitation. The participants reported it is not feasible to debrief after every CPR resuscitation case but supported the aim to be as often as the department demand allows. Resuscitation was primarily viewed by participants as CPR efforts, as evidenced by their shared resuscitation events, unlike the meaning of resuscitation for this study (noted in Chapter One), which included respiratory compromise and other hemodynamic rescue efforts. Participants indicated that certain resuscitation cases would spark a CED or CISM while others would not. A suggestion is to make CED initiation criteria, therefore staff has clear expectations surrounding CED initiation. All CEDs should be multidisciplinary, and all healthcare providers involved should be invited to participate. To combat the difficulties of gathering the same team at a later time, conducting a CED immediately after the events is preferable. The suggested duration of the CED should be approximately five minutes. A designated debriefing tool is to be used in each CED. There are many debriefing templates and tools available within the literature. Investigation and consideration is required in selecting a tool that aligns with the program goals and values. Departments may opt to adapt or create a site-specific tool they can further develop as the program progresses. A participant suggested having a laminated debriefing tool/template attached to the resuscitation room computer stations and incorporating the tool into the resuscitation nurses' roles and responsibilities (Participant #4, p. 12). The study participants identified that evaluation of resuscitation events and the emotions surrounding these events were important components in a CED, therefore implementing strategies or tools to encompass these

elements will better aid sustainability of the program. Feasibility of this suggestion can be evaluated by program planning and implementation team members.

Time and department acuity and demand were cited as the most common barriers to CED implementation according to participants, which is grossly evident within the literature. Strategies to create protected time for the participating staff to attend a CED is encouraged. Identifying potential barriers prior to implementing a CED program allows for efforts in mitigating these barriers, which may result in greater engagement and adoption. Individual and unit culture beliefs were also noted to be a barrier to CED implementation. Physicians were reported to be the primary debrief leader in the ED. Therefore, if they did not initiate, or believe a debrief was needed, it would be unlikely to occur. Much like Individual-Dependent initiation of CED, Case-Dependent CED leaves room for interpretation for what is 'traumatizing' or 'unexpected'. For example, a nurse who is new to the ED may find their first motor vehicle accident case traumatizing, but the code team physician has experience with these cases. This again, risks excluding professionals who are affected by the case but are not comfortable or aware to ask for a CED. It is possible that physicians were not educated on CED, don't believe a CED is needed, or do not feel comfortable leading a CED, which are common barriers cited within the nursing literature. More research is required to determine the skills and characteristics of an effective debrief leader. Physicians were not a part of this study, however, physician's beliefs surrounding CED could be a point of interest for future research. Requesting CEDs were reported more often from senior ED nurses versus junior ED nurses. It is possible that comfort and awareness of the department and CED practice may play a factor, such as Clark and McLean (2018) suggested in their research. Implementing sustainable CED practices in the ED would require a unit culture of safety and appropriate buy-in from team members. Providing more

awareness, education, and understanding of the benefits of CED have potential to increase the adoption of the practice.

Lazarus and Folkman (1984) identify social functioning at work as an adaptational outcome of stress and coping. It is important to identify and acknowledge societal influence when working to support a specific population. As mentioned in Chapter Three, an individual's appraisal and coping determines their adaptational outcomes (Lazarus & Folkman, 1984). Adaptational outcomes are evaluated in short-term and long-term assessments. This study does not address long-term adaptational outcomes of social functioning, morale, and somatic health. Short-term assessments of participant accounts determine that compartmentalization and emotional avoidance, social supports, removing self from the stressful environment, and dark humor are effective coping strategies. The effectiveness of Reflection as a coping strategy was not conclusively addressed by participants. Nevertheless, short-term effectiveness does not always determine long-term effective coping. The logistical challenges in conducting longitudinal studies of ED nurses' stress and coping related to ED resuscitation, such as confounding factors and attrition, are likely to limit generalizable data for long-term assessments of adaptational outcomes.

Suggestions for the contents of a CED were shared by participants. Toews and colleagues' Five E's of Clinical Debriefing (2021) (education, environment, emotions, evaluation, experienced/skilled facilitator) aligned with participant reports, as well as previous literature. Participants placed more value on two E's - discussing emotions of those involved and evaluation of the resuscitation efforts. According to LFTTSC, reappraisal is where emotional processing takes place (Lazarus & Folkman, 1984). CED provides a space for new information to be obtained and reappraise the emotions associated with stress that influence coping.

Therefore, CED has potential to positively influence coping of the ED nurse. Opportunities for reappraisal may not be as readily available to those affected if CED is not an option.

Multidisciplinary collaboration is required during resuscitation, as well as in CED practices. Despite the participants' reports and the literature's support for CED as a multidisciplinary intervention, most studies focus on nurse perspectives of resuscitation and CED programs. Hospital support staff are not routinely included in resuscitation and debrief literature. This demonstrates a gap in supportive options for hospital personnel in mitigating negative effects of hospital work life. Chesham and Dawber (2019) noted that hospital support staff, (ex. cleaning staff, transporters, etc.) had the same occurrence of PTSD as the general population, in relation to resuscitation events. A possibility as to why hospital support staff have the same PTSD risk as the general public could be a lack of knowledge surrounding resuscitation. It is predicted that other professions in the ED, apart from nurses, experience similar emotional vulnerability to traumatic events, although this population is disproportionately represented within the literature. This highlights the need for inclusion of other resuscitation team members' perspectives on resuscitation and CED, as it requires many disciplines to function optimally.

Participants suggested practical and feasible recommendations for implementation and adoption of CED practices in a tertiary ED. I remind the readership that CED is not to be viewed as a treatment. CED acts as a social support for the resuscitation team and can help identify if members require further support. Future study considerations include putting these recommendations into action in a tertiary ED, as well as other EDs, and evaluating its success in terms of staff engagement, perceived value, and staff stress levels post-resuscitation.

Emergency Nurses' Recommendations for Future Practice and Resources

The participants recommended continued education for ED resuscitation teams, awareness for the public regarding ED dynamics and demands, suggestions for improvements in

CED implementation, improving staffing resources, and a mentorship program for ED nurses. Since CED was addressed above, it will not be discussed here.

Suggested education for resuscitation teams included multidisciplinary resuscitation team simulation and specialized resuscitation equipment competencies. Simulated resuscitation team training improves team performance by effective communication, teamwork, and leadership, which may positively influence patient outcomes (Murphy et al., 2016). Simulation is advantageous, in that the scenario can be chosen according to the team's learning needs, provides a controlled learning environment, and does not involve real patient consequences. Professionals can become familiar using specialized equipment in a controlled learning environment and feel more prepared for the clinical setting. A study conducted by Kiessling and colleagues (2022) demonstrated increased and sustained confidence among the multidisciplinary team when simulating acute care situations. This form of education and preparation has potential to decrease resuscitation teams' stress levels. Disadvantages of simulation for clinical staff are the logistics of managing multidisciplinary learning, gathering a team on or off work hours, obtaining simulation equipment and space, experience of the simulation leader, and fear of speaking up for participants in larger multidisciplinary groups. Logistics of implementing such training warrants considerable consideration. There is a wealth of simulation literature that can aid in the development of such training with a multidisciplinary team. Simulation debriefing has a vast amount of literature in comparison to real-life event debriefing. A possible reason for this is that simulation and simulation debriefing have more opportunities to manipulate or control variables than real-life resuscitation events. There continues to be a theoretical-practical gap in providing simulation education opportunities for certified providers.

Awareness and education for the public on ED dynamics and provider demands was another recommendation from participants. Every person arriving to the ED deserves quality

care. All participants upheld this notion; however, the competing demands and prioritization of severely acute patients takes precedent, which left the participants feeling like they cannot provide optimal care to all patients. The desire for the public to be aware of the competing demands and the team's desire to provide the best care was proposed. One participant suggested developing a department strategy for frustrated patients that does not minimize the patient's needs, does not compromise PHIA, and recognizes that the providers went through something distressing, even traumatizing, and that the patient's cooperation is appreciated. Effective communication between ED staff and patients does yield greater satisfaction in the patient (Shah et al., 2015). Literature on public awareness of ED dynamics is sparse to nonexistent. Literature found on this topic consisted of patient's perspectives and satisfaction of emergency care, but not on strategies for ED staff to appropriately handle the frustrations of their ED patients. Investigation is warranted into what public education or campaign would be effective and what strategies for staff could look like.

Improving staffing resources was reported by participants as a method to decrease ED nurse stress and may allot more time for organizationally supported programs to improve ED nurse well-being. In Caulfield and colleagues' (2022) review of occupational distress in emergency nurses, inadequate staffing to manage department demand was one of the most reported stressors of their work environment. In a study conducted on nurses' and physicians' preferred interventions to combat burnout, improving nurse staffing was ranked as the most preferred intervention, above the desire for employee mental health and well-being interventions (Aiken et al., 2023). Therefore, improving nurse staffing is predicted to have a positive effect on ED nurse stress, even more so than implementing wellness programs. Improved nurse staffing may also allow more time for nurses to engage in de-stressing activities, or practices such as CED. According to the Canadian Nurses Association (CNA), "Proper nurse staffing strengthens

the health-care system and improves patient safety" (CNA, n.d.-a, para. 1). CNA (2015) also promotes that safe nurse staffing ratios lead to fewer errors, fewer readmissions, higher job satisfaction, and reduced costs (p. 13-19). Implementing strategies to ensure safe nurse staffing is in the best interest of the patients, nurses, and the organization.

A mentorship program was a recommendation from participants. To the best of my knowledge there are no ED mentorship programs within the participating health region. Another Canadian province implemented a staff-led mentorship program for newly on-boarded ED nurses that showed promising results. Themes identified were, enhanced preparedness concerning department realities, feeling welcomed by staff, and improved understanding of department flow and avenues of assistance (Peters et al., 2022). This study resulted in participant reports of retention and decreased levels of burnout (Peters et al., 2022). Another study by Gayrama-Borines and Coffman (2021) noted increased confidence, enhanced competency and advocacy skills in nurses transitioning to the ED. They also noted professional benefits for the mentors, heightened department morale, and teamwork. Implementing mentorship programs such as these have the potential for the same successes. Logistics of a mentorship program warrant further investigation and may require a tailored approach to individual site needs.

Stress, appraisal, and coping are individualized processes, as LFTTSC previously mentioned. Therefore, there are challenges in determining which coping strategies and resources are effective, healthy, or detrimental. Due to these individualized processes, group stress management strategies have always presented challenges in individual assessment. This study echo's LFTTSC (1984) sentiment in stating that the best approach to stress management involves multiple modalities, as there will be no strategy that encompasses guaranteed improvement in the adaptational outcomes of social functioning, morale, and somatic health combined.

The suggestions provided by participants of this study have the potential to decrease ED nurses' stress associated with providing resuscitation care. Healthcare administrators and leaders must consider the consequences to patients, families, and healthcare workers by failing to implement ED programs that have potential to improve ED care delivery. Management of occupational stressors are often endorsed on an individual level. Although there is value in individualized well-being practices, prioritizing an organizational approach to staff well-being is of high significance. Harnessing an organizational proactive approach to healthcare providers' well-being can be of more benefit than downstream interventions. ED leadership cannot begin to understand the psychological toll that is placed on the resuscitation providers if staff are not provided the opportunity, and the safe space, to express their concerns. Leadership has the ability to implement and support proactive approaches to burnout, compassion fatigue, and negative psychological consequences whilst improving teamwork, staff engagement, and the delivery of patient care.

Implementing CED programs have shown to have benefits on personal, professional, and organizational levels and is a relatively budget-neutral intervention. Hospital leadership must provide protected time to perform such activities and allocate training time for debrief leadership. Presently there is a lack of organizational protocols and administrative guidance in CED practices in the province's healthcare facilities. Although not mentioned in the literature, or by participants of this study, virtual platforms, that have gained much interest throughout the covid-19 pandemic, may provide a convenient space for many personnel to gather and review information.

Limitations of the Study

There are some limitations of this study. One limitation of the study was the small sample size. Although the purposive sample consisted of eight ED nurses, transcripts and reflective

journals providing rich description, allowed for data saturation. Data saturation was reached as there was no new information in the last two interviews. The underrepresentation of men within the sample is unfortunate but expected. Nursing in Canada remains a female-dominated profession, with approximately 91 percent representation in 2021 and nine percent male representation (CNA, n.d.-b). This study's sample lacked heterogeneity. Participants were primarily female, in their 30's and working part-time. This was a coincidence and unfortunately misrepresents full-time ED nurses, and nurses younger than 30, and older than 39. However, it is unknown the average age of the participating department, or the amount of full-time positions filled or vacant, compared to part-time positions. It is also possible, but unlikely, that this study's sample is an average reflection of the study setting and population. It is unclear why other age groups, full-time nurses, or male nurses did not participate. It is possible participants who underwent the interview shared their participation with other ED nurses causing a snowball effect, which has potential to lead to a more homogeneous sample. It is possible the study sample is subject to volunteer-bias, which implies a participant's voluntary interest in the research under study for those that choose to participate. Therefore, participants who have a vested interest in resuscitation or debriefing, for example, are more likely to volunteer their viewpoints, and the sample may not be reflective of the perspectives of ED nurses as a whole. Social desirability bias, the tendency for participants to respond with answers that coincide with an accepted social norm or to appease the researchers (Polit & Beck, 2021), is always a possibility in qualitative research, especially when discussing sensitive topics. Member checking was not implemented due to my understanding of the study topic, which can be viewed both as an advantage and a disadvantage. Studying multiple sites would strengthen the transferability and credibility of the study findings, however time and resources were limiting factors. A future cross-sectional descriptive survey of ED nurses in the province or across Canada is warranted.

It was previously mentioned that resuscitation and CED are multidisciplinary events. This study focused on the nursing perspective. Within the literature review, it was noted that many manuscripts on clinical debriefing examine one discipline, especially nursing (Allen & Palk, 2018; Clark & McLean, 2018; McMeekin et al., 2017; Ratrout & Hamdan-Mansour, 2020 – as examples), and although this can produce insightful information, inclusion of all team members is championed over siloed approaches. A gap in the literature remains for multidisciplinary perspectives, stress, and coping, regarding ED care and resuscitation events. Conducting a similar study with other ED disciplines, such as healthcare aides, phlebotomists, physicians, respiratory therapists, ward clerks, etc., would align with resuscitation and debriefing's multidisciplinary nature and real-world practices.

As a novice researcher and interviewer, with personal experience of the study topic, researcher subjectivity and bias may have influenced the research process. Every effort to mitigate this was made, as was previously addressed in the 'Rigor' section of Chapter Two. One interview was not recorded due to unfamiliarity with the audio recording equipment. In this instance, I wrote a detailed reflective journal about the participant's responses. The participants' authentic meaning may have been misinterpreted. To reduce the risk of researcher bias, I documented everything that could be recalled using the semi-structured interview guide and reflective journal guide immediately after the interview ended. I engaged in regular and on-going discussion with my academic advisor throughout the duration of the study.

Concluding Statements

ED nurses are highly skilled, committed, and compassionate providers who perform live-saving efforts that can improve patient outcomes. Their resuscitative efforts result in profound impacts on their personal and professional lives. Strategies to mitigate the negative emotional consequences of providing resuscitation efforts and emergency nursing are required for the

durability and the longevity of the career. ED nurses, and other ED personnel, deserve a more prioritized and dynamic approach to mitigating psychological distress that arises form resuscitation events, which are expected encounters of their profession. This is a call to action for health regions, organizations, ED leadership, and emergency care providers to implement, encourage, and support adequate resources that foster coping and mental wellness that are valued by the healthcare team. It is only appropriate to end with one of the most simplistic, yet encouraging, quotes from a participant on the conundrum of implementing effective and sustained staffing resources and CED practices ---*"…it's not rocket science"* (Participant #8, p. 8).

REFERENCES

Adeoye-Olatunde, O. A. & Olenik, N. L. (2021). Research and scholarly methods: Semi-structured interviews. *Journal of the American College of Clinical Pharmacy, 4*, 1358-1367. https://doi.org/10.1002/jac5.1441

Aiken, L. H., Lasater, K. B., Sloane, D. M., Pogue, C. A., Fitzpatrick Rosenbaum, K. E., Muir, K. J., McHugh, M. D. (2023). Physician and nurse well-being and preferred interventions to address burnout in hospital practice. *JAMA Health Forum, 4*(7), 1-14. https://doi.org/10.1001/jamahealthforum.2023.1809

Allen, R. C., & Palk, G. (2018). Development of recommendations and guidelines for strengthening resilience in emergency department nurses. *Traumatology, 24*(2), 148–156. https://doi.org/10.1037/trm0000141

Almost, J. & Mildon, B. (2022). R-E-S-P-E-C-T: A key to nurse retention. *Nursing Leadership, 35*(2), 12-28. https://doi.org/10.12927/cjnl.2022.26876

American Heart Association (AHA). (2020a). *Advanced cardiac life support: Provider manual.* First Heart & Stroke Printing.

American Heart Association (AHA). (2020b). *Highlights of the 2020 American Heart Association guidelines for CPR and ECC.* https://cpr.heart.org/-/media/cpr-files/cpr-guidelines-files/highlights/hghlghts_2020_ecc_guidelines_english.pdf

Anderson, T. M., Secrest, K., Krein, S. L., Schildhouse, R., Guetterman, T. C., Harrod, M., Trumpower, B., Kronick, S. L., Pribble, J., Chan, P. S., & Nallamothu, B. K. (2021). Best practices for education and training of resuscitation teams for in-hospital cardiac arrest. *Circulation: Cardiovascular Quality and Outcomes, 14*(12), 1261-1269. https://doi.org/10.1161/circoutcomes.121.008587

Babamohamadi, H., Davari, H., Safari, A-A., Alaei, S., & Pordanjani, S. R. (2023). The association between workload and quality of work life of nurses taking care of patients with COVID-19. *BMC Nursing, 22*(234), 1-11. https://doi.org/10.1186/s12912-023-01395-6

Barton, G., Bruce, A., & Schrieber, R. (2018). Teaching nurses teamwork: Integrative review of competency-based team training in nursing education. *Nurse Education in Practice, 32*, 129 – 137. https://doi.org/10.1016/j.nepr.2017.11.019

Beed, M., & Penn, M. (2019). Does psychological trauma affect resuscitation providers? *Resuscitation*, *142*, 188–189. https://doi.org/10.1016/j.resuscitation.2019.07.022

Berg, G. M., Hervey, A. M., Basham-Saif, A., Parsons, D., Acuna, D. L., & Lippoldt, D. (2014). Acceptability and implementation of debriefings after trauma resuscitation. *Journal of Trauma Nursing*, *21*(5), 201–208. https://doi.org/10.1097/JTN.0000000000000066

Berg, K. M., Cheng, A., Panchal, A. R., Topjian, A. A., Aziz, K., Bhanji, F., Brigham, B. L., Hirsch, K. G., Hoover, A. V., Kurz, M. C., Levy, A., Lin, Y., Magid, D. J., Mahgoub, M., Peberdy, M. A., Rodriguez, A. J., Sasson, C., & Lavonas, E. J. (2020). Part 7: Systems of care 2020 American heart association guidelines for cardiopulmonary resuscitation and emergency cardiovascular care. *Circulation*, *142*(suppl 2), S580–S604. https://doi.org/10.1161/CIR.0000000000000899

Bouchard, L. (2016). *Exploring compassion fatigue in emergency nurses.* The University of Arizona University Libraries. https://repository.arizona.edu/bitstream/handle/10150/622932/?sequence=1

Bourgault, P., Lavoie, S., Paul-Savoie, E., Grégoire, M., Michaud, C., Gosselin, E, & Johnston, C. C. (2015). Relationship between empathy and well-being among emergency nurses.

Journal of Emergency Nursing, *4*1(4), 323 -328. https://doi.org/10.1016/j.jen.2014.10.001

Canadian Institute of Health Research, Natural Sciences and Engineering Research Council of Canada, & Social Sciences and Humanities Research Council (CIHR, NSERCC, & SSHRC). (December 2018). *Tri-council policy statement: Ethical conduct for research involving humans*. Her Majesty the Queen in Right of Canada, Government of Canada, https://ethics.gc.ca/eng/documents/tcps2-2018-en-interactive-final.pdf

Canadian Nurses Association (CNA). (2015). Evidence-based safe nurse staffing toolkit. https://www.cna-aiic.ca/en/nursing/regulated-nursing-in-canada/nurse-staffing/safe-staffing-toolkit

Canadian Nurses Association (CNA). (2017). *Code of ethics for Registered Nurses.* https://www.nscn.ca/sites/default/files/documents/resources/code-of-ethics-for-registered-nurses.pdf

Canadian Nurses Association (CNA). (n.d.-a). *Nursing Staffing.* https://www.cna-aiic.ca/en/nursing/regulated-nursing-in-canada/nurse-staffing

Canadian Nurses Association (CNA). (n.d.-b). *Nursing Statistics.* https://www.cna-aiic.ca/en/nursing/regulated-nursing-in-canada/nursing-statistics

Cardinal, S. (2021). *What is CISM?* Critical Incident Stress Management International. https://www.criticalincidentstress.com/what_is_cism_

Caulfield, R., Wiseman, T., Gullick, J., & Ogilvie, R. (2022). Factors preceding occupational distress in emergency nurses: An integrative review. *Journal of Clinical Nursing, 32*, 3341-3360. https://doi.org/10.1111/jocn.16461

Cheng, A., Nadkarni, V. M., Mancini, M. B., Hunt, E. A., Sinz, E. H., Merchant, R. M., Donoghue, A., Duff, J. P., Eppich, W., Auerbach, M., Bigham, B. L., Blewer, A. L.,

Chan., P. S., & Bhanji, F. (2018). Resuscitation education science: Educational strategies to improve outcomes from cardiac arrest: A scientific statement from the American Heart Association. *Circulation*, *138*(6), e82- e122. https://doi.org/10.1161/CIR.0000000000000583

Chesham, B., & Dawber, C. (2019). The "All of Us" study – Non-clinical staff members' experience of performing cardiopulmonary resuscitation in acute care settings. *Australasian Emergency Care*, *22*, 243 – 248. https://doi.org/10.1016/j.auec.2019.04.004

Clark, P., Hulse, B., & Polivka, B. J. (2022). Resilience, moral distress, and job satisfaction driving engagement in emergency department nurses: A qualitative analysis. *Journal of Nursing Administration*, *52*(2), 112-117. https://doi.org/10.1097/NNA.0000000000001111

Clark, R. & McLean, C. (2018). The professional and personal debriefing needs of ward based nurses after involvement in a cardiac arrest: An explorative qualitative pilot study. *Intensive & Critical Care Nursing*, *47*, 78 – 84. https://doi.org/10.1016/j.iccn.2018.03.009

Clements, C., Barsamian, J., Burnham, N., Cruz, C., Grillo Darcy, A. M., Duphiney, L., FitzGerald, J., Holland, S., Joyce, C., & DeSanto-Madeya, S. (2021). Supporting frontline staff during the covid-19 pandemic. *American Journal of Nursing*, *121*(9), 46-55.

Coggins, A., Santos, A. D. L., Zaklama, R., & Murphy, M. (2020). Interdisciplinary clinical debriefing in the emergency department: An observational study of learning topics and outcomes. *BMC Emergency Medicine*, *20*(1), 1–11. https://doi.org/10.1186/s12873-020-00370-7

Connelly, L. M. (2016). Understanding research: Trustworthiness in qualitative research. *MEDSURG Nursing, 25*(6), 435-436.

Conoscenti, E., Martucci, G., Piazza, M., Tuzzolino, F., Ragonese, B., Burgio, G., Arena, G., Bolt, S., Luca, A., Arcadipane, A., & Chiaramonte, G. (2021). Post-crisis debriefing: A tool for improving quality in the medical emergency team system. *Intensive and Critical Care Nursing, 63*, 102977, 1-6. https://doi.org/10.1016/j.iccn.2020.102977

Copeland, D. & Liska, H. (2016). Implementation of a post-code pause. *Journal of Trauma Nursing, 23*(2), 58-64. https://doi-org.uml.idm.oclc.org/10.1097/JTN.0000000000000187

Couper, K., Finn, J., & Perkins, G. D. (2013). Debriefing to improve outcomes from critical illness: A systematic review and meta-analysis. *Intensive Care Med, 39*, 1513–1523. https://doi.org/10.1007/s00134-013-2951-7

Couper, K., Kimani, P. K., Abella, B. S., Chilwan, M., Cooke, M. W., Davies, R. P., Field, R. A., Gao, F., Quinton, S., Stallard, N., Woolley, S., & Perkins, G. D. (2015). The system-wide effect of real-time audiovisual feedback and postevent debriefing for in-hospital cardiac arrest: The cardiopulmonary resuscitation quality improvement initiative. *Critical Care Medicine*, *43*(11), 2321–2331. https://doi.org/10.1097/CCM.0000000000001202

Couper, K., & Perkins, G. D. (2013). Debriefing after resuscitation. *Current Opinion in Critical Care, 19*(3), 188–194. https://doi.org/10.1097/MCC.0b013e32835f58aa

Dekeseredy, P., Kurtz Landy, C. M., & Sedney, C. L. (2019). An exploration of work related stressors experienced by rural emergency nurses. *Online Journal of Rural Nursing & Health Care, 19*(2), 2-24. http://dx.doi.org/10.14574/ojrnhc.v19i1.550

Dovetail Editorial Team. (2023, March 9). *What is inductive coding in qualitative research?* Dovetail. https://dovetail.com/research/inductive-

coding/#:~:text=Inductive%20coding%20is%20a%20ground,emerge%20from%20the%20raw%20data.

Gabriel, P. M., Smith, K., Mullen-Fortino, M., Ballinghoff, J., Holland, S., & Cacchione, P. Z. (2021). Systematic debriefing for critical events facilitates team dynamics, education, and process improvement. *Journal of Nursing Care Quality*, *000*(000), 1–7. https://doi.org/10.1097/NCQ.0000000000000581

Gayrama-Borines, Z. & Coffman, S. (2021). Effectiveness of mentorship program in the emergency department. *Journal for Nurses in Professional Development, 37*(2), 107-111. https://doi.org/10.1097/NND.0000000000000710

Gilmartin, S., Martin, L., Kenny, S., Callanan, I., & Salter, N. (2020). Promoting hot debriefing in an emergency department. *BMJ Open Quality*, *9*(3), 1–5. https://doi.org/10.1136/bmjoq-2020-000913

Government of Manitoba. (n.d.). *Transformation Program.* https://www.gov.mb.ca/health/hst/program.html

Greenslade, B. & Reimer, W. (2020, September 17). *Job losses, restructuring coming to health care, say Manitoba health officials.* Global News. https://globalnews.ca/news/7341672/job-cuts-manitoba-health-care/

Gupta, M. A. (2013). Review of somatic symptoms in post-traumatic stress disorder. *International Review of Psychiatry, 25*(1), 86-99. https://doi.org/10.3109/09540261.2012.736367

Hale, S. J., Parker, M. J., Cupido, C., & Kam, A. J. (2020). Applications of postresuscitation debriefing frameworks in emergency settings: A systematic review. *AEM Education and Training*, *4*(3), 223–230. https://doi.org/10.1002/aet2.10444

Hammerle, A., Devendorf, C., Murray, C., & McGhee, T. (2017). Critical incidents in the ED. *Nursing Management, 48*(9), 9–11. https://doi.org/10.1097/01.NUMA.0000522180.69005.1e

Hamric, A. B. (2014). A case study of moral distress. *Journal of Hospice & Palliative Nursing, 16*(8), 457 – 465. https://doi-org.uml.idm.oclc.org/10.1097/NJH.0000000000000104

Heart and Stroke Foundation of Canada. (2023, May 10). *ACLS.* https://cpr.heartandstroke.ca/s/acls

Hennink, M. & Kaiser, B. N. (2022). Sample sizes for saturation in qualitative research: A systemic review of empirical tests. *Social Sciences & Medicine, 292*, 1-26. https://doi.org/10.1016/j.socscimed.2021.114523

Holbert, E., & Dellasega, C. (2021). De-stressing from distress: Preliminary evaluation of a nurse-led brief debriefing program. *Critical Care Nursing Quarterly*, *44*(2), 230–234. https://doi.org/10.1097/CNQ.0000000000000356

Hou, Y., Timmins, F., Zhou, Q., & Wang, J. (2021). A cross-section exploration of emergency department nurses' moral distress, ethical climate and nursing practice environment. *International Emergency Nursing, 55*, 1-9. https://doi.org/10.1016/j.ienj.2021.1009702

Hsieh, H-F. & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, *15*(9), 1277-1288. https://doi.org/10.1177/1049732305276687

Kellogg, M. B., Barker, M., & McCune, N. (2014). The lived experience of pediatric burn nurses following patient death. *Pediatric Nursing, 40*(6), 297-300.

Kessler, D. O., Cheng, A., & Mullan, P. C. (2015). Debriefing in the emergency department after clinical events: A practical guide. *Annals of Emergency Medicine*, *65*(6), 690–698. https://doi.org/10.1016/j.annemergmed.2014.10.019

Kiessling, A., Amiri, C., Arhammar, J., Lundbäck, M., Wallingstam, C., Wikner, J., Svensson, Rm., Henriksson, P., & Kuhl, J. (2022). Interprofessional simulation-based team-training and self-efficacy in emergency medicine situations. *Journal of Interprofessional Care, 36*(6), 873-881. https://doi.org/10.1080/13561820.2022.2038103

Kim, J., Kim, S., & Byun, M. (2020). Emotional distancing in nursing: A concept analysis. *Nursing Forum, 55*(4), 595 – 602. https://doi.org/10.1111/nuf.12475

Lake, E. T., Narva, A. M., Holland, S., Smith, J. G., Cramer, E., Fitzpatrick Rosenbaum, K. E., French, R., Clark, R. R. S., & Rogowski, J. A. (2021). Hospital nurses' moral distress and mental health during COVID-19. *Journal of Advanced Nursing, 78*, 799 – 809. https://doi.org/10.1111/jan.15013

Lazarus, R. S. & Folkman, S. (1984). *Stress, appraisal, and coping.* Springer Publishing Company, Inc.

Malik, A. O., Nallamothu, B. K., Trumpower, B., Kennedy, M., Krein, S. L., Chinnakondepalli, K. M., Hejjaji, V., & Chan, P. S. (2020). Association between hospital debriefing practices with adherence to resuscitation process measures and outcomes for in-hospital cardiac arrest. *Circulation: Cardiovascular Quality and Outcomes, 13,* Article e006695, 887–895. https://doi.org/10.1161/CIRCOUTCOMES.120.006695

Manitoba Health, Seniors and Active Living (MHSAL) & Manitoba Finance. (2017, March 31). Health system sustainability innovation review: Phase 2 report. KPMG, https://www.gov.mb.ca/health/documents/hsir_phase2b.pdf

Mao, A., Cheong, P. L., Van, I. K., & Tam, H. L. (2021). "I am called girl, but that doesn't matter" – Perspectives of male nurses regarding gender-related advantages and disadvantages in professional development. *BMC Nursing, 20*(24), 1-9. https://doi.org/10.1186/s12912-021-00539-w

McEwen, M., & Wills, E. M. (2019). *Theoretical basis for nursing*, 5th ed. Wolters Kluwer.

McMeekin, D. E., Hickman, R. L., Douglas, S. L., & Kelley, C. G. (2017). Stress and coping of critical care nurses after unsuccessful CPR. *American Journal of Critical Care*, *26*(2), 128–135. https://doi.org/10.4037/ajcc2017916

Morrison, L. E., & Joy, J. P. (2016). Secondary traumatic stress in the emergency department. *Journal of Advanced Nursing*, *72*(11), 2894– 2906. https://doi.org/10.1111/jan.13030

Murphy, M., Curtis, K., & McCloughen, A. (2016). What is the impact of multidisciplinary team simulation training on team performance and efficiency of patient care? An integrative review. *Australian Emergency Nursing Journal*, *19*, 44-53. https://doi.org/10.1016/j.aenj.2015.10.001

National Emergency Nurses Association (NENA). (2023). *Members: Become a NENA member*. https://nena.ca/members/

Noble, H. & Smith, J. (2015). Issues of validity and reliability in qualitative research. *Evidence Based Nursing*, *18*(2), 34-35. https://doi.org/0.1136/eb-2015-102054

Nunes, I. R., José, H., & Capelas, M. L. (2018). Grieving with humor: A correlational study of humor and professional grief in palliative care nurses. *Holistic Nursing Practice*, *32*(2), 98 – 106. https://doi.org/10.1097/HNP.0000000000000255

Olsson, A., Sjöberg, F., & Salzmann-Erikson, M. (2021). Follow the protocol and kickstart the heart—Intensive care nurses' reflections on being part of rescue situations in interdisciplinary teams. *Nursing Open*, *8*, 3325–3333. https://doi.org/10.1002/nop2.1050

Omran, T. & (Browning) Callis, A. M. (2021). Bereavement needs of critical care nurses. *Dimensions of Critical Care Nursing*, *40*(2), 83 – 91. https://doi.org/10.1097/DCC.0000000000000460

Pender, D.A. & Anderton, C. (2016). Exploring the process: A narrative analysis of group facilitators' reports on Critical Incident Stress Debriefing. *Journal for Specialists in Group Work, 41*(1), 19-43. https://doi-org.uml.idm.oclc.org/10.1080/01933922.2015.1111485

Peters, T., Mattiussi, D., & Warford, C. (2022). Emergency nursing: A staff-led mentorship program in a tertiary adult and pediatric emergency department. The Alberta Health Services Emergency Strategic Network (ESCN) Quality Improvement and Innovation forum (virtual), January 28, 2021. *Canadian Journal of Emergency Nursing, 45*, 1-2. https://doi.org/10.29173/cjen185

Polit, D. F. & Beck, C. T. (2021). *Nursing research: Generating and assessing evidence for nursing practice.* (11th ed.). Wolter Kluwer.

Porter, J. E., Cant, R. P., & Cooper, S. J. (2018). Rating teams' non-technical skills in the emergency department: A qualitative study of nurses' experience. *International Emergency Nursing*, *38*, 15–20. https://doi.org/10.1016/j.ienj.2017.12.006

Przednowek, T., Stacey, C., Baird, K., Nolan, R., Kellar, J., & Corser, W. D. (2021). Implementation of a rapid post-code debrief quality improvement project in a community emergency department setting. *Spartan Medical Research Journal*, *6*(1), 1–9. https://doi.org/10.51894/001c.21376

Ratrout, H. F., & Hamdan-Mansour, A. M. (2020). Secondary traumatic stress among emergency nurses: Prevalence, predictors, and consequences. *International Journal of Nursing Practice*, *26*(1), 1–9. https://doi.org/10.1111/ijn.12767

Rider, E. A., Comeau, M., Truog, R. D., Boyer, K., & Meyer, E. C. (2019). Identifying intangible assets in interprofessional healthcare organizations: Feasibility of an asset

inventory. *Journal of Interprofessional Care*, *33*(5), 583–586. https://doi.org/10.1080/13561820.2018.1544118

Riley, K., Middleton, R., Wilson, V., & Molloy, L. (2021). Voices from the 'resus room': An integrative review of the resuscitation experiences of nurses. *Journal of Clinical Nursing*, *00*, 1–10. https://doi.org/10.1111/jocn.16048

Robinson, P. S., Shall, E., & Rakhit, R. (2016). Cardiac arrest leadership: In need of resuscitation? *Postgraduate Medical Journal*, *92*(1094), 715–720. https://doi.org/10.1136/postgradmedj-2015-133738

Rose, S. C., Bisson, J., Churchill, R., & Wessely, S. (2002). Psychological debriefing for preventing post traumatic stress disorder (PTSD) (Review). John Wiley & Sons, Ltd. *Cochrane Database of Systematic Reviews*, *2*, 1 - 39. https://doi.org/10.1002/14651858.cd000560

Rose, S., & Cheng, A. (2018). Charge nurse facilitated clinical debriefing in the emergency department. *Canadian Journal of Emergency Medicine*, *20*(5), 781–785. https://doi.org/10.1017/cem.2018.369

Salladay, S. A. (2015). Not so funny. *Nursing*, *45*(8), 12. https://doi.org/10.1097/01.NURSE.0000469241.35858.6f

Sandhu, N., Eppich, W., Mikrogianakis, A., Grant, V., Robinson, T., & Cheng, A. (2014). Postresuscitation debriefing in the pediatric emergency department: a national needs assessment. *Canadian Journal of Emergency Medicine*, *16*(5), 383–392. https://doi.org/10.2310/8000.2013.131136

Schmidt, M., & Haglund, K. (2017). Debrief in emergency departments to improve compassion fatigue and promote resiliency. *Journal of Trauma Nursing*, *24*(5), 317–322. https://doi.org/10.1097/JTN.0000000000000315

Shah, S., Patel, A., Rumoro, D. P., Hohmann, S., & Fullam, F. (2015). Managing patient expectations at emergency department triage. *Patient Experience Journal, 2*(2), 31-44. https://doi.org/10.35680/2372-0247.1090

Shared Health Manitoba. (2022, February 23). Mental health resources for health-care workers and the public, https://sharedhealthmb.ca/covid19/providers/mental-health-resources/

Sibley, K. M., Roche, P. L., Bell, C. P., Temple, B., & Wittmeier, K. D. M. (2017). A descriptive qualitative examination of knowledge translation practice among health researchers in Manitoba, Canada. *BMC Health Services Research, 17*(1), 1-9. https://doi-org.uml.idm.oclc.org/10.1186/s12913-017-2573-9

Sjöberg, F., Schönning, E., & Salzmann-Erikson, M. (2015). Nurses' experiences of performing cardiopulmonary resuscitation in intensive care units: A qualitative study. *Journal of Clinical Nursing, 24,* 2522–2528. https://doi.org/10.1111/jocn.12844

Spencer, S. A., Nolan, J. P., Osborn, M., & Georgiou, A. (2019). The presence of psychological trauma symptoms in resuscitation providers and an exploration of debriefing practices. *Resuscitation, 142,* 175 -181. https://doi.org/10.1016/j.resuscitation.2019.06.280

Sugarman, M., Graham, B., Nelmes, P., Langston, S., & Matthews, J. (2021). Implementation of the a 'TAKE STOCK' hot debrief tool in the emergency department: A quality improvement project. *Emergency Medicine Journal*, *38*(8), 579–584. https://doi.org/10.1136/emermed-2019-208830

Swedberg, R. (2020). Exploratory Research. In Elman, C., Gerring, J., & Mahoney, J. (Ed.). *The production of knowledge: Enhancing progress in social science* (pp.17- 41). Cambridge University Press, https://doi.org/10.1017/9781108762519

Tannenbaum, S. I., & Cerasoli, C. P. (2013). Do team and individual debriefs enhance performance? A meta-analysis. *Human Factors*, *55*(1), 231 – 245. https://doi.org/10.1177/0018720812448394

Timms, V. (2019). BET 1: To debrief or not debrief. *Emergency Medicine Journal*, *36*(7), 444–445. https://doi.org/10.1136/emermed-2019-208698.2

Toews, A. J., Martin, D. E., & Chernomas, W. M. (2021). Clinical debriefing: A concept analysis. *Journal of Clinical Nursing*, *00*, 1–11. https://doi.org/10.1111/jocn.15636

Twigg, S. (2020). Clinical event debriefing: a review of approaches and objectives. *Current Opinion in Pediatrics*, *32*(3), 337–342. https://doi.org/10.1097/MOP.0000000000000890

Van Osch, M., Scarborough, K., Crowe, S., Wolff, A. C., & Reimer-Kirkham, S. (2017). Understanding the factors which promote registered nurses' intent to stay in emergency and critical care areas. *Journal of Clinical Nursing*, *27*, 1209-1215. https://doi.org/10.1111/jocn.14167

Walker, C. A., McGregor, L., Taylor, C., & Robinson, S. (2020). STOP5: A hot debrief model for resuscitation cases in the emergency department. *Clinical and Experimental Emergency Medicine*, *7*(4), 259–266. https://doi.org/10.15441/ceem.19.086

Wolfe, L. A., Delao, A. M., Perhats, C., Clark, P. R., Edwards, C., & Frankenberger, W. D. (2020). Traumatic stress in emergency nurses: Does your work environment feel like a war zone? *International Emergency Nursing*, *52*, 1-8. https://doi.org/10.1016/j.ienj.2020.100895

World Health Organization (WHO). (2020, December 23). A year without precedent: WHO's covid-19 response, https://www.who.int/news-room/spotlight/a-year-without-precedent-who-s-covid-19-response

Williams, E. & Morrow, S. (2009). Achieving trustworthiness in qualitative research: A pan-paradigmatic perspective. *Psychotherapy Research, 19*(4/5), 576-582. https://doi-org.uml.idm.oclc.org/10.1080/10503300802702113

Wright, B. (2019, May 15). Assessing phase two: Healing our health system Winnipeg Regional Health Authority. Shared Health Inc., https://sharedhealthmb.ca/files/phase-two-report.pdf

Zhang, X., Song, Y., Jiang, T., Ding, N., & Shi, T. (2020). Interventions to reduce burnout for physicians and nurses. An overview of systemic reviews and meta-analyses. *Medicine, 99*(26), 1-13. https://doi.org/10.1097/MD.0000000000020992

APPENDICIES

Appendix A: A Theoretical Schematization of Stress, Coping, and Adaptation

Appendix B: The Generality Model of Illness & The Specificity Model of Illness

Appendix C: Permission to Access Participants Letter

Appendix D: Letter of Invitation to Participate in Research

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Appendix I: Participant Resources

Appendix J: Distress Protocol

Appendix K: Three Levels of Data Analysis in Lazarus and Folkman's Transactional Theory of Stress and Coping

Appendix L: Description of Sample

Appendix M: Findings Supporting Lazarus and Folkman's Transactional Theory of Stress and Coping

Appendix N: Figures of Synthesized Study Findings

Appendix A

A Theoretical Schematization of Stress, Coping, and Adaptation

<table>
<tr><td>Causal Antecedents</td><td>Mediating Processes
Time 1…T2…T3…Tn
Encounter1…2…3…n</td><td>Immediate Effects</td><td>Long Term Effects</td></tr>
<tr><td>Personal variables:
values-commitments-beliefs:
existential sense of control</td><td>Primary appraisal</td><td>Physiological changes</td><td>Somatic health/illness</td></tr>
<tr><td rowspan="2"></td><td>Secondary appraisal</td><td>Positive or negative feelings</td><td>Morale (well-being)</td></tr>
<tr><td>Reappraisal</td><td>Quality of encounter outcome</td><td>Social functioning</td></tr>
<tr><td>Environmental variables:
(situational) demands,
constraints
resources (e.g., social network)
ambiguity of harm
imminence of harm</td><td>Coping:
problem-focused
emotion-focused
Seeking, obtaining, and using social support</td><td colspan="2" rowspan="2"></td></tr>
<tr><td></td><td>Resolutions of each stressful encounter</td></tr>
</table>

Note. Adapted from "Stress, Appraisal, and Coping" by Lazarus, R. S. & Folkman, S., 1984, Springer Publishing Company, Inc., p. 305. Copyright 1984 by Springer Publishing Company, Inc. Adapted with permission.

Appendix B

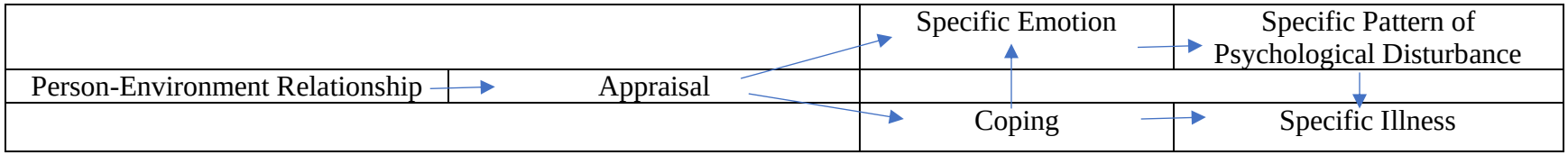
Figure B1

The Generality Model of Illness

Note. Adapted from "Stress, Appraisal, and Coping" by Lazarus, R. S. & Folkman, S., 1984, Springer Publishing Company, Inc., p. 219. Copyright 1984 by Springer Publishing Company, Inc. Adapted with permission.

Figure B2

The Specificity Model of Illness



Note. Adapted from "Stress, Appraisal, and Coping" by Lazarus, R. S. & Folkman, S., 1984, Springer Publishing Company, Inc., p. 219. Copyright 1984 by Springer Publishing Company, Inc. Adapted with permission.

Appendix C

Permission to Access Participants Letter

College of Nursing
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Canada R3T 2N2
T: 204 474 7452
F: 204 474 7682
nursing@umanitoba.ca

[*Date, 2022*]

[*Name of manager/director*]
Manager of Patient Care for Adult Emergency at [*facility*]
[*city, province*]

Dear [*Name of manager/director*],

I am a graduate student at the University of Manitoba conducting research in post-resuscitation experiences and clinical debriefing. Members of my thesis committee are: Dr. Donna Martin, RN PhD, Associate Dean of Graduate Studies at the University of Manitoba; Dr. Wanda Chernomas, RN PhD, Associate Professor at the University of Manitoba; Dr. Kendiss Olafson, MD, FRCPC, MPH, Assistant Professor at the University of Manitoba. The purpose of this Master in Nursing thesis is to explore nurses' experiences of in-hospital resuscitation events and clinical debriefing in an adult emergency. The research objectives are: 1) to explore nurses' experiences of in-hospital resuscitation events in an adult emergency in the presence or absence of clinical debriefing, (2) identify available and needed resources for nurses and healthcare providers after a resuscitation event, (3) describe topics to address, or desired content, of a clinical debrief, and (4) determine facilitators and barriers to clinical debriefing following in-hospital resuscitations in an adult emergency. The title of the project is: Nurses' Experiences of In-Hospital Resuscitation Events and Clinical Debriefing in an Adult Emergency. This research has been approved by the Research Ethics Board at the University of Manitoba, Fort Garry campus.

Your department would be a desirable site for this research because of the volume of patients your facility serves and the proportion of qualified and skilled healthcare professionals. The study involves interviewing 10 - 15 nurses. Each participant would undergo a one-time, one-to-one, digitally recorded interview. The interview would be approximately one hour in length and occur on the employee's own time. Each participant would receive a $50 Loblaw gift card for their time participating in the interview. Anonymity of staff, patients, and facility will be strictly maintained and is of utmost importance to the researcher. All data will be kept private and secure within locked facilities, and password-protected computers and files. For example, [redacted] will not be identified; the research site will be referred to as an adult emergency located in [redacted] or Western Canada.

Results of the study will be presented at research conferences and submitted for publication in a peer-reviewed journal. You will receive an executive summary of the study's

findings upon study conclusion, as well as the option for a brief presentation to management and staff. The study findings will provide you with greater insight into nurses' experiences of in-hospital resuscitation events in an emergency department and the debriefing needs of your staff.

I would like to schedule a phone call, virtual meeting, or in-person appointment with you so that we can discuss the possibility of recruiting participants from your department. If feasible, kindly provide me with written permission to access study participants in your department.

Looking forward to hearing from you,

Andrea Toews, RNBN
[redacted]@myumanitoba.ca
Master in Nursing Graduate Student
University of Manitoba

Advisor: Dr. Donna Martin, RN, PhD
[redacted]@umanitoba.ca
Associate Dean of Graduate Program

Appendix D

Letter of Invitation to Participate in Research

College of Nursing
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Research Project Title: Nurses' Experiences of In-Hospital Resuscitation Events and Clinical Debriefing in an Adult Emergency

Researcher and contact information:
Andrea Toews, RN BN
Email: [redacted]@myumanitoba.ca
Phone: [redacted]

Research Supervisor and contact information:
Dr. Donna Martin
Helen Glass Center for Nursing
University of Manitoba
Email: [redacted]@umanitoba.ca
Phone: [redacted]

The following letter describes the research study and your involvement in the research if you choose to participate. This research has been approved by the Research Ethics Board at the University of Manitoba, Fort Garry campus and Shared Health. If you would like further information or have any questions, feel free to contact the researcher (Andrea Toews). Please take time to read through carefully.

Dear potential participant,

My name is Andrea Toews and I am a Master in Nursing Student at the University of Manitoba, under the supervision of my advisor Dr. Donna Martin. I would like to invite you to participate in a study that aims to explore nurses' resuscitation, post-resuscitation, and debriefing experiences in an adult emergency. I am keenly interested in hearing your stories about in-hospital resuscitations in a professional capacity in the adult emergency department.

You are eligible for the study if you meet all the following criteria: a) you are a nurse actively practicing and licensed by the College of Registered Nurses of Manitoba (CRNM) b) employed in the adult emergency department at the [redacted], c) have experienced at least five resuscitation events in the past six months as a healthcare provider in an adult emergency. For the purpose of this study, resuscitation events include cardiopulmonary arrest and acute respiratory compromise (ex: requiring emergent placement of ventilator support and/or

cardiopulmonary resuscitation (CPR) efforts), and d) consent to being audio-recorded with a hand-held audio-recording device for a one-time interview.

If you meet the eligibility criterion and are interested in participating, you will be asked to participate in a one-time, one-on-one, audio-recorded interview. The interview will take approximately one hour. You will be asked some questions about your experience providing care in resuscitation events, with and/or without debriefing opportunities. These interviews are transcribed into a typed/written format for further analysis. This is **NOT** an evaluation of your work performance. The purpose of the study is to increase awareness of the complexities of caring for patients in resuscitation events and to provide insights that may influence current and future debriefing practices and other supports for healthcare providers in adult emergency departments.

Confidentiality of your contribution will be strictly maintained. Your privacy is very important to the researchers. The information you provide will only be accessed by those involved in the research. It will not be shared with your colleagues and/or manager(s). The interview documents will be assigned a de-identified code. The digital recorder will be stored in a locked facility and all transcribed data from interviews will be in a password-protected file on a password-encrypted computer with restricted access. Quotes from the interviews may be reported but no individual identifiers will be used.

Events that involve life-saving actions can be sensitive and bring up challenging and mixed feelings. A list of mental health resources will be provided to *all* participants.

Your participation is completely *voluntary*. You may choose to leave the study at any time without providing a reason and without consequence. After development of an executive summary of study findings, you will no longer be able to withdraw from the study. A signed copy of the consent form is securely kept in a locked office with limited access and a copy is given to you for your records.

Each participant will be given a $50 Loblaw gift card for their participation. Even if you decide not to answer all questions or if you want to withdraw from the study after the interview, you may keep the gift card.

Thank you for considering participating in this study. I look forward to hearing from you.

Andrea Toews, RNBN
Researcher
Graduate Nursing Student
University of Manitoba
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[redacted]

Appendix E

Consent Forms

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University of Manitoba | Rady Faculty of Health Sciences

LETTER OF INFORMATION FOR CONSENT TO PARTICIPATE IN RESEARCH

Title of Research Study: Nurses' Experiences of In-Hospital Resuscitation Events and Clinical Debriefing in an Adult Emergency

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This is a consent form for the above listed study. A copy will be given to you for your records and reference. It will explain the research study and what your participation will involve. If you would like more details, or information not included here, feel free to contact the researcher. Please take the time to read this carefully.

THE STUDY

The purpose of this study is to explore nurses' experiences of in-hospital resuscitation events and clinical debriefing in an adult emergency. The research objectives are: 1) to explore nurses' and healthcare providers' experiences of in-hospital resuscitation events in an adult emergency in the presence or absence of clinical debriefing, (2) identify available and needed resources for healthcare providers after a resuscitation event, (3) describe topics to address, or desired content,

of a clinical debrief, and (4) determine facilitators and barriers to clinical debriefing following in-hospital resuscitations in an adult emergency.

If you agree to participate, you will be asked to engage in a one-time, one-on-one, audio-recorded interview with a digital hand-held recorder. You will be asked some demographic questions (age, years in discipline, etc.), eight main interview questions, and supplemental questions (The supplemental questions are meant for the researcher to gain more understanding of your answers to the main questions). This interview will take approximately one hour. At the interview meeting, you will receive a $50 Loblaw gift card to thank you for your participation and contribution to the research (See Compensation section below). Once you have completed the interview, your participation is complete. You will be given the opportunity to receive an executive summary of the study findings. This is *optional*. This will be done in the form of an email. This email will take place approximately six months after the initial interviews.

RISK/BENEFIT OF PARTICIPATION

There are no known direct benefits of participating in this study. However, your contribution may benefit future healthcare providers and support programs. Talking about life-saving measures can be distressing, even for the most experienced individuals. Emotional distress may result from the interviewing process. All participants will receive a list of available mental health resources. In the event of imminent danger to the participant, such as suicidal ideation with a plan, the interviewer is required by law to contact the appropriate authorities for your safety. Your well-being is important to the research team.

CONFIDENTIALITY

All data and information shared with the interviewer will be coded. There will be no facility or individual identifiers in the published study findings. For example, [redacted] will not be identified; it will be referred to as an emergency department located in [redacted] or Western Canada. Rather than refer to a specific participant, the participant will be assigned a hypothetical name, or identified as an emergency room healthcare provider/nurse. The use of direct quotes may be used in the published study findings, however, there will be no identifiers tying the information to a specific individual.

Upon completion of your interview the researcher will upload your audio-recorded interview as a digital file. This file is password-protected and on a password-protected computer only accessible by the researcher and in the researcher's home office. Once this is completed, the audio recording is erased off the handheld device. Your interview will be assigned a participant code to protect your identity. The digital file of your interview is sent to a transcription service, via an encrypted system, which transcribes your spoken words into written words (transcripts). All transcripts will be uploaded to a shared drive in the College of Nursing with password-protected access, limited to the researcher and the researcher's advisor (Dr. Donna Martin). These are the only two individuals with access to the coded transcripts or any other study data. Once the transcripts are reviewed for inaccuracies, the digital audio recording file of your interview is deleted. The transcripts, and consent forms will be destroyed to protect your privacy in approximately 02/2029 (seven years) as per the University of Manitoba's policy for managing confidential documents.

Your participation in the study is *voluntary* and you may drop out at any time before the development of the executive summary of study findings (approximately 02/2024). You may withdraw from the study without providing a reason and without any negative consequences or repercussions. We ask that you contact the researcher by email or telephone and inform them of your decision. If you decide to withdraw from the study, all data associated with your participation is not included in the study findings. Consent forms, transcripts, audio-recordings, and researcher's notes associated with your interview will be deleted or destroyed. Participation or withdrawal from the study will not be communicated to your coworkers or managers and is **not** an evaluation of your work performance. The executive summary of study findings will be offered to leadership and administration of [redacted] Emergency Department. Again, this will not contain individual identifiers. If you would like an executive summary of the results of the study, please provide your consent and email at the bottom of this form. The executive summary of the study's results will be sent to you via email on or before Winter 2024.

COMPENSATION

For your valued participation in this study, we would like to acknowledge your contribution with a $50 Loblaw gift card. Participants are given their honorarium at the one-time interview. In the event a participant decides to withdraw from the study after receiving the honorarium and before data aggregation, the participant may keep the gift card.

If you have any questions about the study, please feel free to contact the researcher, Andrea Toews, at [redacted]@myumanitoba.ca, or by phone, [redacted]

If you have any concerns or complaints about the research, you may contact Human Ethics at the University of Manitoba by emailing them at humanethics@umanitoba.ca

Your signature on this form indicates that you have read and understood, to your satisfaction, the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and /or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation. The University of Manitoba may look at your research records to see that the research is being done in a safe and proper way. This research has been approved by the Research Ethics Board at the University of Manitoba, Fort Garry campus. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Officer at 204-474-7122 or HumanEthics@umanitoba.ca. A copy of this consent form has been given to you to keep for your records and reference.

☐ By checking off this box, I consent to be contacted by the researcher (Andrea Toews) and to participate in an interview about my professional experience in resuscitation event(s), post-resuscitation, and/or my experience of clinical debriefing, or lack thereof.

Name (Given Name and Surname):_____
Contact Information (Phone Number and Email):_____
_____
Participant Signature:_____
Date Signed (dd/mm/yyyy):_____

☐ By checking off this box, and providing my email address, I am requesting and consenting to receive a summary of the study. Please note that providing feedback to the study's results is *optional*.

----------*Below is for the researcher ONLY*----------

Researcher Signature:_____
Date Signed (dd/mm/yyyy):_____

☐ By checking this box, it indicates that the participant has received their honorarium in full.

☐ By checking this box, it indicates that the participant has been given the Covid-19 Consent/Information Letter

Appendix F

Recruitment Poster

WANT TO CONTRIBUTE TO RESEARCH?

PARTICIPANTS NEEDED

If you are a Nurse working in the [redacted]
Emergency Department you may qualify!

(Must have experienced at least 5 resuscitation events in the last 6 months)

STUDY PURPOSE:

- To understand nurses' experiences in resuscitation and resources post-resuscitation

HOW AM I INVOLVED?

- Participate in a 1 hour (approx.) interview

HOW CAN MY CONTRIBUTION HELP?

- Your contribution may help inform current and future healthcare provider supports
- **Participants will receive a $50 Loblaw/Superstore gift card**

This research has been approved by the Research Ethics Board at the University of Manitoba, Fort Garry campus

University of Manitoba

To participate or for more information please email, call, or text Andrea Toews, RNBN:

[redacted]@myumanitoba.ca or [redacted]

Academic advisor: Dr. Donna Martin, RN, PhD [redacted]@umanitoba.ca

Note. Poster size was printed on 8.5 x 11 inches (standard printer paper size)

Appendix G

Semi-Structured Interview Guide

Goals/Objectives of the Research

- Participants' experiences with in-hospital resuscitation/post-resuscitation and clinical debriefing in an adult emergency
- Participant's views on the effects of in-hospital resuscitation and resources available post-resuscitation
- Facilitators and barriers to clinical debriefing
- Participants' perspectives about important components of a post-resuscitation clinical debrief and any other resources identified

Introduction Topics

- Thank them for their time
- Introduce researchers - position/title
- Explain purpose of study, goals/objectives (listed above)
- Review *Consent Form* and *Participant Resources*
- Explain what to expect – "The interview includes eight main questions. I may ask more questions (probing questions) or ask for more details to gain a better understanding of your answers. I encourage free flowing conversation. We may stray from the questions a little bit. This interview should take approximately one hour."
- Explain the audio-recording equipment
- There are no wrong answers – "Sometimes the responses people feel are 'bad' hold the most value."
- Reminder them the research is confidential and recorded transcripts will be de-identified.
- "Do you have any questions before we begin?"
- Begin recording

Semi-Structured Interview Questions with Probing Questions

Participant Code #:
Date:
Age (in years):
Gender (self-identified):
Years worked in above discipline:
Years worked in emergency department(s):
Casual/part-time/full-time employee:
Number of in-hospital resuscitation events in last six months (approximate):

1. Tell me about your role and responsibilities during a resuscitation event in the adult emergency department.
2. Please share a memorable resuscitation event you were a part of.
    - Why is it memorable to you?
    - How did this event make you feel?
    - How has/have this/these event(s) affected you?
      -Short term? Long term?

-Physiologically? Psychologically? Socially?

- Was there a debrief?
  YES
  -What did the debrief discuss?
  - How did you feel about the debrief?
  -What would you have liked to address in the debrief that wasn't addressed?
  NO
  -What would you have liked to address in a debrief regarding the event?

3. What do you do/ what is done to help deal with resuscitation events you've experienced at work?
   - Is this helpful? YES/NO – Why is that?
4. Following resuscitation events, what supports are available to you through your work?
   - Are these supports adequate? NO - What supports do you believe are needed? What can be done to improve these supports?
     YES/NO –What can be done to improve/ensure uptake of these resources?
5. Please tell me about a memorable debrief. (*If the participant was never part of a debrief, please skip to question 6*)
   - Are you satisfied with this/these experience(s)? Why or why not?
   - Is there anything you would suggest to improve for this debriefing experience? What would you suggest?
6. According to you, what is important to address in a debrief following a resuscitation event?
   - Why do you feel this is important?
7. What is the purpose of clinical debriefing, to you?
8. From your experience, what are the barriers to clinical debriefing?
   - What would help to have more debriefs?
9. Is there anything else you would like to share?

Probing questions may vary slightly or be added depending on what information is shared by the participant. A main question may result in a tangent of thoughts and content the researcher may want to explore more in depth.

Appendix H

Observation/Reflective Journal Guide

Study Title: Nurses' experiences of in-hospital resuscitation events and clinical debriefing in an adult emergency

As soon as possible following the in-person interview, Andrea Toews, the student researcher and principal investigator, will document this information in the coded/de-identified reflective journal:

- Describe how the participant responded to reading, hearing, and talking about the purpose of the study.
- Identify common terms that the participant used to describe resuscitation/postresuscitation/clinical debriefing
- What were taken-for-granted "norms" that emerged from this participant's interview?
- Based upon this participant's experiences, what were key facilitators/barriers influencing positive and negative coping strategies to resuscitation care?
- Describe any methodological or theoretical epiphanies.

Appendix I

Participant Resources

Talking about resuscitation events can be distressing, even for the most experienced healthcare providers. Here are some resources available to you.

- **Blue Cross Employee Assistance Program**
  - Short term counselling, information, & resource documents
  - For more information call **204-775-0151** (8:00 am – 5:30 pm weekdays)
- **Bounce Back (Canadian Mental Health Association)**
  - Evidence-based coaching program for people experiencing low mood, mild-to-moderate depression, or stress, with or without anxiety
  - Toll-free: **1-844-733-8181**
- **Canadian Mental Health Association Service Navigation Hub**
  - Specialists are available to help all Manitobans find the best type of care or service to match their needs, including mental health and addictions.
  - For more information call **204-775-6442**
  - Phone: **204-482-5376** or toll-free: **1-877-499-8770**
- **Crisis Resource Centre**
  - The Mental Health Crisis Response Centre in Winnipeg is a central point of access for adults experiencing a mental health crisis, accessible 24 hours a day, seven days a week within an atmosphere that promotes healing and recovery. For more information call **204-940-1781**.
- **Klinic Evolve Counselling Program**
  - The program provides counselling to parents and children in situations where domestic abuse is currently an issue or has occurred in the past
  - Counselling can help families to increase resiliency, strengthen relationships and develop new patterns
  - For further information, please call an intake counsellor at **204-784-4059**
- **Klinic Suicide Prevention and Support Line**
  - 24/7 Crisis support and intervention
  - Phone: **204-786-8686** or toll-free: **1-866-322-3019**
- **Wellness Together Canada - https://wellnesstogether.ca/en-CA**
  - Tools and resources to help Canadians get back on track
- These include modules for addressing low mood, worry, substance use, social isolation, and relationship issues
- **Workplace Strategies for Mental Health - https://www.workplacestrategiesformentalhealth.com/**
  - This is a website employees can access for free tools, resources and education including: *Guarding Minds at Work, Managing Mental Health,* Psychologically Safe Leaders, and Psychologically Safe Interaction

Resources retrieved from https://sharedhealthmb.ca/services/mental-health/mental-health-and-wellness-resource-finder

Appendix J

Distress Protocol

In the event of participant distress, the following protocol is put in place for the interviewer to safeguard participant safety and well-being:

1. Are you experiencing a high level of stress or emotional distress related to your work? (If the answer is "no", continue to question 2. If the answer is "yes" use additional questions below)
    a) Tell me more about that.
    b) Do you have thoughts about harming yourself?
    c) Do you intend to harm yourself? (If "yes" continue to question d)
    d) How do you intend to harm yourself? (If there is a plan, participant is in imminent danger – refer to below 'imminent danger' in bold font)
2. Could this interview make it difficult for you to continue with your day and do the things you need to do (school, work, obligations)?
3. Is there any reason you believe you should not participate?

If the participant answers "no" to questions 1, 2, and 3. Continue with the interview.
If the participant answers "yes" to any of the above questions, assess for distress and take the actions below as indicated.

If the participant answers yes to any of the following questions and is deemed to be in **acute distress but NOT in imminent danger**:

a) Do NOT proceed with the interview.
b) Provide Participant Resources handout.
c) With the participants permission ask if it is okay to contact them the next day to make sure they are okay.
d) Encourage contact with participant's care provider.

If the participant is in **imminent danger**:

a) Inform the participant that you have a professional duty to ensure the safety of any persons who are deemed in imminent danger.
b) Notify local authorities.
c) With the participants permission ask if it is okay to contact a trusted person of their choice. If yes, proceed to do so.
d) With the participants permission ask if it is okay to contact them the next day to make sure they are okay.

Appendix K

Three Levels of Data Analysis in Lazarus and Folkman's Transactional Theory of Stress and Coping

	Causal Antecedents	Mediating Processes	Immediate Effects	Long-term Effects
Social	-Socioeconomic status -Cultural templates -Institutional systems -Group structures (e.g., role patterns) -Social networks	-Social supports as proffered -Available social/institutional means of ameliorating problems	-Social disturbances -Government responses -Sociopolitical pressures -Group alienation	-Social failure -Revolution -Social change -Structural changes
Psychological	Person variables: values-commitments-beliefs-assumptions e.g., personal control cognitive-coping styles Environmental: (Situational) variables: -situational demands -imminence -timing -ambiguity -social and material resources	Vulnerabilities Appraisal-Reappraisal Coping: -problem-focused -emotion-focused -cultivating, -seeking and using -social support Perceived social support: -emotional -tangible -informational	-Positive or negative feelings -Quality of outcome of stressful encounters	-Morale -Functioning in the world
Physiological	-Genetic or constitutional factors -Physiological conditioning-individual response stereotypy	-Immune resources -Species vulnerability -Temporary vulnerability -Acquired defects	-Somatic changes (precursors of illness) -Acute illness	-Chronic illness -Impaired physiological functioning -Recovery from illness -Longevity

	-Illness risk factors – e.g., smoking			

Note. From "Stress, Appraisal, and Coping" by Lazarus, R. S. & Folkman, S., 1984, Springer Publishing Company, Inc., p. 308.

Appendix L

Description of Sample

Demographic Item	Range	Mean
Age (years)	30 - 39	34
Self-Identified Gender	7 women / 1 man	-
Years as a Nurse	2 - 16	8.5
Years in Emergency Department	2 - 16	7.25
Employment Status	1 Full-time/ 6 Part-time/ 1 Casual	-
Number of Resuscitation Events in the last 6 months (approximate)	10 - 30	20

Note. Description of sample from study titled: *Nurses' Experiences of In-Hospital Resuscitation Events and Clinical Event Debriefing in an Adult Emergency.*

Appendix M

Findings Supporting Lazarus and Folkman's Transactional Theory of Stress and Coping

Causal Antecedents →	Mediating Processes →	Immediate Effects →	Long Term Effects (Adaptational Outcomes)
Personal Variables: **Beliefs:** - Sense of control for patient outcome "I felt like that was my patient and I could have done differently, maybe if I saw signs earlier" (Participant #6, p. 3). - Moral conflict. "We're doing all the stuff we need to, but ultimately, we're just delaying the inevitable, which is kind of a challenge sometimes" (Participant #5, p. 2). **Commitments:** - Patient commonalities to self or loved one(s) "…it's like oh my gosh that could've been me or even like when things relate to my family members or my loved ones, I always feel like I just think about them a little bit more"	**Primary & Secondary Appraisal** - "I was doing something, but at the same time I felt lost that I was not doing anything" (Participant #1, p. 3). - "I think everybody took a step back and wasn't sure what to do until we kind of kicked in and started" (Participant #6, p. 2). - "I didn't know how to – what to feel after something like that" (Participant #6, p. 2). - "But reflecting on what happened and seeing things step by step from how I viewed, you know, how I experience things and see what I can do better or what we can do better" (Participant #1, p. 12). - "if you actually thought about what was going on in that instant or what the patient might be feeling or going through, or about you know, the loved ones sitting in the waiting room crying because you are working on their loved one trying to resuscitate them, you wouldn't get your job done" (Participant #8, p. 2).	**Physiological changes** - Crying. "I went in the bathroom and I looked at myself in the mirror and I bawled my eyes out for five minutes straight" (Participant #1, p. 5)." - "I was like having panic attacks going to work …" (Participant #4, p. 13).	**Somatic health/illness** - Not addressed within this study

(Participant #3, p. 3). "If there's little features in the patients that feel similar to me, then I find it affects me more" (Participant #4, p. 4). "If people have the same medical conditions as like my parents or something you just, I just feel like you really, I don't know you think a little harder about it" (Participant #3, p. 9) - Devotion to profession, including team, patient, and family - "All I could think of was that little girl not having her mom at the wedding dress shop when she's getting married" (Participant #4, p. 4). "– even though it was overwhelming, I felt like you know, I was doing what I was supposed to do as a nurse. This is as an emergency nurse – like I love emergency nursing" (Participant #1, p. 4).			
		Positive or negative feelings	**Morale (well-being)** - Depression

		- "you figure out what's wrong, you send them up to ICU, and you're like, "Oh, my gosh, that was really fun." Then you find out two weeks later that they stabilized and they went to [medical area] and now they're in the ward and they're doing really well, and that's that little bit that you just hold onto where you're like, "This is why I do it. The adrenaline	- "Burnout" (Participant #3, p. 8). - Moral distress - Symptoms of STS - "I was crying all the time, I was like having panic attacks going to work, like I was not doing well" (Participant #4, p. 13).

		and I love it" (Participant #5, p. 6-7).	
	Reappraisal - "It was a good learning curve, even though it was overwhelming at the same time…looking back at it, it was a good learning curve" (Participant #1, p. 3). - "Everybody acknowledged that, so that's actually cemented what I was feeling – OK, I wasn't feeling this alone, I wasn't feeling like it was overwhelming just because I'm new, but it's overwhelming because it was overwhelming" (Participant #1, p. 8). - "…is there something, could this have been prevented and so we just talked about it and she definitely like reassured my feelings" (Participant #3, p. 5). - Regarding a debrief: "…that was good for my own knowledge…Yeah, to know what their indication for the intervention was and why they called it after that" (Participant #7, p. 3-4).	**Quality of encounter outcome** - "I think if it ended up – if the person ended up passing, it might have been a different – the way I feel about it, might be a little bit different" (Participant #1, p. 4).	**Social functioning** - Withdrawing: "If we've had like a stretch of three shifts that had been like trauma after trauma after trauma, I like stay in bed for two days…" (Participant #4, p. 13). - " I had to ignore my family and my teenage kids … I literally didn't really do anything" (Participant #7, p. 6).
Environmental Variables: **Ambiguity:** - Unclear why patient arrested	**Coping:** **Problem-focused:** Debriefing for solutions:		

- Unclear reason for continuing/discontinuing resus. care "…and called it. And so, my question was like, do we not give it some – like it felt weird to not even do one round of, like CPR.." (Participant #4, p. 8). **Event Uncertainty:** - Unexpected decline/ patient resus. (probability) "…even though she wasn't feeling well, but we - it wasn't necessarily that I was expecting her to pass" (Participant #1, p. 5). **Novelty:** - First death/trauma/resus. case - New to ED/Resus. care/profession - Unusual case When asked 2 participants why the resus. was memorable: "I think because I've never - the severity of the burns was – I have not seen burns to that severity" (Participant #5, p. 2). "I've just never seen something like that	- "So we'll just discuss what went OK, what we could build on and how we could run the code smoother the next time" (Participant #1, p. 10). Removing self from environment: - "And I think that a lot of people, myself included, like have to take breaks [from ED]" (Participant #4, p. 6). Self-care: "I just, I took the day to myself. I didn't really do anything, and just spent a lot of time journaling and processing …" (Participant #7, p. 4) **Emotion-focused:** Compartmentalization & Emotional Avoidance: "I think most of us who work in emergency medicine sort of live our lives with silos. So I have my emotional silo for work, I have my emotional silo for my family, I have my emotional silo that I keep to myself…" (Participant #5, p. 4). "I think I'm probably a little desensitized to it which is the only way I think to survive in like a trauma center for a long time, right?" (Participant #8, p. 2). Positive beliefs: "There's so many patients that I've walked through – walked through the doors and walked out of the door and were grateful and were going back home you know…So I	

before" (Participant #6, p. 2). **Predictability:** - Resus. case occurred in atypical resus. room. "It's usually busy, but it's usually not like that…" (Participant #1, p. 3)…." **Relation to Life Cycle:** - Young resus. patient. "…she was like super young…and she died and like I just, you're just like what, like what do you mean?" (Participant #3, p. 9). "…he was like a young man who was like early 20s. And his parents came in and so like divulging to the parents that they have lost their child …" (Participant #4, p. 2). **Temporal Factors:** - Sudden decline/ unexpected resus. (timing) "… but he still, was still breathing and had a heart rate, but just a sudden change of alertness and then 30 seconds later he arrested" (Participant #7, p. 2).	think more about that and I think that's the way I cope" (Participant #1, p. 5). Dark Humor: "we have a really dark sense of humor, that's coping and defensive" (Participant #5, p. 6), "…the thing that comes with emergency is dark humor, we try to make light of the situation" (Participant #6, p. 7). **Seeking, obtaining, and using social support:** Colleague Support: "I think that your peers are your biggest support when you've gone through like traumatic resuscitations and things like that" (Participant #4, p. 10). "We have this ride or die allegiance to our colleagues, because we have this trauma bond that you don't have with anybody else" (Participant #5, p. 5). External Social Networking: "I find like I'll call my mom on the way home from work, that tends to be like a good outlet…" (Participant #4, p. 5).."	

"…sometimes we can tell that this person was going to pass with – like it's imminent, right. But this death was not imminent, it's not something that should happen today or in 10 minutes" (Participant #1, p. 5). - Prolonged code (time) "we ran the code for longer than we probably should've …" (Participant #8, p. 2).		
	Resolutions of each stressful encounter	

Note. A Table of *Lazarus and Folkman's Theoretical Schematization of Stress, Coping, and Adaptation* supported by participant quotes from the study: *Nurses' Experiences of In-Hospital Resuscitation Events and Clinical Event Debriefing in an Adult Emergency.* CPR, Cardiopulmonary resuscitation; EMS, Emergency Medical Services; ED, Emergency Department; LOC, Loss of consciousness; Resus., Resuscitation; STS, Secondary Trauma Stress. Adapted from "Stress, Appraisal, and Coping" by Lazarus, R. S. & Folkman, S., 1984, Springer Publishing Company, Inc., p. 305. Copyright 1984 by Springer Publishing Company, Inc. Adapted with permission.

Appendix N

Synthesized Study Findings

Figure N1

The Emergency Nurses Experience of Providing Resuscitation Care

Impactful Resuscitation Patterns

- Moral Conflict
- Severity of Illness/Injury
- Young Patient
- 'Close to Home'
- Novelty of Case
- Sudden/Unexpected Patient Decline/Arrest
- Distress of Patient's Loved One(s)

Stress Associated with Resuscitation Care

- Moral Distress
- Secondary Trauma Stress

Devotion to Profession, Patient, and Team

Current Available Resources

- Clinical Event Debriefing
- Critical Incident Stress Management
- Personal Counselling
- Post-Code Pause

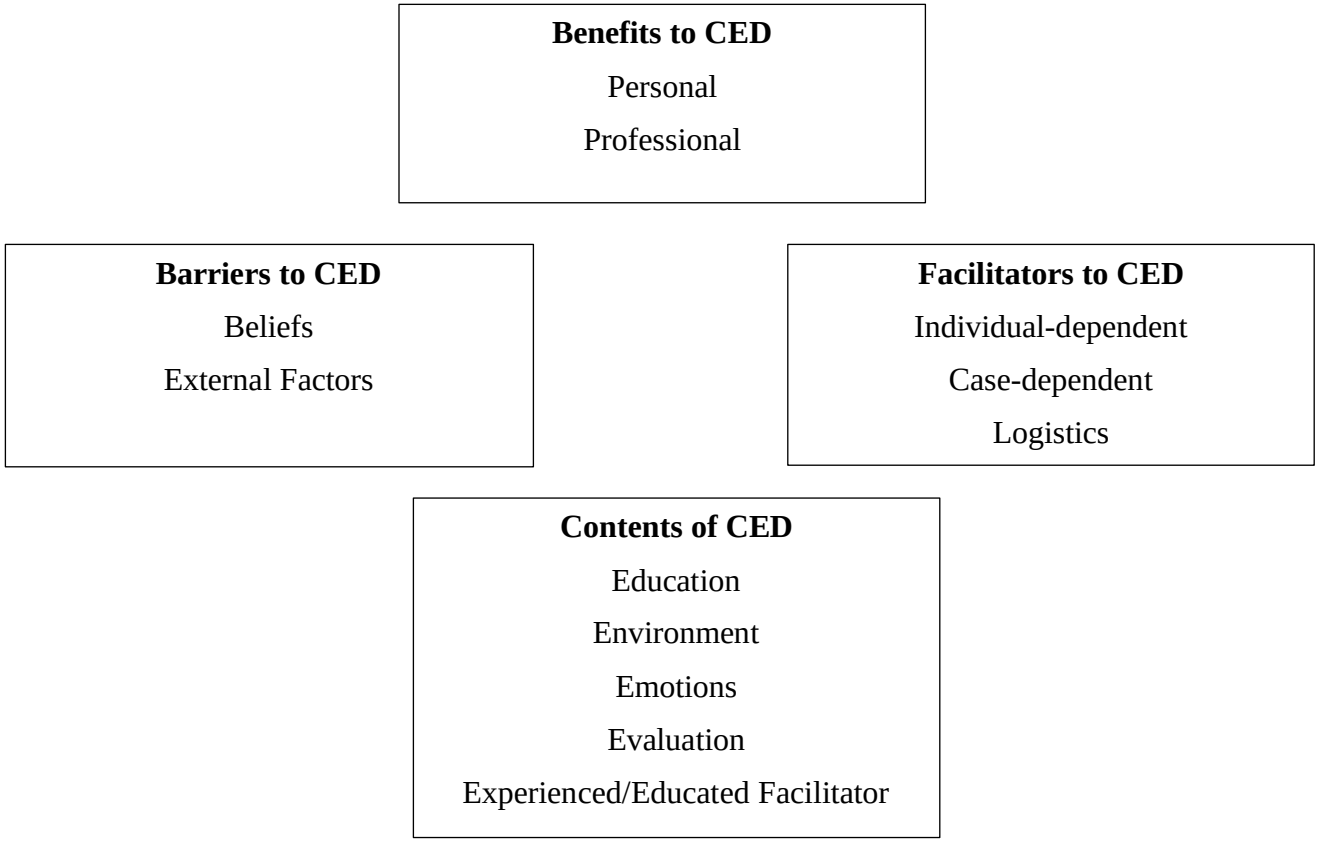
Current Coping Practices

- Compartmentalization & Emotional Avoidance
- Social Support
  - Colleague Support
  - External Social Support
- Removing Self from Stressful Environment
- Dark Humor
- Reflection

Note. Thematic analysis findings derived from participant accounts from the study titled: *Nurses' Experiences of In-Hospital Resuscitation Events and Clinical Event Debriefing in an Adult Emergency.*

Figure N2

Emergency Nurse's Perspectives of Clinical Event Debriefing (CED)



Note. Thematic analysis findings derived from participant accounts from the study titled: *Nurses' Experiences of In-Hospital Resuscitation Events and Clinical Event Debriefing in an Adult Emergency.*

Figure N3

Emergency Nurses' Recommendations for Future Practice

Improved Staffing Resources

- Improved staffing to decrease RN stress and provide time for post-resuscitation resources

Emergency Mentorship Program

- One-to-one RN match up for newly trained/hired emergency staff
- Volunteer basis
- Contact mentor as needed or as on shift basis

Clinical Event Debriefing (CED)

- Implement a standardized CED program
- Designated debriefing tool
- Approximately 5 minute duration
- To occur immediately after resuscitation event
- Contains 5 E's
- Assess need for Critical Incident Stress Management post-CED

Education

For Resuscitation Teams

- Regular trauma/resus. simulation practice
- Regular review of resus. RN competencies (ex: site specific roles, ACLS)
- Regular review of resus. equipment

For Public

- Awareness of emergency RN/department priorities and demands
- Awareness of compassion ED providers have for each patient and family member

Note. Reported suggestions derived from participant accounts from the study *Nurses' Experiences of In-Hospital Resuscitation Events and Clinical Event Debriefing in an Adult Emergency.* 5 E's of clinical debriefing (education, environment, emotions, evaluation, experienced/skilled facilitator) from "Clinical Debriefing: A Concept Analysis," by Toews, A. J., Martin, D. E., & Chernomas, W. M., 2021, *Journal of Clinical Nursing, 00*, p. 1-11 (https://doi.org/10.1111/jocn.15636).

ACLS; Advanced Cardiac Life Support; Resus., resuscitation; RN, registered nurse.

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