INTRAOPERATIVE DEATH:
THE UNTOLD STORIES OF PERIOPERATIVE TEAMS

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Abstract

The Operating Room (OR) is a clinical context in which interprofessional teams surgically intervene with the intention of improving the health of the patients they care for. Despite this, surgery is high risk, invasive and often volatile. The reality is that some patients die in the OR, an outcome which violates the care intention of the clinicians who work there. Using the narrative paradigm, this study explores the stories interprofessional team members shared about caring for patients who died intraoperatively. To appreciate the cultural climate in which these stories were rooted, a literature review of OR culture and theoretical analysis of master narratives was conducted. Using individual interviews, six perioperative clinicians were invited to share their stories: two Registered Nurses, one Registered Practical Nurse, two Surgeons and one Anesthetist. Two analytic approaches were used to authentically capture participant narratives: a narrative thematic approach and structural analysis. The structural analysis revealed the types of stories told—tragedies, romances, comedies and satires—while the thematic perspective elucidated participants' experiences of intraoperative death and their interpretation of the impact of these experiences. These findings illustrated unique perspectives of intraoperative death, illuminating features which enhanced or deteriorated the experiences for clinicians and their teams. Examining results in tandem with master narratives highlighted prevalent cultural discourses which are held in tension by the clinicians who perpetuate them. Exploring these intersecting elements provides insight into implications for nursing practice, research, education and policy, with particular attention to interprofessional dynamics, staff support and promoting a culture of resilience.

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Chapter 1: Introduction

Little is known about what occurs behind the metaphorical mask of perioperative teams exposed to the dichotomy of patient death in a life-sustaining context. Surgery is universally understood to have a life maintaining or enhancing purpose (Blomberg, Bisholt, Nilsson, & Lindwall, 2014). This understanding is further perpetuated by perioperative staff who hold the safe passage of a patient during the surgical process as their central objective (Bull & FitzGerald, 2006; Gazoni, Durieux, & Wells, 2008; Tucker, 2009). In reality, Operating Room (OR) staff are frequently exposed to patient death due to the high-risk and emergency interventions that characterize their care (Pinto, Faiz, Bicknell, & Vincent, 2013). Staff are therefore placed in a precarious conflict, positioned to sustain patients in life-threatening and often fatal cases. When death inevitably occurs, how do staff live and reconcile their experiences in a context where end-of-life is equated with failure?

Background

Statistics reporting OR deaths are difficult to access and often classified by professional discipline (e.g., airway complications or deaths attributed to anesthesia), diluting the overall magnitude of intraoperative death rates (Braz et al., 2009; Li, Warner, Langs, Huang, & Sun, 2009). The World Health Organization (WHO) (2009) flagged surgical death as a patient safety issue, bringing to light the growing prevalence of surgery and its associated risks and complications. Based on cobbled findings, literature from 56 countries estimate surgical death rates at 0.4 - 0.8 percent, which seems insignificant (Gawande, Thomas, Zinner, & Brennan, 1999; Kable, Gibberd, & Spigelman, 2002). However, once the amount of major surgeries performed in these countries annually is considered — 187-281 million — this translates into 744,000-2.2 million intraoperative deaths per year (Gawande et al., 1999; Kable et al., 2002;

Weiser et al., 2008). This number does not account for the rates of major complications attributed to surgical interventions or intraoperative death rates in developing countries, both of which are notably higher (Gawande et al., 1999; Kable et al., 2002; Rickard, Ntakiyiruta, & Chu, 2016; Yii & Ng, 2002). Although the WHO's involvement has brought a global focus to the issue of intraoperative mortality, hospitals continue to censor publically available data, particularly related to 'table deaths' (de Vries, Ramrattan, Smorenburg, Gouma, & Boermeester, 2008). Despite this lack of transparency and dated statistics, researchers reiterate that patients in surgical environments are at increased vulnerability to critical incidents, echoing a need to recognize the delicate role of practitioners who care for them (Gawande et al., 1999; Haynes et al., 2009; Pinto et al., 2013).

Unexpected deaths have been examined in a variety of other practice environments and have been linked to personal and professional destabilization among care providers, ultimately deteriorating patient care (Pratt & Jachna, 2015; Scott et al., 2009; Seys et al., 2013). Clinicians have described symptoms of psychological stress: guilt, sadness, frustration, anger, fear, shame and anxiety (Martin & Roy, 2012). Physical manifestations have included: sleep disturbances, hypertension, tachycardia and difficulty concentrating (Pratt & Jachna, 2015). The culmination of these manifestations has been linked to emotional numbing, isolation and depression (Michael & Jenkins, 2001). These experiences are perhaps further compounded in intraoperative contexts due to the invasive procedures conducted by the surgical team on a routine basis. Surgery has been described as assaulting: incisions violating the integrity of the patient and unnatural manipulation of anatomy, incompatible when compared to traditional notions of caring (Killen, 2002). Staff working in this environment are therefore consistently witness varying degrees of trauma (Gillespie & Kermode, 2004).

There is an urgency to understand team experiences of patient death in the context of the OR because of the association between clinician performance and patient safety (Gazoni et al., 2008). Surgical interventions are complex and depend on effective collaboration of interdependent practitioners, fulfilling their roles while functioning at an optimal level (Forse, Bramble, & McQuillan, 2011). Surgery has been likened to the airline industry: it is high risk and requires seamless execution (Mazzocco et al., 2009). This closed environment dictates multidisciplinary interdependence: the roles of surgeons, nurses and anesthetists overlapping to achieve comprehensive care and meet shared goals (Entin, Lai, & Barach, 2006). These clinicians are embedded in team structures, reliant on their colleagues to function in symbiosis and connected by shared responsibilities (Finn, 2008; Prati & Pietrantoni, 2014; Undre, Sevdalis, Healey, Darzi, & Vincent, 2006). Surgery requires all three disciplines to work in synchrony, adapting to unpredictable patient conditions, new technologies and volatile contexts (Arora et al., 2010; Mazzocco et al., 2009; McDonald, Waring, & Harrison, 2006). Collaboration in the OR context is further compounded by the critical and traumatic nature of cases that are seen, demanding increased efficiency and presenting heightened challenge (Michael & Jenkins, 2001).

It is clear that perioperative staff are not only exposed to patient death but are also at heightened vulnerability for destabilization (Mazzocco et al., 2009). Deterioration of individual competence and subsequent team performance has been directly linked to poor patient outcomes (Awad et al., 2005). Reported patient outcomes range from minor to major complications: pressure ulcers, accidental lacerations, surgical burns, adverse drug reactions, transfusion reactions, intraoperative hemorrhage, cerebrovascular accident, myocardial infraction, or death (Awad et al., 2005; Catchpole et al., 2007; Mazzocco et al., 2009). Although consequences are often attributed to patient indicators (e.g., age, comorbidities) (Nunes et al., 2014), Catchpole and

colleagues (2007) found that many complications in surgery arise from contextual issues not mediated appropriately by the team. Occurrences classified as "minor problems" or "operating problems" were allocated severity levels of "seemingly inconsequential" or "disruptive but not dangerous", however, were often linked to serious complications when unresolved amongst the team (Catchpole et al., 2007, p. 105). Examples given were a ringing phone or malfunctioning monitor, distractions that decreased the team's capacity to identify and diminish preventable errors arising during challenging surgical interventions (e.g., when navigating complex anatomical features or using complex technology). These minor problems often go unrecognized as features that promote an unsafe environment and therefore remain unmediated by the team. The authors found that interpersonal relationships, although beneficial in uncomplicated surgical procedures become less effective or even detrimental in resolving issues during complex surgical cases (Catchpole et al., 2007). The reality that poor patient outcomes could be attributed to team performance rather than health indicators places a potential degree of fault with clinicians. Catchpole and colleagues (2007) offer a caveat, explaining this inquiry is difficult and often unwelcome due to the "culture of blame" (p. 108) concealing surgical errors (Catchpole et al., 2007, p. 108).

These findings are reinforced by numerous studies that ascribe the majority of medical errors to ineffective team functioning, rather than technical errors (Awad et al., 2005; Catchpole, 2007; Mazzocco, et al., 2009). The American Heart Association conducted a literature review focused on the human variables that impact teamwork in cardiac surgery (Wahr et al., 2013). Findings reiterated that most preventable errors are not related to a limitation of knowledge or skill but rather a breakdown in team functioning. They emphasized the importance of relational, interprofessional skills on maintaining patient safety and highlighted ineffective collaboration as

the predominant issue underlying critical events. Teamwork failures are echoed in studies

depicting a variety of different surgical procedures: labour and delivery, laparoscopic cases, and

multi-traumas (Healey, Sevdalis, & Vincent, 2006; Mazzocco et al., 2009).

The unique features of the OR place it as a distinctive context from which to explore

stories of intraoperative death. Death is not the intended or desired outcome when caring for

patients intraoperatively, rather a philosophy of life-saving care is embedded into the

professional legitimacy of the clinicians who work there (Bull & Fitzgerald, 2006; Prati &

Pietrantoni, 2014). However, the volatile reality of this practice context creates circumstances

where people do die (Pinto et al., 2013). Research tells a story of clinicians becoming

professionally and/or personally destabilized following experiences with unexpected deaths,

although little inquiry has been done specifically in the OR (Pratt & Jachna, 2015; Scott et al.,

2009; Seys et al., 2013). Reactions following destabilization are reported to impact an

individual's ability to function, permeating team structures and impairing overall performance.

This is of concern because OR care is delivered by teams and their functioning capacity has been

directly linked to patient safety (Mazzocco et al., 2009; Wahr et al., 2013; WHO, 2009). These

entangled features generate a potential cyclical predicament, threatening practitioner competence

and patient care.

Researcher's Personal Stance

The ideas for this research project were originally prompted by challenges I faced as a

novice OR nurse, living the death of my patients while caring for them intraoperatively. Vivid

memories transport me back to a chaotic room—a blur of people, machines and panic—pumping

the fractured chest of a mother with an open skull and watching my anesthetist colleague whisper

apologies into her unconscious ear. I remember the silence after; the team had dissolved and the

coroner assumed jurisdiction so I had no latitude to perform post-mortem care. The case had been classified a homicide, the original head trauma perpetrated by a relative, so the space filled with police in lieu of bereaved family. Perhaps it was my inexperience or unfamiliarity with unit culture but what shocked me the most was that we didn't talk about it, we carried on with other cases and other patients as though nothing had happened. This case was eventually flagged to management as requiring a debriefing after a number of nurses expressed emotional impact and lingering struggles. We were congregated in a room, the chart was reviewed and the manager told us once we had more experience, we would care less. I was initially shocked, angry, hurt and completely disillusioned with leadership. Care less - is that the goal?

During my time working in the OR I experienced a number of other intraoperative deaths that stayed with me long after my shifts had ended. I sought opportunities to develop and implement resources to support staff through these challenges and find meaning in traumatic loss. I reflected that we do not understand the experience of intraoperative death for the involved clinicians and subsequently do not know how to help our colleagues. This realization motivated me to conduct this research project, with the hope of bringing light to these stories that could eventually inform supports for practitioners. This thesis is threaded with personal reflection; although the places where I use 'I', I am referring to myself as the Primary Investigator this project was a collaborative effort with my research team.

Scope and Objectives of the Research Study

Using narrative inquiry, the personal narratives of OR clinicians will be explored to uncover stories of caring for patients that die intraoperatively. This methodology will uncover elements of how death is shared and experienced by clinicians working in perioperative environments and illuminate intersecting cultural discourses (Polit & Beck, 2012). I speak to different types of

stories throughout this project — the personal narrative and research – both forms of evidence will contribute to our understanding of storied experiences. To date, an individualist approach has been used to elucidate and analyze health care professionals' reactions to intraoperative death, ignoring the interprofessional dynamics that characterize surgical teams. Conceptualizing the stories of nurses, surgeons and anesthetists will embed individuals' stories within their perioperative team contexts. This approach will provide an opportunity to consider how these deaths disseminate, affecting individuals, patients, perioperative teams and health care organizations (Holloway & Freshwater, 2007).

The purpose of this study is to explore how members of the interprofessional team (perioperative nurses, surgeons and anesthetists) narrate their experiences of intraoperative death within an interprofessional team context. I will consider what these stories reveal about practitioners' experiences of intraoperative end-of-life care and their interpretations of impact, on themselves, on the team and on patient care.

Outline of Chapters

The following two chapters (Chapter 2 and 3) create a foundation for understanding the experience of caring for a patient who dies in the context of the OR. Chapter 2 (Literature Review) presents a current review of the literature, focusing initially on intraoperative death and then exploring OR culture, clinician roles and teamwork. This body of evidence illustrates that perioperative clinicians are vulnerable to destabilization following an intraoperative death and that their experiences are shaped by the OR culture in which they practice. This chapter informs our understanding of concepts relevant to the OR environment; based on these findings the terms 'perioperative' and 'OR' will be used interchangeably to described clinicians throughout this thesis.

In Chapter 3, (Theoretical Perspectives) I present a manuscript which offers a theoretical analysis of clinician vulnerability, drawing on specific 'master narratives' that shape individual experiences. Master narratives are dominant discourses which reinforce cultural influences relevant to a particular context, in this case underpinning OR culture and shaping meaning for OR clinicians (Esteban-Guitart, 2012; Green, 2013; Mishler, 1995; Riessman, 1993). Master narratives comprise social, economic and political structures dictated by the interests of the social institutions in which they occur (Boje, 2001; Esteban-Guitart, 2012). The importance of acknowledging master narratives lies in recognizing how these discourses permeate individual's identities and personal stories (Cunliffe, Luhman, & Boje, 2004; Esteban-Guitart & Ratner, 2011; Mishler, 1995). Not only do dominant discourses constrain how lived phenomenon are seen, experienced and told, but they govern how individuals interpret meaning and identity (Boje, 2001; Esteban-Guitart, 2012). Exploring and recognizing master narratives is necessary to contextualize stories and understand social realities (Goodson, 1998). The master narratives of biomedical values, normative death discourses and socially (un)sanctioned grief will be used to inform our theoretical understanding of the space in which clinicians narrate stories of intraoperative death.

Chapter 4 (Methods) explores the narrative paradigm, outlining the ontological, epistemological and methodological assumptions of this study. I describe the study methods including approaches to data collection and analysis. Consideration of research ethics and my own positioning as a perioperative nurse and as a researcher are found in this section.

In Chapter 5 (Findings), I present a manuscript of the research findings which has been written and formatted with the intention of submitting to the international journal, Research and Theory for Nursing Practice. This manuscript contains summaries of the information found in

Chapters 1-4 including an introduction, background and significance, and study methods. The findings section responds to the research purpose, exploring how interprofessional team members storied their experiences of caring for patients who die intraoperatively using a structural analysis. By layering on a thematic analysis, we also considered what participants' narratives revealed about their experiences of intraoperative end-of-life care including the impacts of these experiences to themselves, their patients and their teams. The discussion section embeds our study findings in current literature, particularly focusing on the theme of responsibility among disciplines.

Chapter 6 (Integrated Discussion) brings together the master narratives from the Chapter 3 manuscript (Theoretical Perspectives) and the Chapter 5 manuscript (Findings). In this section I consider how master narratives surfaced throughout participants' interviews as well as how narratives deviated from these dominant discourses. This chapter also provides insights to perioperative storytelling and some of the challenges related to sharing traumatic memories. A summary of research limitations and future implications for nursing are also included in Chapter 6. The chapter concludes with an overview of the project and a new perspective on my own stories of intraoperative death.

Chapter 2: Pertinent Literature

Intraoperative Death

I completed a literature review to identify research exploring the experiences of interprofessional team members caring for patients that die intraoperatively. Based on the topic and population of interest I selected three databases: CINHAL, Medline and PsychINFO. I used a similar approach to gather resources which were modified to meet the unique features of each database. MESH terms 'Death', 'Mortality' and 'Death and Dying' were merged using 'or' and combined with a number of MESH terms representing OR care and the attitudes of health care personnel (e.g., perioperative care, perioperative period, intraoperative care, intraoperative period, intraoperative complications, perioperative nursing, surgery and surgical patients). Two truncated keywords, "intraoperative death*" and "perioperative death*" were searched in the title and abstract of each database. Articles were hand-searched based on inclusions and exclusion criteria. Few articles (25/298) focused on the experiences of clinicians following an intraoperative death and no overarching MESH term could be identified capturing these studies specifically. Therefore, results were reviewed for relevance based on title and abstracts. The majority of research is editorial or opinion based, examining individual disciplines and their unique experiences with OR deaths.

The concept of 'intraoperative catastrophe' is borrowed from anesthesia literature (Gazoni et al., 2008; Gazoni, Amato, Malik, & Durieux, 2012; Rose & Brown, 2010). An intraoperative catastrophe is defined as death or serious injury occurring while the patient is in the OR suite being cared for by the perioperative team (Gazoni et al., 2008). While all of these cases compromise patient well-being, many are lethal and have long-term implications for the clinicians involved (Gazoni et al., 2008; 2012; Rose & Brown, 2010). This concept is inherently

emotional; the dictionary definition of catastrophe describing it as "a momentous tragic event" (Merriam-Webster, 2009). Authors communicate that the focal message captured by this term is not the mechanism of injury but rather the magnitude of stress and chaos that characterize these cases (Gazoni et al., 2008; 2012; Rose & Brown, 2010). Literature explores the 'aftermath' experienced by practitioners, stretching beyond the space and time where the catastrophe took place (Clegg & MacKinnon, 2013; Cooper, Cullen, Eichhorn, Phillip, & Holzman, 1993; Gazoni et al., 2008; 2012; Pratt, Kenney, Scott, & Wu, 2012; Vincent, 2012). In the following sections 'intraoperative catastrophe' will be used interchangeably with the term 'intraoperative death'.

Research is focused on the consequences of participating in an intraoperative death and subsequent risk to future patients (Bishop, 1946; Martin & Roy, 2012). Multiple survey-based studies have identified that surgeons, anesthetists and nurses are expressing consistent levels of psychological and physical stress following intraoperative death (Gillespie & Kermode, 2004; Michael & Jenkins, 2001; Todesco, Rasic, & Capstick, 2010; White & Akerele, 2005). Practitioners report increased stress, difficulty mediating emotional responses, trouble concentrating, isolation and insomnia. Studies by Gazoni et al. (2012), Martin and Roy (2012), and White (2003) articulate that these effects are long-lasting; they jeopardize practitioners' confidence, competence and personal relations. Authors described a large spectrum of experiences (e.g., traumatic deaths, bloody cases, disfigured bodies, conversations with families, coroner inquests and litigation) which are linked to adverse physical and psychological responses (e.g., onset or aggravation of a physical illness, insomnia, rashes, depression, loss of confidence, flashbacks, fear, anxiety, guilt, and substance abuse); the overarching theme being that intraoperative deaths are destabilizing experiences for the majority of clinicians (Aitkenhead, 1997; Gazoni et al., 2012; Hvizdos, 2000).

Although many authors suggest a mandatory break following an intraoperative catastrophe, additional literature urges the consideration of a multitude of factors and team members when making this decision (Christie, 1999; White & Akerele, 2005). Goldstone and colleagues (2004) highlighted that the physician's psychological, emotional and physical responses are dependent on the type of surgery, suggesting that a thorough assessment and possible interventions should be dictated by the nature of death. Researchers have also found that a clinician's surgical standpoint shapes their experience of a critical surgical event (Briffa & Shifert, 2001). Authors proposed different surgical specialties as influencing the reaction to patient death; cardiac surgeons being identified as in a position of increased vulnerability compared to orthopedic surgeons (Briffa & Seifert, 2001; Smith & Jones, 2001). Briffa and Seifert (2001) explain that unlike orthopedic surgeons, cardiac surgeons are responsible for restoring immediate function to the tissue on which they work. There is not an expectation that a patient would be able to walk on their leg immediately following a fracture repair, however, in cardiac surgery the heart must regain function in order for surgery to be deemed successful. When heart function is not restored and intraoperative death occurs, it suggests a surgical failure despite access to maximal mechanical and pharmacological resources. In conjunction with carrying the "burden of intraoperative death", cardiac surgery tends to be lengthy, resulting in a longer period of surgical engagement which can physically and psychologically deplete the staff (Briffa & Seifert, 2001, p. 323). This attention to clinician positioning is echoed in two reflective articles exploring how unique nursing roles—Nurse Anesthetists and Nurse Liaison—shape clinician's experiences of OR death (Booth, 1998; Fina, 1994). Booth (1998) explicitly reiterates that Nurse Anesthetists shoulder heightened stress following intraoperative catastrophes due to their responsibility to maintain physiologic stability during surgical intervention. Failure to do so leaves Nurse

Anesthetists questioning their decision making and their competence (Booth, 1998). An 'ethical issue' published by the American Journal of Nursing described the personal story of a Nurse Liaison caring for a family whose child died in the OR (Fina, 1994). This story illustrates the unique responsibilities of the Nurse Liaison in delivering updates and emotionally supporting families who are distanced from their loved ones by the physical boundaries of the OR. In addition to building acute therapeutic relationships, Nurse Liaisons witness and potentially contribute to a family's grief experience (e.g., delivering bad news) (Lerman, Kara, & Porat, 2011; Stefan, 2010). For these reasons Fina (1994) describes a long term preoccupation with a case where she felt the OR environment constrained her ability to provide bereavement care to the family. These results suggest that death in the intraoperative context is an experience influenced by roles, responsibilities and therapeutic relationships.

Some articles explored the cultural underpinnings of OR care which perpetuate a foundation of practitioner victimization (Gazoni et al., 2008). Aitkenhead (1997) and Bacon (1989) highlighted anesthetists as not receiving education surrounding patient death and consequentially lack awareness and effective coping mechanisms. In addition to the high stress and traumatic nature of surgical interventions, literature has described the OR as creating a culture of "self-neglect" (Gazoni et al., 2008, p. 599). The conceptualization of death as taboo propagates a mentality of failure which Catchpole and colleagues (2007) describe as a "culture of blame" (p. 108). Scholars have described this culture as encouraging practitioners to hide their struggles, ignoring and ultimately intensifying symptoms of destabilization (Bromiley & Mitchell, 2009; Kowalski, 1983; McLennan et al, 2015). These symptoms have been linked to negatively impacting job performance and when left unacknowledged, create a foundation for errors (Gazoni et al., 2012; McLennan et al., 2015; Pratt & Jachna, 2015). In their study about

traumatic experiences among OR nurses, Michael and Jenkins (2001) call for a paradigm shift away from the biomedical model to a framework that considers the human cost to practitioners.

All literature touched on the need to integrate tools or strategies into the clinical setting to help mediate the experience of intraoperative death. Screening tools, supportive resources, theoretical models, policy changes, educational workshops and debriefing sessions were all methods suggested to bolster individual and team support (Aitkenhead, 1997; Bacon, 1989; Bishop, 1946; Breadon & McColgan, 2012; De Leval, 2004; Ivarsson, Larsson, Johnsson, Lührs, & Sjöberg, 2008; Onstott, 1998). In articles that considered team functioning, an interprofessional approach was recommended to effectively implement strategies (Clegg & MacKinnon, 2013; Taylor, Hassan, Luterman, & Rodning, 2008; White, 2003).

The previous section explored the available literature on the experience of intraoperative death for OR clinicians and possible approaches to coping with the aftermath. The majority of articles measured the experience and varying impact of intraoperative death on a single professional group, using questionnaires that were developed by the research team. The remaining literature comprises a variety of discussion pieces: personal opinion, synopsis of literature, commentary on current evidence and applicable recommendations following an intraoperative death. One article is written from the perspective of a bereaved family member, questioning ineffective team behaviours which contributed to errors made during his wife's surgery. Although these findings are compelling, they lack the qualitative richness to understand the breadth of end-of-life experiences in perioperative contexts. Many of these studies present as superficial, assuming a uni-professional approach that ignores the intricacies of interdisciplinary care. Although research findings are similar among studies they are sequestered by discipline. Due to this partition, it is unknown how nurses would respond when given the same surveys as

their physician colleagues or vice-versa. By isolating disciplines, researchers have not given attention to the interdisciplinary dynamics in which OR clinicians practice and how these are impacted by intraoperative catastrophes.

In addition, a systematic approach to data collection (e.g., surveys) prescribes a certain type of response thereby diluting the complexity and individuality inherent in the experience of caring for people who die. Some of the proposed interventions demonstrate a desire for change, however, they overlook the powerful cultural forces shaping these contexts. These superficial interventions create a metaphorical 'band-aid' solution, layering an intervention (e.g., undefined 'breaks' following an intraoperative catastrophe) on top of the actual issue and subsequently hiding and discounting what festers beneath. Acknowledging cultural mores may create discomfort, however, it is necessary for the process of establishing and sustaining interdisciplinary supports. Examples are the social discourses of 'interprofessional teams' and 'medical hierarchy', frameworks on which surgical interventions are designed but which are ignored in the literature exploring impacts of OR deaths (Mazzocco et al., 2009; Riley & Manias, 2009).

A more in-depth engagement is required: not a single study but an ongoing conversation uncovering the dynamics of perioperative environments and the end of life stories they contain. A more informed position of what these experiences look like from a diversity of inter-connected perspectives will allow for a broad foundation from which to develop resources and design prospective research.

Death

For the purpose of exploring intraoperative death in this project the conceptual boundaries of "death" must be articulated. The traditional discussion characterizing death as an

event or a process considers the physiological and psychological aspects of end-of-life (Morison, 1971). Death is an abstract concept that has social, cultural, spiritual, biological and legal implications (Bernat, 1998). In perioperative contexts, the ideas of life and death are polarizing and mutually exclusive. OR care is implemented with a life-saving or enhancing purpose built on the tenets of the biomedical model that opposes death (Blomberg et al., 2014). When the patient condition becomes critical, team members exercise a spectrum of abilities and all life-saving measures are attempted before the outcome of death is accepted (Smith, Leslie, & Wynaden, 2015). This process often takes hours, maximizing the use of resources, energy, and teamwork (Taylor et al., 2008). Bernat (1998) describes resuscitation as returning a person from the dying process but not from death itself. He stipulates that death is a "distinct biological event" (p. 16) and not qualified on a continuum (Bernat, 1998).

The concept of an OR death becomes complicated because biologic functions can be maintained artificially (Bartlett & Gattinoni, 2010; MacLaren, Combes, & Bartlett, 2012; Morison, 1971). By manipulating a patient's vitals using technology and medications the team can often temporarily supress death and facilitate transfer to another unit (Ivarsson et al., 2008). From a documentation perspective, these cases are not categorized as intraoperative fatalities but charted as having a 'surgical completion time' and unit of relocation. This contrasts cases where time of death is called in the OR, requiring orders, paperwork and involvement of the coroner (Hamlin & Davies, 2009). Following potential family viewing, these patients are taken to the morgue, the area of transfer as indicated on the intraoperative record. At an organizational level, statistics related to patients dying post-operatively are not allocated to the perioperative department and therefore are institutionally unrecognized as OR deaths. (Attri, Makhni, Bala, Kumar, & Jain, 2016; Hamlin & Davies, 2009; Stephens-Lesser, 2007).

Since this study aims to explore clinician's stories of intraoperative death there is an onus to identify deaths that are socially recognized as occurring in the OR. Treating death as a social construction creates space for death to be interpreted by individual practitioners and may differ between disciplines. For these reasons, whenever 'death' is used in this thesis it refers to deaths that are pronounced by a physician in the operating suite. This is recognized as the moment when the perioperative team ceases attempts at resuscitation and collectively acknowledges death. This conceptualization of death does not include situations where people are brought into the OR for organ recovery.

OR Culture

In this section I will review evidence examining OR culture. In summary, it will begin with a depiction of the current state of perioperative research from an international stance. Based on literature searches, I will provide a description of the OR context and some of the physical and psychological challenges faced by perioperative clinicians. I will then move to consider workplace culture including the social norms that govern surgical spaces. This will include an examination of obvious guiding principle (e.g., practice standards) as well as less evident cultural influences (e.g., medical hierarchies). This discussion will centre around the idea of 'hierarchies' and build upon the findings described by Gillespie and colleagues (2008). These authors speak to a value system assigned to surgical specialties in the OR which is used to socially reward clinicians. It is valuable to recognize this idea because it offers an explanation of social ordering in the OR beyond traditional understandings of medical hierarchy. This exploration will be supported using available empirical and theoretical research.

Although literature on the experience of OR death remains sparse, research on perioperative culture has gained traction over the last decade. This interest could be partially

attributed to the glimpse provided by the WHO (2009) safety investigation, inviting outsiders to appreciate the complexities of surgical care. The WHO (2009) initiated the Patient Safety Safe Surgery Saves Lives Challenge with the purpose of establishing global standards to guide perioperative teams in the delivery of safe care. They recognized surgical safety as an international public health issue with multiple challenges that required attention: (1) the complexity of surgical interventions, (2) the critical but often ignored features of interprofessional teams, (3) a global scarcity of data and (4) the current state of poorly implemented safety practices. International experts, (including nurses), viewed scientific evidence and collaborated with experienced clinicians and international stakeholders to develop "Ten essential objectives for safe surgery" (WHO, 2009, p. 9). These objectives focus on four main topics: teamwork, anaesthesia, prevention of surgical site infections and measurement of surgical services. In addition, the WHO (2009) developed the Surgical Safety Checklist, a manual that can be implemented in any perioperative context to promote a culture of safety.

The attention to patient safety has brought a research focus to perioperative teamwork and subsequently the OR environment. This focus may reflect a downstream thought process. Perioperative researchers have begun to recognize the perioperative environment as a result of examining the link between teamwork and patient safety, when in reality perioperative culture shapes how team function (Lingard, Reznick, DeVito, & Espin, 2002). A change in perspective has begun with researchers shifting their inquiry from *how* patient safety is deteriorated to *why*. It is difficult to pinpoint ubiquitous terms for these concepts, however, database searches concentrating on perioperative teams and occupational culture presented a variety of literature. Hand searching the reference lists of articles that consider an interdisciplinary approach was also fruitful.

The majority of articles begin with an introduction that situates the reader in the context of intraoperative care. The OR is portrayed as a unique environment, characterized by specialized interprofessional teams, complex technology and a high acuity of patients (Arora et al., 2010; Mazzocco et al., 2009; McDonald et al., 2006; Sax, 2012). All perioperative departments offer a different combination of surgical specialities, cases that range from day procedures to post-operative admissions to the intensive care unit (ICU). Although many articles focus on specific clinicians, there is unanimous recognition that all practitioners function within a network of disciplines: surgeons, nurses, anesthetists (Carney, Mills, Bagian, & Weeks, 2010; Finn, 2008; Makary et al., 2006; Rydenfält, Johansson, Larsson, Åkerman, & Odenrick, 2012; Sexton et al., 2006). Perioperative practitioners are at heightened physical risk: exposure to blood borne pathogens, musculoskeletal injuries and potentially combative patients post-anesthetic (Morath, Filipp, & Cull, 2014). There is an expanse of research considering the psychological vulnerabilities of OR employment (Gazoni et al., 2008; Gerow et al., 2010; Michael & Jenkins, 2001; Perrin, Jones, & Winkelman, 2013; Pinto et al., 2013; Pratt & Jachna, 2015; Pupkiewicz, Kitson, & Perry, 2015; Seys et al., 2012). In addition to the potential personal and professional impacts of caring for patients that die, ORs have been ascribed as a 'toxic culture', attributed to geographic isolation, medical hierarchies, interprofessional conflict and occupational stress (Badger, 2001; Morath et al., 2014; Schwam, 1998). These conclusions leave space to wonder who are the clinicians who survive and thrive in this environment and how are they positioned to react to destabilizing experiences? To understand the different layers contributing to OR care and shaping the roles of clinicians it is valuable to take an in-depth look at cultural elements represented in the literature (Eskola et al., 2016; Morath et al., 2014; Schein, 2004).

Like all workplace cultures, perioperative departments reinforce collective norms,

propagated through routines, rules and rituals (Rydenfält et al., 2012; Waring, Harrison, & McDonald, 2007). Clinicians learn and perpetuate these customs, shaping their behaviours and eliminating divergence (Eskola et al., 2016; Waring et al., 2007). Some examples are overt: specified standards of practice, specialized language, knowledge of surgical instrumentation, principles of aseptic technique and perioperative policies (Eskola et al., 2016; Gillespie, Wallis, & Chaboyer, 2008; Seifert et al., 1993; Sigurđsson, 2001). Studies looking specifically at novice OR nurses (including new graduate nurses and nurses with varying levels of experience, new to perioperative practice (Chard, 2000; Pupkiewicz et al., 2015)) describe the phenomenon of "culture shock", (Gillespie et al., 2008, p. 261). Although 'culture shock' is seen in different practice contexts, in this situation it is attributed to the unfamiliarity of the perioperative environment and OR norms, resulting in challenges to adapt (Chard, 2000; Pupkiewicz et al., 2015; Seifert et al., 1993).

Other normative expectations are more covert but nevertheless have substantial influence on perioperative care. A collection of research illustrates the overwhelming presence of medical hierarchies entrenched in the biomedical focus of the intraoperative team and delineating work roles. (Bleakley, Allard, & Hobbs, 2012; Finn, 2008; Gillespie et al., 2008; Gurses et al., 2012; Kaplan, Mestel, & Feldman, 2010; Mitchell et al., 2011; Sax, 2012; Undre et al., 2006). This power dynamic is further reinforced by rewards systems, organizational policies and clinician education (Bate, 2000; Epsin & Lingard, 2001; Finn, 2008; Finn & Waring, 2006; Kaplan et al., 2010; Schwam, 1998). Both physicians and nurses have recognized and confirmed the presence of hierarchies (Gillespie et al., 2010). While this mentality is problematic from several perspectives, hierarchies are particularly concerning because they preclude the free-flow of information (Makary et al., 2006; Mitchell et al., 2011; Sexton et al., 2006; WHO, 2009); as

Bleakley and colleagues (2012) describe, "generating a climate of monologue rather than dialogue" (p.636). Hierarchical discourses translate into occupational boundaries, discouraging team members from voicing concerns and inhibiting collaboration (Bleakley, 2006; Lingard et al., 2002; Rydenfält et al., 2012). There are direct implications for patient safety; authors have echoed that skills such as communication, decision making and teamwork are imperative to preventing errors in surgical contexts (Gillespie et al., 2010; Gurses et al., 2012; Schaefer, Helmreich, & Scheidegger, 1995).

Gillespie and her colleagues (2010) used a grounded theory approach to develop an understanding of organizational and individual factors shaping team functioning in perioperative departments. They used an interdisciplinary approach, interviewing nurses, surgeons and anesthetists individually and in groups. Interestingly in their findings, Gillespie et al. (2010) mentioned other potential perioperative hierarchies present but largely unidentified in the shadow of the medical hierarchy. These predominantly refer to levels of competence, not just among surgeons but also their nursing and anesthesia colleagues (Gillespie et al. 2010; Pupkiewicz et al., 2015). Competence is considered paramount in the OR and according to Rydenfält and colleagues (2012) the main source of trust between professionals. Individuals who demonstrate high levels of competence are rewarded, attributed increased value and assigned to more difficult procedures (Gillespie et al. 2010; Pupkiewicz et al., 2015). A threshold of capability is central to a clinician's ability to adapt and socialize in the OR (Gillespie et al., 2010). Therefore, individuals who were perceived to have a lower level of competence were also considered 'lower' on the perioperative social ladder.

Competence-based social ranking becomes cyclically reinforced. This is because individuals who have experience in complex and high-stress situations are more skilled in future cases,

particularly if they have had a positive outcome (Arora et al., 2010; Gillespie et al., 2010; McDonald et al., 2006). Accessibility to competence development was observed as a form of social currency: individuals who were viewed as skilled were better liked among their colleagues and assigned to more coveted or specialized surgeries (Gillespie et al., 2008). Subsequently, individuals who struggled to socially acclimatize were assigned to surgeries that were considered less challenging. These individuals were often denied opportunities to diversify their professional skills and consequently performed poorly when in stressful or complex scenarios (Arora et al., 2010; Gillespie et al., 2010; McDonald et al., 2006).

Gillespie et al. (2008) remind us that different surgical specialties hold different 'value' in the eyes of perioperative clinicians, thus elucidating yet another hierarchy inherent within the scaffold of perioperative culture. Clinicians who are considered highly competent, are viewed more favorably by their colleagues and continue to be rewarded through challenging surgical assignments. They are granted more opportunities to develop professionally and are more likely to perform proficiently in future complex cases. On the contrary, individuals who suffered from 'culture shock' or demonstrated a lower level of competence were viewed negatively by their colleagues. They worked in more 'straightforward' surgeries, do not develop the skills to handle complex cases and often performed poorly when these situations occurred. Over time these positions begin to become fixed, impacting not only the clinician's skill enhancement but also their social status in the perioperative environment (Gillespie et al., 2008). Both the medical hierarchy and these more insidious forms of social positioning have been linked to negative OR culture. Consequences include interprofessional or lateral violence and can result in practitioners leaving practice (Gilmour & Hamlin, 2005; Koch, 2012; Morath et al., 2014; Tame, 2012).

The findings from Gillespie et al. (2008) are useful in clarifying another layer in the social

dynamics of perioperative team functioning and are corroborated by a number of other

researchers and theorists (e.g., Arora et al., 2010; McDonald et al., 2006; Pupkiewicz et al.,

2015; Rydenfält et al., 2012). There are notable limitations to their study methodology which

warrant recognition when examining their findings. Although their study involved multiple

disciplines, 75% of their participants were nurses and only these participants were interviewed in

groups. This may have resulted in the overrepresentation of collective nursing ideology or

stifled individual nurse's perspectives. Interestingly, group interviews were restricted to nurses

of the same status to prevent power differentials. Not only did this prove to be untrue

(hierarchies were discovered to exist among clinicians of the same 'status') but power

differentials appeared as underpinning many of their major themes. Due to these findings

interactions among individuals of varying 'statuses' may have merited exploration in an

interprofessional interview platform. Despite these limitations, this study in combination with

other research examining OR culture illustrates the practices, norms and social dynamics shaping

teamwork and intraoperative care. The following section will take an in-depth look at roles of

OR clinicians: nurses, surgeons and anesthetists.

OR Clinicians

Although clinical and academic work has been criticized for a siloed approach, based on the

foundation of research available, it is valuable to first consider nurses and physicians separately

before delving into the complexity of interdisciplinary teams (Bleakley, 2006; Finn & Waring,

2006). It is important to recognize the professional identities of clinicians and how they

reciprocally construct workplace culture (Gillespie et al., 2010; Lingard et al., 2002; Mitchell et

al., 2011). I will delineate summaries of research by profession and use these to inform a deeper

understanding of surgical teams. First, I will present a body of literature on OR nursing. This will

include an examination of the role of nurses from an individual and team perspective. I will

speak to the responsibilities of perioperative nurses: therapeutic care, technical competence,

patient advocacy and promotion of organizational policies. Nurse's perceptions of

interprofessional teams and their desire for equilibrium and recognition will also be explored. I

will present disciplinary literature on surgeons and anesthetists within the umbrella concept of

physicians. Emphasis will be placed on their autonomous and self-regulated professional

identities and some of the associated consequences of these identities. Focusing on physician's

perceptions of leadership and teamwork will help to extrapolate the stress and responsibility they

experience in clinical context. This understanding will ground findings, examining the physical

and psychological consequences of unmediated stress, particularly substance abuse and suicide

among anesthetists. Some of these findings reflect contradictions between disciplines which

complicates their team identity. The following section is intended to be read with an appreciation

of the previous overarching understanding of OR culture.

    OR nursing. Historically and arguably publicly, OR nurses have been underrecognized.

Modern research has struggled to identify the overlapping components involved in the

perioperative nurse role, which could be attributed to role blurring experienced by the nurses

themselves (Bull & FitzGerald, 2006; Chard, 2000; McCloskey, 1995). In an attempt to describe

her position, one OR nurse said, "We are indefinable" (Sigurðsson, 2001, p.211) and many

others voiced the externally perpetuated stereotype that OR nursing is not true nursing (Chard,

2000; Waring et al., 2007). The Association of periOperative Registered Nurses (AORN) Special

Committee on Ethics reinterpreted the America Nurses Association (ANA) (1985) Code for

Nurses to include interpretive statements representing OR nursing (Seifert et al., 1993). Although

the initiative shows value, the code reiterates practices that translate across nursing: providing

ethically competent care, protecting patients' rights, enhancing health and wellness, reporting

errors and maintaining nursing credentials. They touch on the different guidelines governing OR

environments and the importance of "surgical conscience" but the majority of the document

illustrates a lack of certainty regarding perioperative nursing responsibilities (Seifert et al., 1993,

p. 375). This role ambiguity could also be attributed to the hierarchical lens applied to the OR,

designed to favour biomedicine and distorting nursing identities (Dunn, 2003; Morath et al.,

2014).

What the research presents is that OR nurses experience multiple occupational pressures,

within an ever-expanding role that contains a multitude of divergent responsibilities (Mitchell et

al., 2011; Pupkiewicz et al., 2015). One study described this theme as "being all things to all

people": the multifaceted expectations of the perioperative nursing role (Chard, 2000, p. 887).

These expectations included working with all disciplines, caring for patients, responding

efficiently in emergency situations, fixing technology, locating equipment, transitioning

seamlessly between surgical specialties, and mobilizing resources while remaining rooted in the

OR suite (Bull & FitzGerald, 2006; Chard, 2000; Gillespie et al., 2010; Pupkiewicz et al., 2015;

Rudolfsson, von Post, & Eriksson, 2007; Sigurðsson, 2001). Most research highlights two

juxtaposing priorities of perioperative nurses: patient care and technical competence (Bull &

FitzGerald, 2006; Chard, 2000; Rudolfsson et al., 2007). In three separate qualitative studies

nurses described the occupational pressure to be technical efficient and maximize surgical

volume, features which they felt constrained the time and value given to therapeutic caring

behaviours (Bull & FitzGerald, 2006; Chard, 2000; Rudolfsson et al., 2007).

Overlaying these findings with additional research brings to light another nursing responsibility: implementing and ensuring adherence to organizational policies (Sax, 2012; Seifert et al., 1993). Unlike their physician counterparts, nurses are exclusively employed by the organization and therefore accountable to uphold departmental procedures (Bolton, 2004; Finn, 2008; Rudolfsson et al., 2007). In addition to absorbing and disseminating institutional policies and procedures nurses govern the surgical environment, ensuring their colleagues practice within these parameters (Gillespie et al., 2010; Riley & Manias, 2006; Seifert et al., 1993). One example is the process of marking the surgical site, an expectation outline by WHO (2009) which specifies that the surgeon or a surgical delegate must mark the operative site prior to bringing the patient to the OR. Despite this being a physician responsibility, it is enforced by nursing; Rönnberg and Nilsson (2015) explain that nurses are pivotal in ensuring surgical safety protocols are adhered to. This role has contributed to what Riley and Manias (2006) call "gatekeeping" (p. 1456), a concept used by perioperative nurses to control situations in clinical settings. In an ethnographic study, Riley and Manias (2009) collected data on gatekeeping behaviours through participant observation, individual interviews and focus group interviews. They also employed a method called Photovoice in which they asked participants to take pictures to prompt conversation in their interviews (Riley & Manias, 2009). A variety of examples of gatekeeping were identified in which nurses chose to share or withhold information from their colleagues (other nurses, anesthetists and/or surgeons). In their 2006 article, Riley and Manias explored how nurses govern time, for example: delaying opening the surgeon's gloves. Nurses rationalized these behaviours as forcing the surgical team to allow time for essential procedural activities (e.g., the surgical instrument count) while in actuality they prevented the surgeon from scrubbing and controlled the pace of the case. These authors concluded that gatekeeping was

ultimately a practice underpinned by an imbalance of power, used to control roles and social relationships within perioperative communities (Riley & Manias, 2006; 2009). These findings are pertinent to the role of nurses and team dynamics in the OR but are also particularly important when considering the promotion of patient safety. If power imbalances translate into nurses withholding information or delaying surgery that could have harmful results on patient care, particularly in emergency cases.

It is useful to consider the nursing role from two perspectives: patient advocacy and critical thinking (Bronfenbrenner, 1979). The principle responsibility of OR nursing is to patient care (Seifert et al., 1993; Sigurðsson, 2001). The AORN adapted their definition of perioperative nursing to emphasize their role as patient advocates, translating across all phases of an operation (Spry, 1994). Authors situate perioperative patient care on a continuum from building a therapeutic relationship with patients during short preoperative moments, to ensuring bony prominences are well padded when the patient is anesthetized (Bull & FitzGerald, 2006; Chard, 2000; Seifert et al., 1993). Physician colleagues echoed similar sentiments, positioning nursing as responsible for patient advocacy within the team (Parker, Yule, Flin, & McKinley, 2012; Sax, 2012).

Sundqvist, Holmefur, Nilsson, and Anderzen-Carlsson (2016) identified examples of perioperative patient advocacy in their integrative review study which synthesized findings from 9 articles. The overarching theme that they developed to encompass categories and subthemes was that patient advocacy is a virtuous responsibility, based on compassion and humanity but also personally fulfilling for nurses (Sundqvist et al., 2016). These authors drew on the work of Schreiber and MacDonald (2010) to articulate that perioperative nurses describe their role in patient advocacy as protecting the patient while anesthetized and vulnerable. Researchers

describe advocacy in a variety of ways: maintaining patient dignity, preserving personhood, protecting patients from harm, ensuring patients' preferences are followed, embodying a holistic approach, keeping patients informed and, connecting verbally and non-verbally (Boyle, 2005; Bull & Fitzgerald, 2004; Gillespie et al., 2008; Killen, 2002; Mauleon & Ekman, 2002; Schreiber & MacDonald, 2010; Schroeter, 2004; Sundqvist & Anderzen-Carlsson, 2014). Some tangible examples are offered: Boyle (2005) described ensuring accurate documentation (particularly concerning specimens) and Sundqvis and Anderzen-Carlsson (2014) emphasized that nurses advocate for the maintenance of hygiene, temperature and fluid balance. Nurses also spoke to promoting a safe environment which Rönnberg and Nilsson (2015) suggested was integrated through the regulation and use of the WHO (2009) surgical safety checklists.

Sundqvist et al., (2016) also considered the consequences nurses experienced when advocating for their patients intraoperatively. They summarize consequences as "being emotionally involved" which outlined difficulties becoming vulnerable with colleagues, challenging the status quo and suffering from stress and feelings of powerlessness (Sundqvist et al., 2016, p. 428). Nurses considered advocacy as a central aspect of their professional responsibility and when they perceived their ability to advocate as insufficient, they experienced moral distress (Sundqvist et al., 2016). Research exploring nursing advocacy in the OR is sparse and lacks tangible examples. It should also be recognized that authors of this integrative review published 2 of the 9 included articles, potentially over-representing their thematic understandings. These findings have been substantiated by examining the similarities of how nurses describe patient advocacy across practice contexts using concept reviews offered by Baldwin (2003) and, Bu and Jezewski (2007). Although advocacy may be operationalized

differently in perioperative practice, the duty to protect and respect patients translates across clinical spaces (Baldwin, 2003; Bu & Jezewski, 2007; Sundqvist et al., 2016).

From a team perspective, nurses predominantly interact with their colleagues through a series of collaborative tasks (Sigurđsson, 2001; Wade, 2014). Perioperative nurses are trained to use critical thinking skills and experience to anticipate the needs of the intraoperative team (Fesler-Birch, 2010; Mitchell et al., 2011; Sexton et al., 2006). A qualitative study conducted by Mitchell and colleagues (2011) used semi-structured interviews to identify vital non-technical skills necessary in perioperative settings. They interviewed surgeons and 'scrub nurses', the nursing role responsible for working in the sterile field with the surgical team (Mitchell et al., 2011; Sexton et al., 2006; Sigurđsson, 2001). In their discussion they reflected on the interdependence among team members: the need for a shared understanding and attentiveness to ensure the smooth delivery of instruments and equipment to the surgical field. Mitchell et al. (2011) explain that the 'scrub nurse' (the nursing role responsible for working in the sterile field) needs to be a step ahead of the surgeon and therefore the 'circulating nurse' must anticipate two steps ahead. The 'circulating nurse' is a non-sterile nursing role responsible for mobilizing equipment and resources in addition to a variety of other un-sterile activities (Mitchell et al., 2011; Sexton et al., 2006; Sigurđsson, 2001). For example, in a situation where a laparoscopic cholecystectomy may potentially convert to an open procedure the 'circulating nurse' must evaluate the potential possibilities and collect the necessary equipment to be prepared (e.g., an open-abdomen instrument tray, cautery, suction etc.). The expectation is this instrumentation will be passed to the 'scrub nurse' prior to a large abdominal incision to facilitate the surgeon safely accessing the gallbladder (Mitchell et al., 2011; Riley & Manias, 2009).

Bull and Fitzgerald (2006) recognize tasks executed by OR nurses not solely as technical competence but intertwined with and reflective of the type of caring required. They illustrate surgical efficiency not as a succession of routine tasks, but as the nurse and the surgical team prioritizing patient safety to ensure limited anesthetic is required. An example is ensuring sterility of all instrumentation, a skill-based task that is underpinned with the intention of preventing surgical site infections and patient harm (Bull & FitzGerald, 2006). Similarly, Riley and Manias (2006) speak to the "judicial wisdom" (p. 1548) exercised by nurses in tandem with surgical skills. While participating in surgical interventions nurses are interpreting the ambiance of the room—changes in the surgeon's body language or tone—adjusting their response to maintain efficiency and interprofessional harmony (Mitchell et al., 2011). Riley and Manias (2006) explored this relationship using a postmodern ethnographic approach. They described nurses as having an "embodied knowledge of surgeons" similar to the traditional notions of personal knowledge that nurses develop about their patients (Riley & Manias, 2006, p. 1548). This type of 'knowing' cannot be conveyed in a classroom but is acquired through experiences and interactions with individual surgeons. The example shared describes "prudent silence" (p.1546) involving a nurse entering an OR suite to determine the length of time remaining in the case (Riley & Manias, 2006). The nurse uses her "clinical gaze" (Riley & Manias, 2006, p.1548) to evaluate the progression of the surgery and decides against posing her question as she knows the surgeon is an individual who becomes stressed when interrupted. Across three surgical departments these authors observed that nurses had an awareness of surgeons' emotional states, choosing communication styles (e.g., "prudent silence" (p. 1546), gatekeeping, collaborating, or engaging in trivial conversations) depending on the mood of the surgeon (Riley & Manias, 2006). The research offered by authors exploring the tacit skills embedded in OR nursing also

argues that dismantling the role of perioperative nurses to separate technical skills from the caring behaviours is reductionist (Bull & FitzGerald, 2006; Mitchell et al., 2011; Riley & Manias, 2006; 2009). This one-dimensional perspective devalues the complexity and skills embedded in the OR nursing role.

Being part of the interdisciplinary team is central to the identity of perioperative nurses (Chard, 2000; Undre et al., 2006). In studies with OR nurses about their practice, their perspectives reflect a 'relational repertoire' that defines their expectations of teamwork (Finn, 2008; Sigurđsson, 2001). Finn (2008) describes 'relational repertoire' as emphasizing an egalitarian approach and mutual respect among disciplines. Nurses see teamwork as a collaborative process and tend to value non-technical skills that foster positive interprofessional relationships over tactile competence (Bleakley et al., 2012; Gillespie et al., 2010). OR nurses do not express a desire to redistribute financial compensation. Essentially, they do not expect to be paid similarly to their physician colleagues, however, they do want equal recognition within their team. They also wish to work with colleagues that support and endorse the emotional and therapeutic aspects of their work (Finn, 2008). Perioperative nurses voiced teamwork as a key component of their job satisfaction and a principle reason why they chose to work in the OR (Chard, 2000; Foley-Brinza & Brunges, 2015; Henry, Hunt, Kroetch, & Yang, 2012). They view themselves as embedded in highly functional groups: sharing stress, coordinating in unison and shouldering collective fault when failures occurred (Chard, 2000; Pinto et al., 2013; Prati & Pietrantoni, 2014).

Physicians: surgeons and anesthetists. Unlike their nursing co-workers physicians have not been unrecognized and their value is squarely placed at the centre of the biomedical hierarchy overarching the OR context (Bleakley et al. 2012; Gillespie et al., 2008; Kaplan et al., 2010;

Morath et al., 2014; Wilson, 2012). Autonomy and self-government have been described as two features defining physicians, underpinned by their specialized and tacit medical knowledge (McDonald et al., 2006; Waring et al., 2007). In studies exploring doctors' professional narratives it became clear that these characteristics are central to physicians' identities (McDonald et al., 2006; Waring et al., 2007). They perceive that their ability to respond to acute and unpredictable patient conditions grants them the independence to be self-directed and forge their own routines.

Divergent findings are available regarding physicians' perceptions of poor patient outcomes. A survey-based study conducted by Prati and Pietrantoni (2014) in Italy, found that surgeons tend to attribute physician (in)competence as the cause of surgical successes or failures, a belief which was also reinforced by nursing staff. In contrast, an ethnographic study conducted in the United Kingdom by Waring and colleagues (2007) reported that physicians were inclined to re-orient responsibility away from their medical colleagues towards systemic issues.

McDonald et al. (2006) suggested that practiced physicians endorsed their individual learned routines and disregarded formalized guidelines. The physician participants in this case study emphasized the need for flexibility in unpredictable situations but also attributed unpredictability as a factor that contributed to errors. Physicians considered errors inevitable particularly in volatile specialities such as surgery where unpredictability is assumed to be inherent. Both the McDonald et al. (2006) and Waring et al. (2007) studies (which both authors co-published with their colleague Harrison) argue this logic is concerning. Not only does it serve as an excuse for errors that prevents physicians from examining and regulating their practice but it also normalizes risk. Waring and colleagues (2007) described physicians as developing ritualistic behaviours which do not account for current evidence and may perpetuate risk. Instead of

recognizing issues with their own practice, physicians have attributed poor outcomes to 'bad luck' or system issues (e.g., poorly trained staff, faulty equipment, chaotic environments). McDonald et al. (2006) added that physicians described unpredictable situations as dictating a need for them to exercise professional flexibility (e.g., to deviate from practice standards). In reality these behaviours were reported to increase risk and actually result in errors (McDonald et al., 2006; Waring et al., 2007). Abdicating responsibility for errors and ritualistic practices have also been linked to undermining physicians' ability to recognize unsafe practices and learn from their colleagues' mistakes (McDonald et al., 2006; Sax, 2012; Waring et al., 2007). Although not made explicit, based on the dates of data collection and authorship, these two studies (McDonald et al., 2006; Waring et al., 2007) are likely part of the same larger study. These findings should be considered in tandem with other research exploring the professional responsibility of surgeons as the presence of their ideas could be overemphasized.

Perioperative research tends to place surgeons as the leaders of intraoperative teams with the anesthesia role being less clearly positioned. Parker and her research team (2012) conducted an observational study investigating non-technical skills displayed by surgeons in a range of procedures. They found a corresponding relationship between complexity of surgery and leadership behaviours, with an increasing amount of leadership seen in complex cases. Despite the category of leadership—supporting, guiding, communicating, or coordinating—all behaviours were adopted with a task-based purpose: efficiently and effectively meeting surgical goals (Parker et al., 2012). The conclusion drawn is that surgeons incorporate leadership to 'achieve a surgical end', rather than enhancing team building or ensuing optimal interdependent performance (Finn, 2008; Helmreich & Davies, 1996; Parker et al., 2012). Observational studies are limited because it is not possible to determine if participants' behaviours changed because

they were aware of the study or the researcher. Parker et al. (2012) were also not able to capture emergency cases and therefore could not draw conclusions on how leadership changes in situations of intraoperative catastrophes. Future research exploring the concept of leadership prior to, during and following an intraoperative catastrophe would be valuable to understanding team dynamics.

This outcome focused mentality is reflective of the "technical-instrumental interpretative repertoire" (Finn, 2008, p. 104), which Potter and Wetherall (1987) suggest underpins the practice of both surgeons and anesthetists. This repertoire frames how physicians view teamwork: focusing on the culminating goal and prioritizing behaviours that contribute to efficiency (Finn, 2008; Helmreich & Davies, 1996). Built on a rationalist view, physicians place themselves at the pinnacle of teams seeing work processes as controllable and driven by a professional imperative (Finn, 2008).

In conjunction with heightened leadership and perceived responsibility, physicians also are susceptible to increased levels of stress (Carney et al., 2010). Stress can manifest as a motivator but when external demands overwhelm resources to cope, it deteriorates technical and non-technical skills (Arora et al., 2010; Lazarus, 1985; Radcliffe & Lester, 2003; Wetzel et al., 2006). As previously discussed, stress and varying impact to professional competence has significant potential consequences for patient safety (Arora et al., 2010; Kingdon & Halvorsen, 2006, WHO, 2009). Similarly to nursing, authors identified clinical experience and the ability to cope with stressful situations as a protective mechanism leading to improved technical competence (Arora et al., 2010; Gillespie et al., 2010; McDonald et al., 2006; Pupkiewicz et al., 2015). Conversely, physicians who failed to cope or had negative experiences were more susceptible to stress and had compromised procedural skills. Participants reported intraoperative death as one of the most

stressful events encountered by perioperative practitioners, placing physicians at increased susceptibility of personal and/or professional vulnerability (Gazoni et al., 2008, 2012; Gerow et al., 2010; Kingdon & Halvorsen, 2006).

Although anesthetists do not report increased levels of occupational stress in comparison to other specialities, they are the physician group most at risk for drug and alcohol abuse or suicide (Booth et al., 2002; Gazoni et al., 2008; Lutsky et al., 1993; Nyssen, Hansez, Baele, Lamy, & De Keyser, 2003). This discipline has been consistently over-represented in the data delineating detrimental coping mechanisms. For example, authors report suicides rates as two to three times higher in anesthetists than the general population (Hawton, Clements, Sakarovitch, Simkin, & Deeks, 2001; Rose & Brown, 2010). Rose and Brown (2010) suggest an underlying catalyst of depression has largely been unrecognized as contributing to substance abuse. This association could be linked to heightened levels of emotional exhaustion, particularly reported by anesthesia residents (Nyssen et al., 2003). Novice anesthetists seems to be specifically vulnerable due to a higher prevalence of depression (Center et al., 2003; Gazoni et al., 2008, 2012).

A hesitation to disclose and seek treatment has been interwoven into the stigma of mental health in medical communities. Turning to your colleagues for care has historically had occupational consequences such as loss of license, decreased medical privileges or impeded professional development (Levine & Bryant, 2000; Rose & Brown, 2010). The "macho" mentality of medicine has been attributed to constraining an individual's ability to request help (Seeley, 1996, p. 573). In 2003 the Journal of the American Medical Association (JAMA) published a consensus statement urging organizations to recognize physician depression and create institutional policies to support disclosure and treatment (Center et al., 2003). Rose and Brown (2010) believe the lack of research published since the JAMA statement represents an

unwillingness to address stereotypes and the continued perpetuation of silence. There is no all-encompassing explanation for why anesthetists exhibit higher levels of substance abuse and depression, however, several contributing factors have been suggested: access to drugs, required performance during high-stress situations, isolated practice and proximity to intraoperative catastrophes (Charney, Paraherakis, Negrete, & Gill, 1998; Gazoni et al., 2008; 2012). Perhaps it is worth considering that while the rest of the team 'sees' the patient through layers of drapes and equipment the anesthetist is typically in close proximity with the person's face, a constant reminder of their humanity and vulnerability. Drawing attention to the challenges embedded in the anesthesia community and intersecting them with the reality that anesthetists will experience intraoperative death in their careers highlights the risk of "self-neglect" (Gazoni et al., 2008, p. 599). Unsupported, these behaviours can become detrimental and significantly impact the delivery of competent and safe patient care (Gazoni et al., 2008; 2012, Rose & Brown, 2010; Waring et al., 2007). These findings are compelling but the rationale behind higher rates of substance abuse and suicide among anesthetists remains largely unfounded. More research is imperative to identify features which place anesthetists at risk and create a culture shift that recognizes their vulnerability.

Although these studies are helpful in elucidating the mentality and position of surgeons within teams, the potential leadership role of anesthetists remains unclear. Perioperative research focuses primarily on surgeons and nurses leaving little attention to how anesthetists situate within the team. Anesthetists are clearly at risk of serious physical and psychological injury, however it is not clear how these behaviours are linked back to their experiences in the OR. Literature has been developed within the anesthetist community but remains segregated, discounting interprofessional dynamics. Authors have identified that anesthetists experience

isolation in their practice, a reality that is also reflected in perioperative literature. Researchers must re-examine the current approach to isolating and/or excluding anesthetists in order to bring light to their perceived roles and responsibilities within perioperative teams.

Teamwork. At this stage, it should be clear that teamwork, culture and patient safety are three interwoven concepts that directly influence the lives of perioperative clinicians and their patients. The following summary describes literature on perioperative teamwork and draws on previous considerations of OR clinicians. Initially I will speak to the ideals of teamwork, its conception as a framework that facilitates collaboration and safe patient care. The focus will then turn to the literature which problematizes intraoperative team functioning. This section will describe flaws in how teams operationalize: lack of role clarity and incompatible communication techniques. Consideration will also be given to foundational issue complicating team structures. In addition to examining disciplines' divergent expectations of teams I will speak to hierarchical influences and how they position clinicians. The following exploration is intended to draw together prior understandings of professionals, questioning commonly held assumptions of teams and illustrating interprofessional nuances.

Finn (2008) explains that the concept of team is socially and traditionally understood as inherently 'good'. Research from a diversity of health care contexts has situated teamwork as a crucial mechanism for delivery of safe and efficient care. Studies specific to the OR have echoed key competencies outlined by Canadian Interprofessional Health Collaborative [CIHC] (2010) for interprofessional collaboration: role clarity, interprofessional conflict resolution, collaborative leadership, team functioning and interprofessional communication (Arora et al., 2010; Bleakley et al., 2012; Dayton & Henriksen, 2007; Gillespie et al., 2010; Kaplan et al., 2010; Morath et al., 2014; Parker et al., 2012; Rydenfält et al., 2012; Wade, 2014; WHO, 2009).

Teamwork is understood as threading together a variety of disciplines, allowing practitioners to exemplify individual professional identities, while creating unity with the collective goal of comprehensive patient care.

What the research exposes is that the reality of teamwork, specifically in the OR, has significant foundational flaws. From a role perspective, nurses, anesthetists and surgeons have different motivations shaping their professional identity and behaviours (Bleakley et al., 2012; Gillespie et al., 2010; McDonald et al., 2006; Sax, 2012). From a responsibility perspective, researchers examining intraoperative teams have categorized nurses as patient advocates, anesthetists as hemodynamically responding to surgical insult (i.e., maintaining circulation) and surgeons as treating the illness or injury (McDonald et al., 2006; Parker et al., 2012; Della Rocca et al., 2016; Sax, 2012; Seifert et al., 1993; Spry, 1994). Some would stipulate that team members believe surgeons have ultimate responsibility for the patient and their care (Bleakley, 2006; Gillespie et al., 2008), however, nurses were less likely to endorse this position, believing accountability is collectively shared within the OR team (Parker et al., 2012; Prati & Pietrantoni, 2014). Although studies show that a collective understanding of individual roles facilitates improved team coordination and functioning, studies in the OR highlight role clarity as a considerable gap among clinicians (Gillespie et al., 2010; Rydenfält et al., 2012; Undre et al., 2006). Practitioners function based on individual interpretations and perceived expectations of their colleagues' roles and responsibilities. This ambiguity has been shown to result in misunderstood priorities and at times, conflicting goals (Lindwall & von Post, 2008; Lingard et al., 2002; Michael & Jenkins, 2001; Undre et al., 2006). Clinicians tended to partition the three surgical disciplines, operating from assumptions of traditional professional role and hierarchical

perceptions of responsibility rather than a local understanding of their unique team (Bleakley, 2006).

Various reasons have been put forth as undermining the concept of team within multidisciplinary surgical settings. One tangible example is the incompatible communication techniques used by clinicians, engrained in their education and training. Nurses are taught to speak in broad narratives, sharing multidimensional descriptions to provide a comprehensive understanding to their colleagues (Gillespie et al., 2010; Lingard et al., 2002). Physicians are trained to quickly and efficiently communicate information, focusing on the 'crux' of the issue (McDonald et al., 2006; Sexton, Thomas, & Helmreich, 2000; Sexton et al., 2006). These divergent styles have been associated with communication failures and interprofessional conflict (Lingard et al., 2002). One study deviated from this idea, reporting intraoperative colleagues felt that vital interactions were performed reasonably well except for communication patterns between surgeons and anesthetists (Undre et al., 2006). Participants perceived effective exchanges between surgeons and anesthetists as imperative for surgical success, however communication was viewed as substandard on many occasions. This qualitative study by Undre et al. (2006) entitled "Teamwork in the operating theatre: Cohesion or confusion", interviewed surgeons, anesthetists, nurses and operating department practitioners (the United Kingdom term for 'operating room technicians') about their perceptions of intraoperative teamwork. The interprofessional strength of this study has situated it as a highly-referenced source in the perioperative community. Undre and colleagues (2006) conclude that OR teams can be functional even if individual practitioners do not perceive themselves as part of a cohesive unit, however the efficiency of these types of teams becomes jeopardized in complex or acute situations. These authors hypothesize that fragmented teams are more prone to errors when crises

occur, particularly because of communication issues. Although, for several reasons it is difficult to conduct research during emergency cases (e.g., time is not available to get consent) further research is imperative to understand how team dynamics alter during critical cases.

Communication barriers are further reinforced by a siloed approach to medical and nursing education, focusing on skill acquisition and leaving little space for practical teamwork skills (Blane, 1991; Gillespie et al., 2010; Helmreich & Davies, 1996; Undre et al., 2006). Communication tools have been developed to organize nursing narratives into succinct facts to improve nurse-physician communication (Steelman, 2014). These tools are examples of nursing acquiescing to medical discourses perhaps due to underlying hierarchies. Regardless, they have not translated into the OR context.

The most pervasive issue problematizing the idea of perioperative teams is the divergent conceptualization of 'team' held by nurses and physicians. The previously described professional repertoires characterizing nurses and physicians reflect different values across each of these two disciplines (Finn, 2008; Potter & Wetherall, 1987; Sigurđsson, 2001). Physicians prioritize efficiency and are concerned with the outcome, whereas nurses covet the process of teamwork and desire collegial equilibrium. Sexton and colleagues (2006) developed a Safety Attitudes Questionnaire specifically for the OR and surveyed surgeons, anesthetists, OR technicians, nurse anesthetists and OR nurses. This study had a large sample size of 2,135 respondents from 60 hospitals, some of which had preemptively instituted teamwork initiatives while others had not. Through their investigation of teamwork in the OR, Sexton and colleagues (2006) found that nurses defined positive collaboration as feeling involved and valued. Surgeon participants believed good collaboration was represented by nurse anticipation and having their needs met (Sexton et al., 2006). This belief is also illustrated by physicians' task-centric approach to

leadership which is contrasted by a nursing belief that strong leadership involves clear role expectations, team cohesion and communication. Physicians identify as autonomous professionals, exhibiting high levels of independence. Gillespie and colleagues (2010) explain that this autonomy has been perceived by physicians to be inhibited by the interprofessional team structures in which they work. The desire to construct their own routines based on skill and experience can be impeded by organizational procedures, designed to reduce errors and upheld by nursing (McDonald et al., 2006; Sax, 2012). These different, if not conflicting expectations of teamwork and responsibility, further entrench professionals into their disciplinary silos (Bate, 2000; Finn & Waring, 2006).

Based on her ethnographic study, Finn (2008) asserts that the concept of team is actually a discourse that engrains and legitimizes inequality between disciplines. It mimics the medical hierarchy, privileging physicians with power and resources while disadvantaging nurses (Blane, 1991; Bolton, 2004; Epsin & Lingard, 2001; Makary et al., 2006; Riley & Manias 2009). Finn (2008) attributes inequalities to clinician's interpretive repertoires (i.e., technical-instrumental repertoire vs. relational repertoire), believing that these discourses create structural inequalities and professional boundaries between physicians and nurses. Physicians describe themselves as technical experts while nurses perpetuate a relational repertoire which positions them as subordinates. Nurses are interested in relational equality (i.e., sharing the emotional impacts of work and receiving equal recognition) but do not desire reconfiguring social structures to redistribute power or material rewards. Much like the medical hierarchy, Finn (2008) describes teamwork as a concept which is built around physicians, legitimizes their privilege and power while undermining the motivations and roles of nurses. Researchers have highlighted long standing social mores underpinning the professional disparity between physicians and nurses:

gender, authority, education and responsibility (Bleakley, 2006). Professional boundaries shaped around different employment and rewards systems position power in the realm of the physician, leaving nursing at risk of institutional reorganization and cuts (Bate, 2000; Epsin & Lingard, 2001; Finn, 2008; Finn & Waring, 2006; Kaplan et al., 2010). Despite their external message of unity, team structures are problematic because they dictate distribution of a finite amount of power and result in unbalanced professional stratums (Finn, 2008; Sigurđsson, 2001; Tame, 2012).

Unsurprisingly, physicians perceived teamwork more positively than their nursing colleagues (Carney et al., 2010; Sexton et al., 2006; Undre et al., 2006). This finding is likely in part related to the hierarchical structures, empowering physicians to perpetuate their priorities and beliefs about teamwork. Disciplines were found to be adamantly engrained in their collective professional identities, creating a sense of "tribalism" and affinity to their profession that trumped cohesion within the interdisciplinary team (Finn, 2008, p. 113). A benefit of this affinity is that within-disciplinary mentorship was prominent and upheld as a professional responsibility (Pupkiewicz et al., 2015; Sax, 2012). Although nurses were more likely to view the team as whole, all professionals acknowledge the presence of multiple sub-teams or "tripartite teams" (Gillespie et al., 2010, p. 736) working in parallel (Finn, 2008; Undre et al., 2006). This independence was not always viewed as negative, participants in studies conducted by Gillespie et al. (2010) and Sigurđsson (2001) spoke to the talent reflected in watching an intraoperative team working in unison during a high-stress emergency case. Perioperative ideals also defend strict role partitioning as a vital aspect of avoiding overlap or gaps in care (Hamlin & Davies, 2009; Seifert et al., 1993; Stephens-Lesser, 2007). In a qualitative interview conducted by Gillespie and colleagues (2010), one participant acknowledged communication as being

unnecessary in emergency cases because behaviours are standardized. Although these perspectives may also be true, the reality that OR teams are multidisciplinary (i.e., a team structure that facilitates coordination, allowing individual disciplines to work in parallel and make independent decisions) rather than interdisciplinary (i.e., a team structure in which professional boundaries are permeable, emphasizing interdependent functioning, collective ownership and shared decision-making) is not widely acknowledged in intraoperative literature (Bleakley, 2006; Coffey & Anyinam, 2015; Undre et al., 2006). The context in which interprofessional teamwork is situated—tied to different professional ideologies, patient safety, organizational expectations and culture—make it a complex, multidimensional concept that must be acknowledged.

In conclusion, the landscape of perioperative research is expanding to consider individual and team dynamics in the delivery of safe surgical care. In addition to contributing to a body of research, this focus has brought attention to the inconsistencies between practitioner roles and expectations. These differences dictate a need for interdisciplinary collaboration in order to deliver comprehensive care, however they also prove problematic in practice. Interprofessional dynamics shape and potentially constrain individual clinician's positions and may jeopardize patient safety. This review was presented with the intention of grounding the research study in an understanding of perioperative culture.

The interprofessional stance that characterizes current perioperative literature must translate to research exploring intraoperative catastrophes. To date, authors have taken a disciplinary approach, segregating existing understandings of caring for patients that die intraoperatively. Although this research is valuable in understanding the experiences of individual professions it cannot be translated into team contexts or compared among disciplines. Authors have reiterated

that poor team functioning contributes to errors, suggesting a link between team behaviours and poor patient outcomes. Researchers have also hypothesized that team functioning and interprofessional relationships deteriorate in critical situations. This potential may have important impacts in situations of intraoperative death, particularly considering team structures may be initially fractious. Our understanding of team functioning remains limited due to the challenges of conducting research in trauma situations. While this study is designed to contribute a multidisciplinary perspective of caring for patients that die intraoperatively, the findings account for the individual stories *and* the varying impact to interprofessional team relationships, reflecting an interdisciplinary perspective.

Chapter 3: Theoretical Perspectives

Dead on the table: A theoretical expansion of the vicarious trauma that operating room clinicians experience when their patients die

Abstract

The practice of operating room (OR) clinicians – nurses, surgeons, and anesthetists – is fundamentally about preserving life. Some patients, however, die in the OR. Clinicians are therefore vulnerable to moral and emotional trauma. In this paper, we discuss three forces that shape clinicians' moral and emotional experiences in OR care: biomedical values, normative death discourse, and socially (un)sanctioned grief. We suggest how each of these forces increases clinicians' vulnerability to feel traumatized when their patients die. We hope this discussion will stimulate clinicians and researchers to engage with social and cultural determinants of clinicians' experiences when surgical patients die.

Keywords: death attitudes, disenfranchised grief, violent death, trauma, culture

Introduction

Little is known about what occurs behind the metaphorical mask of perioperative teams exposed to the dichotomy of patient death in a life-sustaining context. The operating room (OR) is characterized by complex care, choreographed by a number of clinicians and interwoven with a universal goal of life preservation (Forse, Bramble, & McQuillan, 2011). Surgical care rests on the assumption that interventions are beneficial and that all means of resuscitation will be exhausted before death is acknowledged (Smith, Leslie, & Wynaden, 2015). In reality, however, OR clinicians (i.e. anaesthetists, surgeons and nurses) are frequently exposed to patient death by virtue of the severity, complexity, and/or high-risk nature of the cases seen (Pinto, Faiz, Bicknell,

& Vincent, 2013). These clinicians are therefore positioned to sustain patients' lives in what sometimes turn out to be fatal cases, placing them in a precarious conflict. When death occurs, how do OR clinicians reconcile their failure to preserve life?

Following exposure to fatal intraoperative catastrophes, clinicians have reported experiencing symptoms of emotional distress, variably described in the literature as vicarious traumatization (McCann & Pearlman, 1990) and as second victimization (Wu, 2000). The purpose of this discussion paper is to articulate a theoretical expansion of the moral and emotional distress that OR clinicians are vulnerable to experience when their patients die. Such a foundation is important in light of social conversations currently underway with respect to the occupational health of people who care for critically ill patients in tragic circumstances. In the Canadian province of Ontario, for example, legislative changes recently took place to improve access to resources for health care providers who suffer from work related Post Traumatic Stress Disorder, unfortunately restricted to 'first responders' (Legislative Assembly of Ontario, 2016). Consequently, tertiary care nurses and physicians were excluded from resulting resources, such as workplace safety benefits and resiliency training. Thus, the ways in which these practitioners' personal and professional lives are impacted by their involvement in critical incidents appear to be currently under-appreciated.

The concepts of vicarious traumatization and second victimization help to consider how OR clinicians exposed to patient death are vulnerable to emotional harm, and can draw attention to the specifics of their moral experience. Thus, these concepts are useful in locating *what* OR clinicians might experience following patient death, but as of yet, do not enable an understanding of *how* and *why* OR clinicians are vulnerable in the first place. In order to fully appreciate the ways that patient death can impact the emotional lives of OR clinicians, we require a contextual

analysis that accounts for the ethos of OR care culture, the wider forces that shape this care culture, and the ways in which this care culture (dis)allows specific emotional responses when patients die.

In this paper we will first introduce and review concepts of vicarious trauma and second victimization, considering their overlapping components and presence in the OR. Next, we will describe three forces shaping OR culture and identify each as a source of clinician vulnerability to the aforementioned concepts. We will conclude with a reflection on individual agency and potential for change. This examination intends to promote thoughtful reflection, a practice that has been endorsed by professional colleges and linked to clinician resilience (College of Nurses of Ontario, 2015; Jackson, Firtko & Edenborough, 2007; Royal College of Physicians and Surgeons of Canada, 2017; Wald, 2015). According to Wald (2015) reflective practice can nurture "practical wisdom" (p. 702) and support clinicians' efforts to navigate morally complex situations. Reflection is recognized as an empowering process that encourages clinicians to engage with their work, reducing vulnerability and moral distress (Jackson et al., 2007 Lawrence, 2011; Wald, 2015). Deeper awareness of the social discourses that shape clinicians' moral and emotional experiences of loss can inform such reflection.

The first author of this paper is a practicing perioperative nurse. Her initial motivation to conduct this theoretical examination was based in personal experiences of caring for patients that died intraoperatively and witnessing the quiet suffering of her colleagues. What particularly concerned her regarding these experiences was the lack of discussion or support offered to practitioners following the death of their patients. This compelled her to explore theoretical elements of OR culture that create a landscape for victimization. As a perioperative nurse, she understands the relevance and strengths of certain features of OR care culture. And so, engaging

in a critical reflection about the potentially harmful aspects of this culture that is a source of personal and professional pride was sometimes uncomfortable. Of course, the purpose of this critical reflection is not to chastise or throw into question the organization and enactment of surgical care. Rather, the purpose is to bring theoretical awareness about how the landscapes that surgical practitioners inhabit may contribute to their emotional and moral vulnerability. It is our hope that such awareness might bolster capacity for working and living through situations of OR death.

Two schools of thought: Vicarious traumatization and second victimization

McCann and Pearlman (1990) first articulated the notion of vicarious traumatization, based on their examinations of therapists' empathetic engagements with traumatized patients. They defined the phenomenon of vicarious traumatization as: "persons who work with victims who experience profound psychological effects, effects that can be disruptive and painful for the helper and can persist for months or years after working with traumatized persons" (McCann & Pearlman, 1990, p. 137). Ten years later, Wu (2000) proposed the concept of second victims: physicians who suffer due to their perception of having *participated* in an adverse event. Thus, while vicarious traumatization was originally based on the harm caused to clinicians by virtue of witnessing the consequences of another's trauma, second victimization referred to situations in which clinicians perceived themselves to be directly implicated in having caused or aggravated another's trauma. For example, vicarious traumatization might refer to being impacted at hearing the details of a patient's horrific sexual assault, while second victimization might refer to feelings of culpability for causing a patient's death due to a medical error. More recent articulations of second victimization, however, have eliminated the conceptual requirement of

participation or fault, thus blurring the boundaries between ideas of vicarious traumatization and second victimization (Scott et al., 2009)

These two ideas – vicarious traumatization and second victimization – have developed in parallel in the literature, echoing similar themes (i.e., exposure to a critical event and subsequent psychological, physical, behavioural and cognitive manifestations of stress) (Scott et al., 2009). Numerous authors have since cultivated these concepts from a wide array of disciplinary standpoints including nursing, medicine, midwifery, psychology and social work. This multidisciplinary perspective has expanded our understanding of the antecedents and outcomes of, as well as the intersections between, these two concepts (Hall & Scott, 2012; Jones & Treiber, 2012; Marmon & Heiss, 2015; Quinal, Harford, & Rutledge, 2009; Warren, Lee, & Saunders, 2003). While further terms have also emerged (e.g., vicarious victimization, secondary traumatic stress), all refer to the foundational idea that caring for victims of a critical incident creates the possibility that clinicians will be harmed by the experience. Following traumatic exposure clinicians have described symptoms of psychological stress: anger, fear, shame, sadness, and anxiety (Martin & Roy, 2012). Physical manifestations of stress include sleep disturbances, tachycardia, hypertension, and difficulty concentrating (Badger, 2001). Left unacknowledged, symptoms can culminate in long term effects: emotional numbing, isolation, and depression, ultimately deteriorating professionals' clinical performance (Pratt & Jachna, 2015). Clinicians who are traumatized by adverse events are prone to have such events permanently etched into memory; sometimes experiencing flashbacks, continuously questioning their performance and judgement with respect to the event, and living with enduring consequences of guilt, shame, and fear of professional criticism (Ullström, Sachs, Hansson, Øvretveit, & Brommels, 2014). Repeated incidents of clinician trauma have been linked to organizational consequences such as

increased absenteeism, decreased morale, and deteriorated team functioning (Seys et al., 2013). Finally, clinician trauma creates a catalyst effect, weakening resilience and placing practitioners at heightened risk of future destabilization.

The fact that clinicians exposed to adverse events may be traumatized by them is of particular concern in perioperative contexts. Surgical care has been likened to the airline industry: it is high risk and requires seamless execution (Mazzocco et al., 2009). Interventions are extremely complex and depend on effective collaboration of interdependent practitioners, each fulfilling their role and functioning at an optimal level (Forse et al., 2011). Indeed, the majority of preventable errors in surgical contexts are attributable to breakdowns in team functioning (Wahr et al., 2013). If individuals are destabilized as a result of vicarious trauma or second victimization, their ability to participate effectively in the surgical team may be compromised, possibly negatively impacting on patient outcomes (Awad et al., 2005; Seys et al., 2013).

The culture of OR care

Perioperative environments, segregated as restricted areas within the hospital, are known for having complex political, social and cultural elements that govern how care is delivered and how clinicians interact (Pronovost & Freischlag, 2010). Due to highly regulated access, a select few practitioners have a practical understanding of the unique care culture that characterizes this environment. Gillespie, Wallis and Chaboyer (2008) observed that perioperative staff even have an exclusive language, impermeable and meaningless outside the walls of the surgical suite. Researchers have explored factors that shape perioperative contexts: prevalence of emergency and/or high risk cases, isolated environments with highly specialized practitioners, capitalist values governing surgical volume and hierarchical interprofessional structures (Collin,

Paloniemi, & Mecklin, 2010; Gillespie, et al., 2008; Mazzocco et al., 2009; Pinto et al., 2013).

Three cultural aspects of OR care will be explored within the context of intraoperative death

experiences to gain an understanding of how concepts of vicarious trauma and/or second

victimization are fostered in this environment. These ideas are not exhaustive of what

differentiates OR culture, they are representative of themes pertinent to interprofessional teams

who experience death in this clinical milieu.

Biomedical values

The OR environment is biomedical in focus (Schubert, 2007). The biomedical model

polarizes disease and health, stipulating that only biological factors create disease and excluding

psychological and social determinants of health (Beck, 2007). This reductionist approach

attributes illness to a single underlying cause, thereby fostering a belief amongst clinicians that

the pathway to remove disease, is eradication of an assaulting pathogen. The biomedical model

creates dualism between body and mind, excluding any symptoms or stimuli that cannot be

explained as a reflection of biological illness (Bloch & Engel, 1992). Historically, this positivist

conceptual framework has been the guiding principle of Western medicine (Bloch & Engel,

1992). Despite a recent paradigm shift to holistic care in many health care contexts, the

biomedical model is still well entrenched in surgical environments (Schubert, 2007).

Intraoperative culture is organized to prioritize the patient's physical illness or injury

(Schubert, 2007). Limited moments are available for therapeutic relationship building and goals

of care are focused on the efficient provision of anesthetic and surgical procedures (Blomberg,

Bisholt, Nilsson, & Lindwall, 2014). The "conveyer belt" mentality generated by perioperative

care is reflected in strict documentation of anesthetic and procedures times, pressuring clinicians

to adhere to the principal goal of productivity (Mottram, 2010, p. 170). The role of each

practitioner is reduced to specific tasks, toward achieving comprehensive and efficient team care

and elimination of redundancies or oversights (Mazzocco et al., 2009). The application of

surgical drapes purposefully, albeit necessarily, isolates the patient's physical anatomy, reducing

a patient to a representation of illness (Barnard & Sandelowski, 2001). The resulting imagery is

of a person deconstructed; physiology is brought into focus and psychosocial dimensions of

experience and personhood are rendered largely invisible.

The biomedical influence on OR care culture is further revealed in the work of numerous

scholars who have attempted to articulate the role of surgical nursing (Barnard & Sandelowski,

2001; Blomberg et al., 2014; Kelvered, Öhlen, & Gustafsson, 2012; McGarvey, Chambers, &

Boore, 2000; Regehr, Kjerulf, Popova, & Baker, 2004; Rudolfsson, von Post, & Eriksson, 2007).

This work reveals tensions between espoused philosophies of holism and person-centered care

with the lived reality of OR nurses' work that focuses predominantly on technology, body,

procedure, and disease. An ethnographic study of an Australian OR found that technological

activities were the predominate priority of OR nurses – the creation of interpersonal therapeutic

relationships with patients was given less priority, and in certain cases, actively avoided by

participants (Bull & FitzGerald, 2006). These findings highlight a tension between the rhetoric of

'caring in a highly technical environment' (Barnard & Sandelowski, 2001; Bull & FitzGerald,

2006; Kelvered et al., 2012; Killen, 2002) and the reality of the practices and processes that are

prioritized within the OR (Lerman, Kara, & Porat, 2011).

Biomedical values as a contributing source of clinician vulnerability

How might working in an environment governed by biomedical values position clinicians to

be vulnerable to moral and emotional distress when their patients die? We suggest that because

intraoperative teams are socialized to adopt a biomedical perspective, they lack a framework to

explore and process the multidimensional aspects of death. Conceptualizing patients purely in terms of their physical illnesses creates difficulty and discomfort when confronted with the emotional and social impacts of a patient's death. The biomedical model is additionally incongruous for practitioners exploring their own grief associated with patient loss. Focusing solely on physiological health creates a silo wherein clinicians may be unable to recognize and cope with their own moral and emotional reactions.

Zimmermann's (2004) discourse analysis of 'death denial' is helpful in better understanding how OR clinicians' might respond to patient death. She stipulates that death denial is an unconscious, cognitive process; a response to mortality that protects the individual from uncontrollable or threatening situations. Zimmermann (2004) argues that death denial is built on the tenants of the biomedical model and has culturally infiltrated to create a "death denying society" (p. 297), a mentality that Charmaz (1980) suggests is embedded in medical care. Although Zimmermann's (2004) work focuses on patient's expressions of death denial, parallels can be drawn between her findings and the tacit, sociocultural expectations shaping attitudes and behaviours of perioperative clinicians caring for patients at end of life (Cheek, 2004).

When death does occur, OR clinicians are unprepared to reconcile this significant emotional event with their biomedical approach (Schubert, 2007). Organizational influences on clinicians' work further aggravates death denial by labeling a fatal surgery as unsuccessful and urging practitioners to continue to the next case (Beck, 2007). Shrouding death in failure creates a taboo, perpetrating a mentality that intraoperative death is shameful and should not be acknowledged (Bento, 1994).

The result is an unexplored end-of-life experience: emotional responses are repressed and maladaptive coping mechanisms are adopted (Zimmermann, 2004). Personal and professional

struggles may not be acknowledged in team members because of the linear focus encouraged to promote efficiency (Bento, 1994). The biomedical approach fosters a foundation for emotional distress amongst clinicians because death is interpreted as failure and because team members are structurally disconnected from each other. This results in polarization of interprofessional roles, further dividing clinicians and reducing opportunities for collegial support (Pratt & Jachna, 2015). Maintaining a physiological focus influenced by a rigid commitment to biomedical values discounts the human response to loss, resulting in unrecognized distress that goes unnoticed and unacknowledged – making clinicians vulnerable to painful consequences of vicarious traumatization and second victimization.

Normative death discourse

In contemporary end-of-life care, ideas about a 'good death' serve as a moral framework to orient health care professionals in their work with patients and families facing end of life experiences (Holdsworth, 2015; Walters, 2004). Conceptualizations of the 'good death' describe positive end-of-life experiences mutually constructed through relational work between patients, families, and their professional caregivers (Kehl, 2006). Features of the 'good death' are repeatedly described as open awareness and acceptance of impending death, elimination of suffering, affirmation of the dying person's life and enduring legacy and ultimately, the autonomy and discretion of the dying individual (Kehl, 2006; McNamara, 2004). Health care providers are described as playing a pivotal role in ensuring this experience through the development of strong, trusting relationships, relieving family burden and ensuring the ethical integrity of interventions (Holdsworth, 2015; Walters, 2004; Zimmermann, 2012).

In contrast to the utopic descriptions of the 'good death', Hart, Sainsbury and Short (1998) described the antithetical death experience as a 'wild death', a hidden, institutionalized,

mechanical experience devoid of meaning or transcendence. 'Wild deaths' are characterized as being physician controlled, isolated, and dehumanizing—stripping patients and families of tailored care and autonomy (Hart, et al., 1998). They are fraught with overuse of technology; a therapeutic focus on curative measures without prioritizing patients' quality of life (Bratcher, 2010). Personal relationships are undermined by physically separating the dying individual, segregating end of life experiences and reinforcing the mentality that death is shameful (Hart et al., 1998).

Normative death discourse as a contributing source of clinician vulnerability

In the context of the OR, 'wild deaths' are the reality of end-of-life care. Patients are escorted to a foreign environment where the expectation is that they will be acquiescent to the medical priorities (Michael & Jenkins, 2001). In these circumstances, patients are passive recipients of care – there is limited opportunity to play a role in autonomously directing the care to be provided. Masked and capped individuals prescribe what might feel like an endless list of requests: removing clothing, applying monitors and invading personal space. Oxygen is applied, deep breaths are taken, and the patient strains to hear the soothing reassurance of the nurse during their last conscious moments (McGarvey et al., 2000). Once the patient is anesthetized, drapes are applied and individuals are further reduced to waves and alarms on an anesthetic machine (Blomberg et al., 2014). When the patient condition becomes critical, team members exercise a spectrum of life-saving measures before death is accepted (Smith et al., 2015). This process often takes hours, maximizing the use of resources, energy, and teamwork (Taylor, Hassan, Luterman, & Rodning, 2008). When death occurs, this happens away from family members and under the care of professionals whose focus is limited to physical injury (Rhodes, Miles, & Pearson, 2006). Despite feeling disheartened and defeated, the team must continue with

their surgical responsibilities – preparing for the following case and caring for other patients – with little space for reflection or grief (Gazoni, Durieux, & Wells, 2008). The needs of the perioperative unit dictate the transient nature of these teams, they are frequently disbanding and reforming, dispersing practitioners and further creating a context for isolation (Bull & FitzGerald, 2006; Lingard, Reznick, DeVito, & Espin, 2002; Sexton et al., 2006).

The family is faced with the unexpected and immediate process of grieving. When the family is permitted by the coroner to view the patient's body, they are confronted with a body left marked by injury and disfigurement from the application of invasive monitoring technology (Todesco, Rasic, & Capstick, 2010). Families face the unexpected and immediate process of sudden bereavement. Goodbyes are condensed into one transient moment, leaving families feeling stunned and traumatized (Fina, 1994).

In practice, Hart, Sainsbury and Short's (1998) depiction of a 'wild death' is epitomized by the attributes of a surgical death. This is a death discourse in which the patient is powerless to biomedical values that are reinforced by the perioperative team and that govern the operative environment. In a context of end-of-life care, aggressive, life-saving surgical interventions risk being interpreted as gruesome. Radical use of technology and prioritization of resuscitative measures in an attempt to supress death undermines the romanticized aesthetic of a natural death process (Walters, 2004). The purported antecedents of a 'good death' – consciousness and ability to communicate – are impossible under general anesthetic (Kehl, 2006). Despite being surrounded by health care providers, the absence of family contributes to an image of OR deaths as lonely and isolating.

Scholars have argued that the 'good death' ideology is perpetuated and implemented by clinicians, ultimately making their death experiences positive and fulfilling (Hart, et al., 1998;

Kehl, 2006; McNamara, 2004). Practitioners have reported professional satisfaction, enhanced self awareness and increased team cohesion as benefits of providing a 'good death' (Kehl, 2006). The illustration provided above, of OR deaths as synonymous with 'wild deaths', means that the 'good death' discourse is unavailable to OR clinicians as a resource to help them make meaning and draw comfort from the patient death experiences of which they are a part. This unavailability has been observed historically; in Sudnow's (1967) hospital ethnography of death he described the processes of standardizing death, a set of activities by which clinicians interpret their experiences. He observed that staff largely used these processes to normalize death and distance themselves, however when exposed to "non-typical deaths" (i.e., death of young patients or unexpected deaths) staff experienced emotional vulnerability (Sudnow, 1967, p. 43). Consistent and repeated exposure to death experiences that are interpreted as chaotic, painful, and traumatic creates a foundation for emotional destabilization – vicarious trauma and second victimization – where adverse and fruitless events devoid of personal fulfillment or positive meaning contribute to a lasting psychological impact.

Socially (un)sanctioned grief

The concept of socially confined grief has been introduced to describe culturally embedded expectations dictating an individual's "right to grieve" (Doka, 2008, p224). Doka (1989) identified the phenomenon of disenfranchised grief: when a person's experience of grief is considered inconsistent with their role or appropriate response and results in inhibited social acknowledgement or validation. Three factors – disenfranchised relationships, grievers and deaths – have been suggested as contributing to the illegitimacy of bereavement and resulting in the experience of disenfranchised grief (Corr, 1999; Doka, 1989, 2002). Individuals who are engaged in relationships that are considered socially 'non-traditional' and may not be publicly

recognized or sanctioned, lack the social support and recognition offered to mourners rooted in kinship (Corr, 1999; Doka, 1989; 2008). Disenfranchised grievers are classified as people who are considered incapable of grieving, generally attributed to limitations in cognitive development, and are therefore socially unrecognized as mourners (Doka, 2002, 2008). Socially stigmatized deaths provoking anxiety or embarrassment can result in disenfranchised grief because they are culturally ignored and can be fraught with assumptions and questions of responsibility or fault (Corr, 1999; Doka, 1989, 2002, Rando, 1993). These experiences are reflected historically: in the treatment of homosexual couples (disenfranchised relationships), the elderly or cognitively impaired (disenfranchised grievers) and deaths resulting from AIDS or suicide (disenfranchised deaths). Disenfranchised grief is both an internal and external process, governing how individuals classify their own grief response and bereavement and shaping the empathy and social support provided by the community (Doka, 2002, 2008; Neimeyer & Jordan, 2002). Due to the lack of social support available to unsanctioned grievers, disenfranchised grief can complicate the bereavement experience, exacerbating emotional symptoms (e.g. anger, powerlessness, despair and guilt) and persisting without resolution (Corr, 1999; Doka, 1989; 2008).

Unsanctioned grief as a contributing source of clinician vulnerability

Considering disenfranchised grief within OR culture is valuable because it allows for the exploration of clinicians' grief through the three lenses suggested by Doka (1989): disenfranchised relationships, grievers and deaths. Because disenfranchised grief is a socially constructed phenomenon, it is crucial to examine the underlying social structures influencing grief experiences and shaping clinician vulnerability. Doka (1998) and Kamerman (1993) also suggest that socially embedded norms resulting in disenfranchised grief may be designed to

protect personal and organizational interests (e.g. reinforcing the traditional idea of 'family', denying recognition of unsanctioned relationships, protecting limited available social support, increasing organizational efficiency and decreasing organizational costs).

Although researchers hypothesized an inverse relationship between grief experience and exposure, studies show that clinicians who have more death experiences do not become protected from the exposure but rather experience a culmination of grief responses (Rickerson et al., 2005). In light of these findings, another source of role conflict with respect to clinician bereavement and grief is the polarization between professional and personal, which is particularly accentuated in perioperative culture. A biomedical focus and limited interactions with conscious patients perpetrates a flawed assumption that clinicians are emotionally distanced from their patients and unaffected in fatal cases (Gazoni, Amato, Malik, & Durieux, 2012). Expectations outlined by professional organizations speak to the importance of fostering 'therapeutic relationships' while maintaining professional boundaries (e.g., Canadian Medical Association [CMA], 1999, 2004; Canadian Nurses Association, 2008; College of Nurses of Ontario, 2009; College of Physicians and Surgeons of Ontario, 2008). Clinicians are caught in an undefined space between two ideals: they are supposed to genuinely *care about* their patients, but they are also supposed to maintain a professional detachment so as to not be personally affected by their deaths. This space creates a platform for disenfranchised relationships and therefore disenfranchised grief (Doka, 1989, 1998, 2008).

Bento (1994) offers a theoretical analysis of how professional roles shape grief experiences within an organizational context. She suggested characteristics of Western working culture that constrain an employee's ability to grieve. Implicit and explicit norms establish ultimate goals of efficiency and productivity (Carton & Hupcey, 2014). Since death is considered

taboo in the operating room, expectations regarding appropriate grief reactions are unclear and result in role ambiguity for clinicians (Bento, 1994). This is reflective of the notion of "disenfranchised deaths" (Corr, 1999, p. 4), deaths that are socially stigmatized due to the incongruence with the expectation of the environment and potential clinician fault (Doka, 1998). Uncertain of how to react, due to limited social recognition and lack of professional direction, clinicians may then experience role stress. This stress manifests into measurable patient and organization related consequences, as illustrated by the stress cascade (Bento, 1994).

Potential for Change

The purpose of this analysis was to expand an understanding of the social and cultural influences that underpin vicarious trauma and second victimization in surgical contexts. It is important to recognize second victimization not just as a cyclical crisis, but a phenomenon sustained by deeply engrained discourses that establish social mores within the landscape of OR care. To fully appreciate the moral reality of this landscape, clinicians must be acknowledged for the role that they play as agents, not only experiencing but also perpetuating the sources of vicarious trauma and second victimization. An acknowledgement of individual contributions to what is ultimately a social and cultural problem can initiate a reflective dialogue about how OR clinicians themselves might intervene to stem the currents of the biomedical model, normative 'good death' discourses, and socially prescriptive ideas about grief, at least insofar as these are the source of the emotional pain that OR clinicians experience when their patients die.

Although this discussion was specific to perioperative culture, we think our analysis can stimulate consideration of social and cultural influences on clinicians' end-of-life experiences in a multitude of care environments. Attributes of the biomedical model, normative ideas of death and unsanctioned grief apply in similar ways to other critical care contexts (Badger, 2001; Beck,

2011; Gazoni et al., 2008; Hall & Scott, 2012; Janda & Jandová, 2015; Seys et al., 2013; Taubman-Ben-Ari & Weintroub, 2008; Wainwright & Gallagher, 2008). These theoretical elements shape how we care for patients at end-of-life, after traumatic incidents or in late stage chronic conditions. They also influence how we recognize the phenomena of second victimization or vicarious trauma in our colleagues and subsequently how we cope. Our hope is that clinicians who work in any environment where patients die engage in thoughtful conversations about how the underlying values and beliefs of their own settings might create the potential for vicarious trauma and second victimization.

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Chapter 4: Methodology

Narrative inquiry is a methodological approach used to understand how individuals create structures for conceptualizing, and ascribe meaning to, social and health experiences (Bruner, 1986; Hendry, 2009; Polkinghorne, 1988; Rejnö, Berg, & Danielson, 2014). Stories are central to human life, providing rich insight into individuals' interpretations and illuminating meaning embedded in complex phenomena (Holloway & Freshwater, 2007). Narrative inquirers consider the contextual underpinnings of stories as individual and social representations (Sarbin, 1986; Spector-Mersel, 2010; Thomas, 2012). The researcher co-constructs narratives with participants, exposing profound understandings of individual experiences, exploring social environments and negotiating meanings of stories (Bruner, 1986; Green, 2013; Spector-Mersel, 2010). The purpose is not to determine the facts surrounding the experience, but to give voice to multiple individuals' expressions of reality through transactional relationships between researcher and participants (Chase, 2005; Hendry, 2009; Wiklund et al., 2002).

Narrative as a Paradigm

Literature has identified narrative inquiry as both a methodology and a paradigm (Gustafsson, Wiklund, & Lindström, 2011; Spector-Mersel, 2010; Wiklund et al., 2002; Zilber, Tuval-Mashiach, & Lieblich, 2008). Guba and Lincoln (1994) describe a paradigm as a "worldview that defines, for its holder the nature of the 'world', the individuals place in it and the range of possible relationships to that world and its parts" (p.107). In contrast, a methodology refers to how paradigms are operationalized; a theoretically informed approach to how we gain knowledge about the world (Guba & Lincoln, 1994). Narrative inquiry has traditionally been described as falling under an interpretive worldview because many constructivist, phenomenological and hermeneutic elements underpin this inquiry (Appleton & King, 1997;

Spector-Mersel, 2010). However, I think it is valuable to use the paradigmatic lens to consider

narrative inquiry, expanding its methodological boundaries to consider how it shapes an

ontological and epistemological research stance. Although narratives have been conceptualized

as a vehicle for deriving interpretation, modern scholars of narrative inquiry articulate it as a

process that, through stories, invents social realities, conveying meaning and individual identities

(Bruner, 1986; McAdams, 1993; Polkinghorne, 1988; Riessman, 2008). Narrative is seen not as

'a means to an end' but as an intertwined philosophical infrastructure that constructs the 'what'

and the 'how': the nature of reality and the relationships embedded within it (Guba & Lincoln,

1994; Spector-Mersel, 2010; White, 1973). To illustrate narrative as a paradigm I will use the

following sections to outline its ontological, epistemological and methodological features.

Ontology. The ontological assumptions of narrative inquiry run parallel to the

interpretive hermeneutic foundations of constructivism (Gustafsson, et al., 2011; Ricoeur, 1976;

Wiklund et al., 2002). Hermeneutic ideologies support a pluralist understanding of social

realities, continuously constructed through reciprocity between individuals, society and their

contexts (Bruner, 1986; Holloway & Freshwater, 2007). Narrative is perhaps even further

entrenched in hermeneutic ideology because of the centrality of stories in the creation of social

realities (Gergen & Gergen, 1988; Riessman, 2008; Sarbin, 1986). Researchers believe storying

is a reactive process that simultaneously shares and shapes an individual's identity, relationship

with others and position within a culture (Alasuutari, 1997; McAdams, 1993; Zilber et al., 2008).

As Sparks (2009) explained, stories "constitute and construct human realities" (p. 3) providing a

framework for how individuals and groups see, experience and explain their lives.

Epistemology. In the narrative paradigm, there is a dynamic association between the

ontological and epistemological considerations; realities are shaped through individual

interpretations and are tied by temporality and culture (Cunliffe, Luhman, & Boje, 2004; Wells, 2010; Zilber et al., 2008). The central foundation of narrative epistemology is the imperative relationships between stories, subjects and researchers in discovering meaning (Spector-Mersel, 2010; Zilber et al., 2008). Stories are both the process and the verbal representations of interpretation as selected by the narrator (Rosenthal, 2004). Three levels of context shape stories: the reciprocal relationship between narrator and listener, the context in which the story occurs and the cultural master-narratives that dictate meaning and behaviours (Bruner, 1986; Polkinghorne, 1988; Zilber et al., 2008). These features situate stories as endlessly evolving phenomena that must be contextualized within each of these three levels to authentically represent the vantage from which they are told (Riessman, 2008; Spector-Mersel, 2010).

Methodology. Since scholars believe social realities and narrative realities are intertwined, stories become the object of inquiry (Riessman, 2008). As such, the content of stories and how they are narrated requires examination and cannot be treated as "transparent containers" for the transfer knowledge (Spector-Mersel, 2010, p. 214). Traditional qualitative methods of data collection are typically employed in narrative inquiry but must be cultivated to encourage narrative response, generally commencing with a neutral, open-ended interview question (Holloway & Freshwater, 2007; Wiklund et al., 2002). Investigators must acknowledge that stories told in research settings are created for that purpose, influenced by interpersonal rapport, the participant's perceptions of the project and how they wish to be portrayed in their narrative (Spector-Mersel, 2010). Five methodological principles are unique to narrative studies and should be upheld through all phases of the study.

1) Although researchers enter the inquiry process with a pre-determined phenomenon of interest, stories must be approached using a multidimensional lens that allows for unexpected

discoveries: integrating alternative interpretations and relational dimensions (Rejnö et al., 2014; Spector-Mersel, 2010; Wiklund et al., 2002).

2) Forms of analysis that deconstruct data into fragmented categories undermine narrative philosophy and therefore boundaries of stories must be respected and treated holistically (Lieblich, Tuval-Mashiach, & Zilber, 1998; Riessman, 2008).

3) The synergy created by layering analysis with approaches that consider both the form and content of stories results in a deeper understanding of and engagement with data (Lieblich et al., 1998; Riessman & Quinney, 2005).

4) Researchers have reiterated that stories do not develop in culturally neutral spaces and context is an essential consideration in understanding the reciprocal relationships between micro, meso and macro dimensions. Recognizing cultures and dominant discourses is imperative in contextualizing stories (Esteban-Guitart & Ratner, 2011; Wells, 2010).

5) The researcher must acknowledge their own stance vis-a-vis the participants and area of interest. As previously described, the researcher's involvement is instrumental in the development of narratives; it is important to recognize any preconceived ideas or experiences that may have influenced how stories are fostered (Cunliffe et al., 2004; Gergen & Gergen, 2000; Holloway & Freshwater, 2007). This continues to be essential during the analysis stage as investigators are encouraged to interpret stories through the translation of their own values and experiences, contributing to the collaborative "kaleidoscope" (Spector-Mersel, 2010, p. 217) of social realities. (Gergen & Gergen, 1988; Rejnö et al., 2014).

Recognizing narrative inquiry as a paradigm is fundamental to this project because it positions the research team to weave narrative ideology throughout all aspects of inquiry. Stimulated by the last three decades of the "narrative turn", this worldview has crystallized as a

research paradigm, however, it often becomes fragmented in application (Bruner, 1991; Spector-Mersel, 2010, p. 205). Researchers apply a storied approach to interviews but dissemble text into fractured units of inquiry during analysis (Chase, 2005; Mishler, 2006; Riessman, 2008). This familiar error results from failing to appreciate that narrative underpins all elements of a study: the epistemology, ontology and methodology. Investigators must consistently uphold the tenets of narrative inquiry, recognizing both themselves and the participants, not as informants but as agents embedded in the stories (Bruner, 1991; Spector-Mersel, 2010). Continuing to perpetuate the centrality of stories is imperative in authentically executing a narrative inspired study.

Narrative Inquiry and Intraoperative Death

The historical and current landscape of narrative inquiry provides a valuable framework for exploring clinician's stories of caring for a patient that dies in the surgical context. Holloway and Freshwater (2007) describe different types of narratives: stories shared with outsiders and inner narratives, an individual's personal beliefs and meanings intertwined through action and story. The researcher must inter-subjectively engage with participants to develop the rapport necessary to discuss and explore inner narratives: individual identities, interpretations of events and underlying meaning (Holloway & Freshwater, 2007). I believe narrative inquiry was the appropriate choice for accessing the inner narratives of perioperative practitioners for three reasons: 1) it provided space and voice to an unrecognized phenomenon; 2) it responded to the need for interprofessional stories to encompass the overall context of working and being in the OR; and 3) it repositioned power from the researcher to the participant. The benefit of each feature in answering the research question has been expanded in detail in the following sections.

Narrative inquiry is a valuable paradigm and research strategy to explore the experiences of intraoperative death because it creates a space for conversation about a relatively unexplored

and intricate event (Hendry, 2009). Brody (2003) determined that narrative inquiry is an appropriate methodology for studying critical events: situations which individuals perceive as important and meriting narration. Three intentions have been described that orient researchers towards a narrative study: 1) narration can be a transformative process that encourages constructive reflection when storying significant events, 2) individuals wish to share their stories and therefore a forum should be provided to 'give voice' to silenced stories; and 3) narratives can be used as an intervention to develop practices in therapeutic environments (Angus & McLeod, 2004; White & Epston, 1990). I believe all three purposes are reflective of why narrative is an appropriate paradigm for exploring stories of intraoperative death. In addition to providing a voice to this underrepresented phenomenon, I hope that participants may see the benefit of reflecting on and vocalizing a difficult experience that receives little professional recognition or support. I also aspire to contribute to a larger conversation that develops strategies to mitigate this experience for clinicians in future practice.

Narrative inquiry is congruent with exploring phenomena in the OR because it stipulates the importance of acknowledging cultural discourses which permeate all levels of narratives. Conversely, these normative ideologies dictate a need for an interprofessional narrative approach to exploring intraoperative death. Stories articulate individual clinicians' interpretations while considering the social and contextual elements of teamwork and operative care (Holloway & Freshwater, 2007). Examining individuals in isolation is futile because it discounts the relational connections shaping individual and team behaviours (Kannampallil, Schauer, Cohen, & Patel, 2011; Mitchell, 2009). By not considering the team context from which these practitioners operate, stories would be one-dimensional, lacking interprofessional complexity and relevance. An interprofessional approach provides opportunity to consider the relationships between

clinicians and how these alter or adapt following intraoperative death. Exploration of multidisciplinary narratives illuminate the experiences of interprofessionals caring for patients that die intraoperatively and the team dynamics that characterize them.

A theoretical understanding of disenfranchised grief (Theoretical Perspectives: Chapter 3) illustrates the need to create space for perioperative clinicians to share their untold, end-of-life stories. This concept is not explored for the purpose of prescribing disenfranchised grief but to understand how current end-of-life narratives are potentially constraining. Similarly, it may be valuable to recognize how clinicians' stories may be molded by consistent exposure to 'wild deaths' or desire to mimic features of a 'good death'. Using a narrative approach to discuss this phenomenon creates a conversation uncovering the unique and unexplored elements of care, while recognizing how these experiences may be supressed (Wells, 2010).

Narrative is a social process, vulnerable to the influence of power and dominant discourses (Holloway & Freshwater, 2007). Research suggests that there is a prominent biomedical hierarchy governing the social context of perioperative care (Lingard et al., 2002). Storytelling re-positions power into the conceptualizations of clinicians who have lived the experience, allowing them to become active participants in defining their reality and creating opportunity to explore untold stories (Wells, 2010).

Setting

This study took place with perioperative staff who work in OR contexts across Ontario and Atlantic Canada. Interview participants were not limited to a particular hospital setting or geographic location but were sampled based on experience caring for patients that have died intraoperatively. This allowed for the exploration of a breadth of stories while considering the similarities and differences between practice contexts.

Sample

The intended purpose of this research was to uncover the untold stories of OR team members caring for patients that die intraoperatively; therefore, large sample sizes, data saturation, or informational redundancy were not feasible or desired (Polit & Beck, 2012). Sampling was based on a purposive approach, drawing on elements of critical case sampling to identify individuals who had experienced the phenomenon of intraoperative death (Holloway & Freshwater, 2007). A perioperative team structure was used to guide clinician sampling, recruiting surgeons, anesthetists, and perioperative nurses.

Key informants from the research committee identified potential participants and a snowball approach was used to recruit additional practitioners. Key informants disseminated the research information and interested participants were directed to contact me directly. I provided potential participants with a comprehensive letter of information and participants were selected based on the inclusion criteria. Physicians (surgeons and anesthetists) were approached through their affiliation with Canadian Universities and were asked to forward research information to colleagues that may be interested in participating in the study.

Nurses were approached using publicly available Facebook sites. A recruitment poster was made available in perioperative nursing interest groups with my contact information and relevant study details (i.e.: purpose of the study, participant eligibility and details regarding the interview process). Individuals who were interested in participating were invited to contact me directly and were provided with a detailed letter of study information. Nurse participants were encouraged to share research information with colleagues using the Facebook forum.

Prospective participants were selected using the following inclusion criteria: 1) English speaking, 2) professionally designated as a surgeon, anesthetist, or perioperative nurse (either

Registered Nurse or Registered Practice Nurse), 3) experienced a patient death in an intraoperative setting, and 4) currently working as a part of an intraoperative team. The decision to limit the study to English-speaking participants was made because I am unilingual. Clinicians were required to be surgeons, anesthetists, or perioperative nurses because together these designations represent the nucleus of intraoperative care and each are essential for surgical interventions to occur (Arora et al., 2010; Bull & FitzGerald, 2006; Lingard et al., 2002). Nurses were not limited by licence as both Registered Nurses (RN) and Registered Practical Nurses (RPN) are involved in intraoperative care teams (Operating Room Nurses Association of Canada [ORNAC], 2015). The methodological decision was made to consider these practitioners under the umbrella term of 'nurses' because of their overlapping scopes of practice, specific to perioperative contexts in Canada (ORNAC, 2015).

Participants. The inclusion criteria were designed to result in the identification of information-rich cases (Sandelowski, 1995). To facilitate detailed analysis of narratives the research team decided to limit collection to 6 participants, based on the content and quantity of data (Polit & Beck, 2012). This sample size also provided an opportunity to interview all three perioperative disciplines—2 Registered Nurses, 1 Registered Practical Nurse, 2 Surgeons, and 1 Anesthetist—allowing for an interprofessional focus. All narrators were currently employed in an OR context and had between 5 and 47 years of perioperative experience. All nursing participants were female, while all physician participants were male. Three participants—both surgeons and the RPN participant—identified themselves as specializing in vascular surgery, while the remaining participants identified no particular speciality. Although everyone had cared for patients who had died, only the RNs had traditional palliative care training or education.

Procedures for Data Collection

Semi-structured, individual interviews using open-ended questions were conducted to stimulate collaborative discussions with perioperative clinicians (Polit & Beck, 2012). Holloway and Freshwater (2007) suggest a narrative interview is facilitated using questions to stimulate a fluid exchange of stories between participants and the researcher. Dialogues must develop organically and frequent interruptions can jeopardize the development of narratives and violate the story-telling process. Riessman (2008) suggests it is more valuable to present probes that encourage a narrative response rather than prepared detailed questions. She also recommends commencing interviews with a broad, open-ended question. The broad question that was used to initiate these interviews was*: can you tell me a story about caring for a patient that died intraoperatively?* Although an interview guide outlining major themes of interest was prepared prior to commencing the study it was modified based on reflections from preliminary interviews. In collaboration with my co-supervisors the interview guide was adjusted to reflect an unstructured approach and probes were modified to foster storied responses. As each interview developed differently, questions were tailored to the stories told in an attempt to expand narratives. This process was documented on individual interview guides to map the progression of interviews. Demographic data was also collected during each interview. In addition to ascertaining information regarding education, years of experience in perioperative care, and perioperative employment, participants were asked about any previous training or experience in end-of-life care.

Interviews were scheduled at a time and place based on the preference of the participant, with the intention of maximizing convenience and comfort. In addition to five in person interviews, Skype technology was also used to facilitate one session with a participant at a

distance. All interviews were audio-recorded, transcribed verbatim and verified against the audio recording for accuracy (Wells, 2010). To ensure confidentiality, each interview was assigned a number and all personal identifiers were removed. For the purposes of writing the findings (Chapter 5), pseudonyms were incorporated. Recording devices and transcripts were physically or digitally protected using locks or passwords accessible only to myself and the committee (Polit & Beck, 2012). Six interviews were conducted ranging from 28–82 minutes in length, averaging 47 minutes. During the debrief period (unrecorded conversations that ranged from 5-10 minutes following the interview) each participant voiced that they found the interview process valuable and that they appreciated the opportunity to revisit and reconsider these experiences. Many were surprised with the emotions which surfaced during storytelling, reminding me that often years had passed since these deaths. All participants reflected that they wished more opportunities for support were available and shared their opinions on what resources they felt would be valuable. Only one participant chose to go back on tape during the debriefing session, however half of the participants reached out informally in weeks to months following their interviews. Two participants reiterated how helpful they had found participating in the study and that they felt better equipped to process intraoperative death in their current practice.

Data Analysis

The first step in analysis was a preliminary, overarching interpretation which entailed reading the entire text to grasp the instinctive meaning and overall message. Transcripts were read with an initial focus on situating the reader in the development of narratives and in observing patterns (Gergen & Gergen, 1987). Researchers describe this process as decontextualizing the data, extracting meaning from the individual level and examining it with a lens of shared experience across participants (Gergen & Gergen, 1987; Wiklund, 2010). This

level of interpretation clarifies the researcher's position, an amalgamation of experiences and knowledge that must be challenged in later stages of analysis.

It became clear during this process that participants vacillated between different levels of narration. At times they would tell stories at a micro level referring to specific characters at a particular time, behaving in sequence. Other parts of the transcript contained large segments of abstract narratives, descriptions of experiences that lacked specifics about time and place. These challenges compelled me to explore the nestled concepts of stories and narratives with the larger intention of understanding how best to analyze and represent participant dialogues. By reflecting on the work of various narrative scholars, I was able to create a definition of what constitutes a 'story' for the purposes of our analysis. The challenges related to this process are discussed in Chapter 6 (Discussion) but three key features were used to distinguish stories about intraoperative death from other segments of discourse: characters, plot, and temporality. I will use the following section to expand on my conceptualization of each concept and to illustrate how these informed our process of analysis.

In order to be selected as a story, the segment of interview had to contain a plot, temporality, and characters. In our study characters included some combination of health care providers, patients, and families but also considered individuals who were not explicitly present (i.e., the narrator's partner, parent, or sibling). The plot is described as pattern of causation, linking events together, illustrating relationships, and creating meaning within the story (Colbey, 2005, Holloway & Freshwater, 2007; Mishler, 1995). Scholars of narrative inquiry caution that the plot is not a linear device but may be circular or iterative. It is illustrated through reflections or projections and evolves throughout the storytelling process (Bruner, 1991; Colbey, 2005; Holloway & Freshwater, 2007; Jovechelovitch & Bauer, 2004, Mishler, 1995). Temporality

speaks to the three linked sequences of a story: the beginning, the middle, and the end. It also represents the story's position within a larger narrative, embedding it in the past, the present, and the future. The work of Cunliffe et al. (2004), exploring an amended version of temporality which they termed "Narrative Temporality" (p. 261), is more congruent with the methodological principles I aimed to uphold in this study. Cunliffe and colleagues (2004) echo the beliefs of a number of other scholars that spatial and temporal contexts are inextricably linked to storytelling and both shape how events occur (Giddens, 1976). Identifying both dimensions (spatiality and temporality) allows for consideration of cultures and social structures which shape how stories are told and the meaning within them.

The second phase of analysis focused on the structural elements of how stories were constructed. This analysis concentrated on the development of plot and direction and intention of narratives (Gergen & Gergen, 1987). The emphasis was on how stories were told, particularly the form and language used to describe relationships between events. This analytic technique explored the narrative genre, major characters, and contextual factors influencing the plot (Elliott, 2005). Experiences were examined for progressive (i.e., move towards achieving desired outcome) or regressive (i.e., desired outcome is thwarted) elements, illustrating the periods of tension within personal narratives (Gergen & Gergen, 1987; Wiklund, 2010). White (1973) describes the construction of a story as "emplotment" (p. 7), the process of ordering events and describing the character's relationship with outcomes. Building on a hermeneutic foundation, Wiklund and colleagues (2002) coined this approach "explanation by emplotment". Like Gergen and Gergen (1987), White (1973) categorizes stories based on four genres: tragedy, satire comedy, and romance. The value of considering how genres develop is that it provided insight into the storyteller. Stories can be told to reflect any genre depending on how the narrator

describes the events and intention of characters. Allowing participants to narrate their experiences gives them latitude to emphasize or minimize elements within the story, purposefully or unintentionally conveying significance. By recognizing how plots contribute to narrative structures, I acknowledged the intent of the narrator and discovered new meanings embedded in their stories. In an article focused on the methodological approach of narrative structure, Rejnö and colleagues (2014) described focusing on this organization of a story as an opportunity to "slow down" (p. 620) and recognize narrative elements that are often overlooked by superficial levels of analysis. Reflecting on structural elements in the text also compelled the researchers to dissociate from their pre-understandings of the experience of intraoperative death and examine how participants storied their experiences.

To operationalize this technique, narrative features (i.e.: genre, characters, contextual factors, plots, master narratives, and areas of tension) were treated as concepts and a qualitative descriptive approach was taken to analyze data (Elliott, 2005; Gergen & Gergen, 1987). During the second read, the researchers coded data around major narrative concepts and identified key information and quotes pertaining to the research question (Holloway & Freshwater, 2007). The researchers created a more focused coding approach with the intent of discovering emerging genres within the data and narrative process (Polit & Beck, 2012). Genres and their embedded elements were mapped within a narrative framework, weaving together elements of primary data to develop paradigm genres (Holloway & Freshwater, 2007). This process entailed both within and across case examination, analyzing individual stories as well as narrative elements spanning genres. During this process areas of tension and patterns were highlighted as requiring further investigation; these nuances were fleshed out using thematic inquiry.

The third phase of analysis was concerned with including the segments of interviews that did not meet the criteria of being a story. Using Riessman's (1993; 2008) narrative thematic analysis, I focused on the content of what participants said across transcripts. This approach was constructive because it accounted for the abstract narrative space in which participants situated themselves for large portions of data collection. Riessman (1993) also guides us to expand our gaze, investigating patterns and concepts of thematic importance across participants. To integrate thematic analysis transcripts, were read and re-read multiple times with a focus on repetitions, omissions, and incongruences (Ayres, Kavanaugh, & Knafl, 2003). Emerging patterns were categorized according to several topics and compared across transcripts. External influences shaping narratives were also considered, the master narrative or dominant discourses outlined in Chapter 3 (Theoretical Perspectives) as well as any other culturally normative assumptions that surfaced (Boje, 2001; Mishler, 1995). Topics were grouped into overarching themes. The researchers re-engaged with transcripts to assess how they contributed to, or diverged from themes. Stories and particular areas of tension highlighted as requiring further investigation in the structural analysis phase were also thematically analysed, to expound engrained significance and re-contextualize findings.

Rigour

Traditional understandings of scientific rigour must be re-imagined within the scope of narrative inquiry. The conceptualization of 'truth' within the participants' stories should not be concerned with the validity of the clinicians' accounts, but as a representation of their interpretation of reality in that moment and context (Green, 2013; Wells, 2010). The researcher must authentically represent the stories of the participants, ensuring coherence, and contextualization (Holloway & Freshwater, 2007). Lincoln and Guba's (1985) criteria for

trustworthiness was used as a guiding strategy to ensure authenticity throughout the research

process. The researcher ensured dependability by maintaining transparency during all phases of

research: design, data collection, analysis, and description of findings (Holloway & Freshwater,

2007). This was illustrated by clarity of writing and a complementary audit trail. Credibility was

ensured by illustrating an intersubjective understanding and accurately representing these social

realties using verbatim quotes (Polit & Beck, 2012). Credibility is supported by data collection

strategies (audio taping interviews, verbatim transcription, and validating texts) and appropriate

depth of engagement with participants to develop rapport and discover inner narratives. A thick

level of analysis (i.e., an analysis that accounts for the narrative space in which stories are

situated) is recommended for narrative inquiry to provide sufficient information to assess

transferability of findings in settings with similar contextual elements (Holloway & Freshwater,

2007). Before commencing data collection, I journaled a statement, sharing my own stories of

intraoperative death. This clarified the my a priori stance which was continually reflected upon

using reflexive journaling (Thomas, 2012; Pyett, 2003). I analyzed narratives in tandem with the

research committee, facilitating integration of different professional perspectives and

establishing confirmability (Polit & Beck, 2012).

Ethical Considerations

Approval from The University of Ottawa Research Ethics Board (REB) was obtained on

August 18th, 2017 following a Full REB review. As per the Ethics application, participants were

provided with an Information Sheet and Consent form. Informed written consent was obtained

prior to participation in the study and participants were notified that their consent could be

withdrawn at any time. The same procedure was followed for participants interviewing by

distance, however consent was obtained verbally and audio-recorded for verification. A

debriefing session was conducted following each interview which allowed participants an opportunity to reflect, without contributing to their recorded transcript. This time was dictated by the needs of the participant and was intended to provide a safe space for individuals to close and process any emotions raised during storytelling. A list of supportive resources was also provided to each participant tailored to their geographical location, should they require additional support moving forward. These resources included in-person, telephone, and electronic options offered by their organization and in their community.

Positioning Myself

As a perioperative nurse, I bring an insider perspective to this project. This stance was valuable, both to identify the presence of death in intraoperative care as potentially destabilizing and to illuminate the cultural narratives shaping this environment. Sigurðsson (2001) suggests an insider understanding is particularly important in research within perioperative contexts as complex socio-political, economic, and cultural processes govern this practice environment and are not widely recognized. I would argue this privileged position was also necessary for the data collection process. A certain collegiality accompanied the invitation to perioperative clinicians to become vulnerable in the telling of their stories. It was valuable in facilitating the interview process to approach participants with the message: 'I see you, I recognize what you have been through because I have my own experiences of living through this too'. I felt as though participants were able to speak openly, sharing their narratives with a peer who understood the complicated nuances of perioperative culture. As narrative inquiry dictates, the investigator and participants co-create stories, a reality that would have been shaped differently without my clinical experience (Allen & Jensen, 1990; Holloway & Freshwater, 2007).

While this insider position is valuable, it is also a powerful influence and at times constraining (Wiklund et al., 2002). I have therefore strived to achieve balance in two ways. We built a strong research committee, comprised of experienced researchers and clinicians who have guided the development and execution of this project. The participation of these individuals created a mosaic of perspectives, bringing backgrounds diverse in palliative care, critical care, family-centered care, research, ethics, bereavement, leadership, and loss. At times, these mentors would reorient me when I became entrenched in perioperative contexts, urging me to question commonly held assumptions and recognize how the strange had become familiar or the familiar strange (Vrasidas, 2001). This also involved me sharing perioperative culture with them, facilitating reciprocal learning that required me to reflect on my own stance within the data.

The approach to data analysis was also threaded with safeguards against imposing my own interpretations of intraoperative death. As Wiklund and colleagues (2002) describe there is a fine balance in the researcher's interface with the data: engaging while maintaining distance. Two approaches were used to facilitate this: a narrative thematic analysis and a deep structural analysis, examining the emplotment and narrative elements of a story (Gergen & Gergen, 1988; Riessman, 1993). Intersecting these two approaches encouraged me to step back from the data, allowing for the identification of alternative interpretations (Ricoeur, 1995; Wilklund et al., 2002). Wiklund et al. (2002) explain the alternative interpretations can be realized by "addressing narratives from different angles" (p. 118), repositioning researchers to examine data using different analytic lenses. A structural analysis, in particular encourages distance from pre-understandings, focusing on the construction of plots rather than the phenomenon of interest (Wiklund et al., 2002). Looking at findings from both approaches highlighted tensions and provided a new perspective from which to question assumptions. Layering these approaches

challenged my pre-existing perceptions, allowing for the development of new understandings

and meaning.

Chapter 5: Findings

Intraoperative deaths: The untold stories of perioperative teams

Abstract

Background and Purpose: The Operating Room (OR) is a clinical context in which interprofessional teams surgically intervene with the intention of improving the health of their patients. Despite this, surgery is high risk, invasive, and the reality is that some patients die in the OR, an outcome which violates the care intention of the clinicians who work there. The purpose of this study was to explore what the stories of caring for victims of intraoperative death revealed about practitioners' experiences of intraoperative end-of-life care.

Methods: Using the narrative paradigm, six perioperative clinicians were invited to share their stories: two Registered Nurses, one Registered Practical Nurse, two Surgeons, and one Anesthetist. Two analytic approaches were used to authentically capture participant narratives: a narrative thematic approach and structural analysis.

Results: The structural analysis revealed the types of stories told—tragedies, satires, comedies, and romances—while the thematic perspective elucidated participant's interpretations of how they were impacted by caring for victims of intraoperative death. Findings illustrated that experiences of intraoperative death are deeply intertwined with perceptions of responsibility. Moments of assumed, shared, or eschewed responsibility impacted participants' relationships, personally and professionally.

Implications for Practice: This study illuminated features which enhanced or deteriorated end-of-life experiences for OR clinicians and their teams, introducing the potentiality of vicarious resilience or moral distress.

Keywords: intraoperative death, responsibility, interprofessional dynamics, traumatic death

Introduction

Surgery is universally understood to have a life sustaining or enhancing purpose (Blomberg, Bisholt, Nilsson, & Lindwall, 2014). This perception is further perpetuated by perioperative staff who hold as their central objective to ensure the safe passage of a patient during the surgical process (Bull & FitzGerald, 2006; Gazoni, Durieux, & Wells, 2008; Tucker, 2009). In reality, Operating Room (OR) staff can be exposed to patient death due to the high-risk and emergency interventions that characterize their care (Pinto, Faiz, Bicknell, & Vincent, 2013). Staff are therefore placed in a tenuous position, situated to sustain patients in life-threatening and sometimes fatal cases. When death inevitably occurs, staff must live and reconcile their experiences in a context where end-of-life is equated with failure (Gillespie, Wallis, & Chaboyer, 2008; Todesco, Rasic, & Capstick, 2010).

Background and Significance

Statistics reporting OR deaths are difficult to access and are often classified by professional discipline (e.g., airway complications or deaths attributed to anesthesia) making it difficult to grasp the overall magnitude of intraoperative death rates (Braz et al., 2009; Li, Warner, Lang, Huang, & Sun, 2009). The World Health Organization (WHO) (2009) flagged surgical death as a patient safety issue, bringing to light the growing prevalence of surgery and its associated risks and complications. Although the WHO's involvement has brought a global focus to the issue of intraoperative mortality, hospitals continue to censor publicly available data related to OR deaths (de Vries, Ramrattan, Smorenburg, Gouma, & Boermeester, 2008). Despite this lack of transparency, research shows that patients in surgical environments are vulnerable to critical incidents, echoing a need to recognize the delicate role of practitioners who care for them (Gawande, Thomas, Zinner, & Brennan, 1999; Haynes et al., 2009; Pinto et al., 2013).

Unexpected deaths have been examined across a variety of other practice environments (e.g., general medical or surgical units, obstetrics, pediatrics, and intensive care) and have been linked to personal and professional destabilization among care providers. Such destabilization is concerning because of the impact on clinicians themselves, and also because of the ultimate threat posed to patient care (Pratt & Jachna, 2015; Scott et al., 2009; Seys et al., 2013). Clinicians exposed to unexpected death are vulnerable to experience feelings of guilt, sadness, frustration, anger, fear, shame, and anxiety as well as sleep disturbances, hypertension, tachycardia, and difficulty concentrating (Martin & Roy, 2012; Pratt & Jachna, 2015). The culmination of these manifestations is linked to emotional numbing, isolation, and depression (Michael & Jenkins, 2001). These experiences are perhaps further compounded in intraoperative contexts due to the invasive procedures conducted by the surgical team on a routine basis. Staff working in this environment consistently witness varying degrees of trauma (Gillespie & Kermode, 2004) and enact interventions that, while performed in a context of care (Bull & Fitzgerald, 2006) are nevertheless assaulting, e.g., incisions that disrupt bodily integrity, unnatural manipulation of anatomy (Killen, 2002). The relevance of such interventions toward a life-saving purpose is obvious. However, when implemented right before a person dies, OR clinicians participate in deathbed scenes that are antithetical to ideas of a 'good death'; ideas that define normative and professional standards for 'good' end-of-life care in contemporary times. (Hartley et al., accepted to Death Studies, 2017).

Surgical interventions are complex and depend on effective collaboration of interdependent practitioners, fulfilling their roles while functioning at an optimal level (Forse, Bramble, & McQuillan, 2011). Surgery has been likened to the airline industry: it is high risk and requires seamless execution (Mazzocco et al., 2009). Goals of care within this sequestered environment

dictate multidisciplinary interdependence: the roles of surgeons, nurses, and anesthetists come together to achieve comprehensive care (Entin, Lai, & Barach, 2006). These clinicians are therefore embedded in team structures, reliant on their colleagues to function in symbiosis and connected by shared responsibilities (Prati & Pietrantoni, 2014; Undre, Sevdalis, Healey, Darzi, & Vincent, 2006). The culmination of manifestations experienced by OR team members in response to patient death can contribute to poor health outcomes for future patients through the lowering of team performance (Awad et al., 2005). Numerous studies demonstrate that the majority of avoidable medical errors are attributable to ineffective team functioning, rather than individual mistakes (Catchpole et al., 2007; Mazzocco, et al., 2009; WHO, 2009). Findings from a literature review conducted by the American Heart Association reiterated that most preventable errors are not related to a limitation of knowledge or skill but rather a breakdown in team functioning (Wahr et al., 2013). They emphasized the importance of relational, interprofessional skills on maintaining patient safety and highlighted ineffective collaboration as the predominant issue underlying critical events. The impact of teamwork failures are documented in studies across a variety of different surgical contexts: labour and delivery, laparoscopic cases, and multi-traumas (Healey, Sevdalis, & Vincent, 2006; Mazzocco et al., 2009).

Within OR teams, each individual caregiver embodies a specific professional identity (Gillespie, Chaboyer, Longbottom, & Wallis, 2010; Lingard, Reznick, DeVito, & Espin, 2002; Mitchell et al., 2011). Professional identity is defined by specific values and commitments; while nurses, surgeons, and anesthetists share a common goal of high-quality patient care, each assumes different aspects of care in service of this goal. Researchers examining intraoperative teams have categorized nurses as patient advocates, anesthetists as maintaining hemodynamic stability (i.e. circulation), and surgeons as treating the illness or injury (Della Rocca et al., 2016;

McDonald, Waring, & Harrison, 2006; Parker, Yule, Flin, & McKinley, 2012; Sax, 2012; Seifert et al., 1993; Spry, 1994). Some would stipulate that team members believe surgeons have ultimate responsibility for the patient and their care (Bleakley, 2006; Gillespie et al., 2008), however, nurses are less likely to endorse this position, believing accountability is collectively shared among the OR team members (Parker et al., 2012; Prati & Pietrantoni, 2014).

Nursing researchers have struggled to identify the overlapping components involved in the perioperative nurse role, recognizing therapeutic care, patient advocacy, and technical competence (Barnard & Sandelowski, 2001; Bull & FitzGerald, 2006; Chard, 2000; Rudolfsson, von Post, & Eriksson, 2007). Perioperative nurses describe their responsibility to patient advocacy as protecting the patient while anesthetized and vulnerable (i.e., maintaining patient dignity, preserving personhood, protecting patients from harm). Physicians echoed similar sentiments, acknowledging nurses as responsible for patient advocacy within the team (Parker et al., 2012; Sax, 2012).

For their part, physicians place themselves at the pinnacle of teams, seeing work processes as controllable and driven by a professional responsibility to effectively meet surgical goals (Finn, 2008; Parker et al., 2012). This outcome focused mentality is reflective of what Potter and Wetherall (1987) call the "technical-instrumental interpretative repertoire" (as cited in Finn, 2008, p. 104), which they suggest underpins the practice of both surgeons and anesthetists. This repertoire frames how physicians view individual and team responsibility: focusing on the culminating goal and valuing behaviours that contribute to efficiency (Finn, 2008; Helmreich & Davies, 1996).

The unique features of the OR place it as a distinctive context from which to explore clinicians' stories of death. Research suggests that clinicians become destabilized following

experiences with unexpected deaths, although little inquiry has been done specifically in the OR (Pratt & Jachna, 2015; Scott et al., 2009; Seys et al., 2013). Reactions following destabilization are reported to impact an individual's ability to function, permeating team structures, and impairing overall performance. A cyclical predicament is potentially created, threatening practitioner competence and patient care.

The purpose of our study was to explore how members of the interprofessional team (perioperative nurses, surgeons, and anesthetists) narrated their experiences of intraoperative death. Using narrative inquiry, we focused on what these stories revealed about practitioners' experiences of intraoperative end-of-life care, their perceptions of responsibility within these experiences, and their descriptions of the impact these experiences have on themselves, on the team, and on patient care.

Methods

Narrative inquiry was used as the paradigmatic and methodological approach to understand how individuals ascribe meaning to their experiences of intraoperative death (Bruner, 1986; Hendry, 2009; Polkinghorne, 1988; Rejnö, Berg, & Danielson, 2014). Stories are central to human life, providing rich insight into peoples' interpretations and illuminating meaning embedded in complex phenomena (Holloway & Freshwater, 2007). Narrative inquiry provided a valuable framework for exploring clinicians' experiences of intraoperative death because it created a space for conversation about a relatively unexplored and intricate event (Hendry, 2009). Brody (2003) determined that narrative inquiry is an appropriate methodology for studying critical events: situations which individuals perceive as important and meriting narration. The purpose is not to determine the facts surrounding the experience, but to give voice to multiple individuals' expressions of reality through transactional encounters between

researcher and participants (Chase, 2005; Hendry, 2009; Wiklund, Lindholm, & Lindström, 2002).

Narrative inquirers consider the contextual underpinnings of stories, emphasizing the importance of cultural discourses that permeate narratives (Green, 2013). Prior to conducting this study, we engaged in a theoretical exploration of 'master narratives' to gain an understanding of the dominant discourses which characterize OR culture and that potentially shape meaning for clinicians caring for patients who die in this environment (Hartley et al., accepted to Death Studies, 2017). Three master narratives— biomedical values, normative death discourses, and socially (un)sanctioned grief – were examined as potential sources for clinician vulnerability. During analysis, attention was given to how these master narratives surfaced in individuals' narratives, recognizing how they were perpetuated and where they were resisted.

Sampling was facilitated by key informants, drawing on elements of critical case sampling to identify individuals who have experienced the phenomenon of intraoperative death (Holloway & Freshwater, 2007). A perioperative team structure was used to guide clinician sampling, recruiting surgeons, anesthetists, and perioperative nurses (including Registered Nurses and Registered Practical Nurses). These designations were selected because together they represent the nucleus of intraoperative care and each are essential for surgical interventions to occur (Arora et al., 2010; Bull & FitzGerald, 2006; Lingard et al., 2002). The first author facilitated semi-structured, individual interviews using open-ended questions to stimulate collaborative discussions with perioperative clinicians (Polit & Beck, 2012). After collecting demographic data (i.e., age, education, years of experience in perioperative care, years of experience in perioperative employment, and previous palliative care training or experience) the broad question that was used to initiate the interview was: *can you tell me a story about caring*

for a patient that died intraoperatively? As each interview developed differently questions were

tailored to the stories told, in an attempt to expand the narratives. All interviews were audio-

recorded, transcribed verbatim, and verified against the audio recording for accuracy (Wells,

2010). To ensure confidentiality, each participant was assigned a pseudonym and all personal

identifiers were removed. The study received ethical approval from the appropriate institutional

Research Ethics Board.

Analysis

Initially we conducted a preliminary, overarching interpretation which entailed reading

the entire text to grasp the instinctive meaning and overall message. It became clear during

reading that participants vacillated between different levels of narration. Some stories would

refer to specific characters at particular times while other parts of the transcript contained large

segments of abstract narratives, a culmination of stories lacking temporality. Using concepts

borrowed from scholars of narrative inquiry we identified key features (i.e., plot, characters, and

temporality) distinguishing stories from other segments of discourse (Cunliffe, Luhman, & Boje,

2004; Holloway & Freshwater, 2007; Labov & Waletzky, 1967; Mishler, 2006). We used the

concept offered by Cunliffe and colleagues (2004) of "narrative temporality" (p. 261) because it

recognizes that spatial and temporal context are inexplicitly linked to storytelling and shape how

events occur. Based on this process two analytic lenses were applied to the data: a structural

analysis to examine stories and a narrative thematic analysis of entire transcripts. Converging

analytic methods offered a way to consider *how* stories were told in addition to *wha*t was said,

creating a synergy that would not have been possible with a single approach to analysis (Rejnö et

al., 2014; Riessman & Quinney, 2005).

The first phase of analysis focused on the structural elements of how stories were constructed. In stories, we examined the concept of "emplotment", the process of ordering events and describing the character's relationship with outcomes (White, 1973, p. 7). Like Gergen and Gergen (1987), White (1973) categorizes stories based on four genres: tragedy, satire, comedy, and romance. We made the decision to preserve the fluidity of plots by highlighting multiple genres embedded within stories, each speaking to different relationships between characters, spaces, and events. The value of considering how genres develop is that it provides insight into the storyteller. Stories can be told to reflect any genre depending on how the narrator describes the events and intention of characters (Gergen & Gergen, 1988). Allowing participants to narrate their experiences gave them latitude to emphasize or minimize elements within the story, purposefully or unintentionally conveying significance.

The second phase of analysis used Riessman's (1993; 2008) Narrative Thematic approach, focusing on the content of what participants said across transcripts. Riessman (1993) guided us to expand our gaze, investigating patterns and concepts of thematic importance across participants' descriptions. Emerging patterns were categorized according to several topics and compared across transcripts. Topics were grouped into overarching themes. Using these topics, the researchers re-engaged with transcripts to assess how they contributed to, or diverged from themes.

Findings

What are the stories? Six participants were invited to share their stories of intraoperative death: two Registered Nurses (RN), one Registered Practical Nurse (RPN), two Surgeons, and one Anesthetist. All narrators were currently practicing in an OR context and had between 5 and 47 years of perioperative experience. Although everyone had cared for patients

who had died, only the RNs had traditional palliative care training or education. The following section endeavours to represent their stories by synthesizing genre and narrative thematic approaches to data analysis.

Individuals shared various stories, some describing violent intraoperative deaths characterized by chest cracking compressions or vasculature falling apart in participants' hands. Other stories illuminated relationships, connections formed between clinicians, colleagues, patients, and families. Thus, while all these stories were inherently tragic they were not *only* narrated as tragedies. In the following sections we outline the narrative elements of the four types of stories: tragedies, satires, comedies, and romances. The same approach is used to explain each section. First we introduce a story which exemplifies the genre. We use these stories in conjunction with literature to elucidate the genre and identify types of death which typically characterized those stories. This will be followed by a description of how genres were deployed by clinicians: highlighting the plots, characters, and temporality of stories using direct quotes from participants.

Tragedy. Sophia (RN) shared a tragic story in which she and her manager helped a team during a chaotic trauma case. They searched through the blood-soaked belongings of a young trauma victim, *"looking for anything [they] could find to identify him, to be able to contact his family"*. She explained, that the

> "*clothes that had come from emergency, that were cut off him, were saturated in blood*" and that "*[his] wallet and everything, like they were caked there was so much blood that we had to wipe it off to be able to see, as well as his cellphone*".

She emphasized that while she was holding these belongings,

> "*One of the nurses came out to tell us that they had pronounced him and at that moment the cellphone rang and it was his father calling. Just, that feeling of like not being able to answer the phone, because what would you say? and it's not really my role to tell the family member that their loved one has passed away based on something that another*

nurse had told me, was a really bizarre feeling for myself, my manager um sort of everybody involved… we just felt…. awful."

Like in Sophia's (RN) story, the narrative tradition of tragedy is characterized by a regressive plot (i.e., moving away from desired outcome) depicting a relationship between characters and challenges in which individuals are ultimately thwarted (Gergen & Gergen, 1988). Characters have varying levels of influence, some tragedies carry a dimension of fault while in others, characters like Sophia (RN) are helpless to a series of sorrowful events (Wiklund et al., 2002). Participants from each discipline narrated elements of their stories as tragedies, particularly when death was perceived as unexpected. Benjamin (Surgeon) reflected on an unexpected death he experienced 15 years previous as a surgical fellow. He expressed, *"the most traumatic part of it [the intraoperative death] was that this guy came in thinking this was just elective surgery and never actually woke up again. So, for me that was pretty… it was pretty significant".* Tragic narratives described situations where care fell short: perceived failures, role limitations or lack of organizational support. In a story tinged with regret, Marco (Surgeon) described a need to compartmentalize following intraoperative deaths because, *"if we just got him [the patient] a little bit sooner, then he certainly could be alive".*

These stories centered around relationships between characters: the narrator, their patients, and their colleagues. Like Sophia (RN), all narrators echoed the tragedy of losing young patients or engaging with young bereaved families. Physicians expressed that having a pre-existing relationship with patients intensified the experience of intraoperative death. Benjamin (Surgeon) tearfully explained, *"It's [intraoperative death] hardest with people [patients] who you have had a pre-existing relationship. Hardest in young individuals, people with family".* If narrators perceived that their colleagues contributed to feelings of powerlessness or regret they

depicted these characters negatively, illustrating themes of interprofessional conflict. In stories where colleagues suffered together, these characters were identified as friends.

A relationship that appeared in clinician narratives occurred within the sphere of self: the participant's reflections of themselves and their own families. Sophia (RN) explained that caring for a cardiac patient was particularly *"upsetting [be]cause … I was a month older than him [patient who died] … it just put it into perspective"*. Similarly, Nancy (RN) justified her emotional response to the death of a trauma patient by expressing, *"[be]cause he [the patient] was so young…. So that was hard. And he looked a lot like my brother which was kind of weird and struck a chord with me as well"*. In these quotes we see that narrators introduced a personal perspective to convey their stories.

Temporally, stories expand past the intraoperative death, permeating spaces outside the OR, and into the narrator's personal life. When narrating tragedies, it was common for participants to focus on the aftermath of the death rather than the events occurring in the OR. This is evident in the story about the patient that resembled Nancy's (RN) brother. She tearfully explained that the accident was a result of drunk driving *"so that's been on the radio lately so it kind of brings it back up, and I'll start crying in the car"*. These reflections lingered towards the future, focusing on the professional and personal impacts of these experiences.

Satire. All disciplines narrated satires, using this genre as an avenue for sharing criticism or describing behaviours that diverged from the narrator's expectations. Satire was used to characterize both expected and unexpected deaths. Nancy (RN) shared a story which reflected satire, questioning the surgeon's behaviour and the team's collective purpose during a ruptured abdominal aortic aneurysm (AAA). She explained that after the elderly patient was emergently delivered by helicopter to the OR,

"The surgeon pretty much just opened him up and stuck his hand in and took a quick look and then look up at the clock and that was it. Like it was a very weird, half-hearted effort. I'm not even sure why we were there, what was the whole point of that"… But I don't know if it's the surgeon's own, 'Ok I need to do this to say that I did it'"

She illustrated a contrast between this story and her perception of traditional emergency care,

"the triple A [abdominal aortic aneurysm] was kind of, it was odd, like it wasn't the same pace as a Class 1 normally is. So, you kind of knew that something was off, so they're just kind of going through the motions". She summarized her story by saying, *"I don't think the Triple A was a good death. But oddly enough the family might be ok with it".*

Micheline (RPN) shared a similar story, a veiled criticism of the surgeon's decision to perform cardiac surgery on a patient who was found unresponsive during winter.

"In my nursing experience [I] could tell by looking at him [the patient] that this was really a lost cause. He was frozen. I mean we went through the motions, put him on bypass but everyone in the room felt it was a futile attempt. And we were ultimately right and he didn't survive but I'm not sure that he would've… I don't think he was really alive… but I the surgeon just didn't want to say 'let's just not bother'"

Satires present as almost two stories, one overlaying the other and creating a message in the space between. In the foreground a narrator shares a story which presents as incongruent with the overarching message or theme (Gergen & Gergen, 1988; Wiklund et al., 2002). In Nancy's (RN) story this was illustrated as the disparity between typical emergency care and the surgeon's *'half-hearted'* surgical attempt. Although satires can be constructed as humorous their predominant intention is to emphasize social criticism, highlighting inadequacies of individuals, groups, or societies (Wiklund et al., 2002).

The characters that were depicted in satires were mainly intraoperative colleagues, although Sophia (RN) reflected on an interaction with a patient's husband. In these stories characters were described as behaving incorrectly, actions that were perceived as negatively influencing clinicians' experience of intraoperative death. Temporally, stories oriented around the time of intraoperative death within perioperative spaces, however, the relational impacts were

long lasting. These encounters affected characters' relationships with their colleagues and with themselves, resulting in interpersonal conflicts, deteriorated team functioning, and complicated grieving.

Satirical stories illustrated inconsistencies. Although Nancy (RN) described her surgical colleague by saying, *"he's a really great guy, he's an excellent surgeon"* she was disillusioned by his *"nonchalant"* leadership approach when their patient died. In one of his stories, Marco (Surgeon) illustrated himself as powerless: he was inhibited by his colleague's poor judgement and unable to intervene to save their patient. After participating in an unsuccessful resuscitation Micheline (RPN) reflected that

> *"I also felt… Upset because I remember the doctor [surgeon colleague] coming in and saying, 'why is it taking so long for the porter to get here [to take the deceased patient away], I need to start my other case', and I was just like, why, you know, like she's still here… and she's still a person, she's just not, you know, alive anymore".*

Despite her desire to honour the personhood of her deceased patient, Micheline's story was sprinkled with examples of her colleagues depersonalizing the patient and from her perspective, limiting her own grief and bereavement. Many narrators expressed an underlying discourse of eroded interprofessional respect, using satire as an avenue to voice hidden conflicts within OR teams.

Comedy and Romance. Nancy's (RN) previous story about the ruptured AAA patient also reflected comedic and romantic elements. The majority of her story focused on the events following death when she and her colleague created a space outside the OR for the family to grieve their father. Since this was her first intraoperative death her colleague mentored her through the experience. She reflected,

> *"I mean there is always pressure to do the next case but she [her nursing colleague] was adamant about taking the time and giving the family time as well. So that was a great example for me. I knew that was the right thing to do but you don't always feel*

empowered to say it. That was good. And, if I ever were in that situation again, like, I would feel Ok saying that because she [her nursing colleague] showed me the way".

Nancy moves past the OR death, reflecting that through mentorship she has been empowered to facilitate, and advocate for the importance of, creating space for families to grieve their loss.

Comedy, in the sense referred to here, does not mean humour, nor does romance refer to attraction among characters. Comedic and romantic plots illustrate relationships between characters and challenges where individuals are ultimately victorious: providing quality therapeutic care, becoming enlightened, or unifying during times of crisis (Gergen & Gergen, 1988; Wiklund et al., 2002; Wilklund, 2010). Since these genres are highly intertwined and ultimately describe overcoming challenges we considered them together. These genres described positive aspects embedded in the process of caring for victims of intraoperative death, regardless if death was expected or not.

The nurses and anesthetist told stories that reflected comedic and romantic genres; the focus of these stories was placed on relationships rather than the outcome of death. Characters were individual clinicians who functioned within team structures to deliver care to dying patients and their families. Narrators described comedic and romantic plots to illustrate actions where characters exemplified their own values: prioritizing therapeutic care, engaging in mentorship, and collaborating to meet shared goals. Like in Nancy's (RN) story, although the patient death was not a positive outcome, empowerment was a positive aspect learned through these experiences and narrated in comedic or romantic styles.

Some of these stories were located within the walls of the OR and described valiant efforts to sustain patients despite tremendous injury.

"It was a full blown resuscitation effort. The anesthesiologist and the resident and the tech, they were all there. They were doing their thing. There was a line up of three

residents, med students, whatever they were, I didn't even recognize half of them. They were lined up so they could take turns doing chest compressions."

This anecdote told by Nancy (RN) depicts individual clinicians coming together during a critical time, endeavouring to collaboratively achieve a shared goal and exercising a full spectrum of abilities.

Other stories were situated outside of the OR, after the patient had died and the team was focused on providing bereavement care to the family. These stories describe colleagues building therapeutic relationships with families and attending to their spiritual and psychological needs following loss. Larry (Anesthetist) described an enriching relationship with a patient's family following a medical error, *"the family asked to meet with me. So, they said: 'We would really like to thank you for being upfront and honest'"*.

Sophia (RN) described connecting with colleagues following a death, *"in that particular instance the staff that I was involved with, we pulled together and like had sort of an… informal debrief, more so as friends, not as professionals"*. Nancy (RN) reminded us that these bonds are long lasting, describing two colleagues with whom she experienced an intraoperative death event as, *"they are part of my OR team for sure. Like for the rest of my life"*.

What do these stories reveal about participants' experiences? An overarching theme of responsibility permeated all layers of participant narratives. Notions of responsibility defined a lens through which participants viewed themselves, their colleagues, and their contexts. In both stories and larger narratives responsibility presented in three ways: assumed, shared, and eschewed.

Assumed responsibility. Clinicians spoke to an awareness of role responsibility, delineated by their professional stance. A sense of responsibility to care for patients was articulated in all narratives and often blended with caring for the patient's family. After death

care was expressed to be particularly important and included: facilitating time for families, maintaining patients' dignity, cleaning the patient, providing spiritual support, preparing the family, and building therapeutic relationships. Using the theoretical lens offered by Bull and FitzGerald (2006) we were also able to identify moments of "caring in a technical environment" (p. 3) laced throughout clinicians' narratives. Examples included: giving blood, adapting end-of-life protocols, and efficient handling of instruments, all of which were done with intention of providing optimal patient or family care. In Nancy's (RN) story she described altering protocol, not initially putting the patient on a morgue stretcher since she perceived this may be upsetting for the family.

> "We didn't put him on the morgue stretcher right away because we didn't want the family to see that. We didn't know if they would notice but just little things like that, you are still thinking of, not just the patient but the family as well"

Nancy is demonstrating the intention of caring within the scope of her task-based responsibilities.

While all disciplines reflected on their professional responsibility to care for both patients and families, clinicians diverged in their perceived role responsibility vis-à-vis intraoperative death. In their narratives of intraoperative death, nurses and anesthetists defined their responsibilities according to the process of providing care. In a story about a young trauma patient that died, Nancy (RN) described her responsibility to anticipate needs and how enacting this was central to her nursing role:

> "I was the one that said, 'I am getting you the vascular pan' and they ended up needing it. And I remember feeling like, 'Ok, **I knew what I was doing. I did what I was supposed to do.'** That's what I did for this patient. **Like I didn't, I didn't let him down**

Despite the patient's ultimate death in this case, Nancy tells us she fulfilled her purpose in caring for this person; she goes on to say "*he was in a car accident [but] it wasn't me*". These words

hint that when patients do die, it is important for participants to know that their own (in)actions are not the cause of the death. For example, Larry affirmed that team performance was not necessarily reflective of the patient outcome and ultimately the body was uncontrollable. His narratives were not coloured with sentiments of fault or guilt but of situations that demanded adaptation while recognizing his limited control.

The surgeons spoke of responsibility with respect to the patient outcome. They spoke about having physiologic control and when this failed and the patient ultimately died, they were afflicted with regret. This sense of ultimate responsibility could also be compounded by the voiced perception that surgeons felt responsible for the entire intraoperative team. In a very literal contrast to their colleagues, surgeons used the word 'responsibility' explicitly when describing their role in the OR.

The surgeons' stories were followed by speculative statements, questioning their own decision-making and what alternative interventions might have altered the outcome. Marco described: "*I think it [intraoperative death] takes me down for a little bit. Especially if there was something that you could've done differently, then you always question, 'what if this was this, would he have survived?'*". This attitude draws parallels to the genre of tragedy, if surgeons perceive death as synonymous with fault, in cases of intraoperative death they are consistently thwarted by challenges. Benjamin provided insight into this mentality, describing a deeply rooted dichotomy balancing death and professional legitimacy:

> "*I think surgeons have, I think there is a little bit of a god complex... I think surgeons in general don't, like we, not that we fear death but we are against death so we are constantly finding ways to avoid death, that's what we do… You have this like perverse fascination with death and you want to avoid, it's almost like you are fighting death, all the time. It's you against death. And so, you always feel like you want to stick with it. You want to, continue doing what you are doing. So you can help other people.*"

Shared responsibility. Ideas of shared responsibility were discussed by participants in the context of interprofessional teams and collaboration. Ideas of shared team responsibility were particularly prominent when participants talked of the moments surrounding decisions to end life-sustaining efforts, and of giving and receiving support from their colleagues following a patient death. For example, Marco (Surgeon) reflected on sharing responsibility with others in deciding to "call" a patient death:

> "*I try to make it a team approach with the anesthetist as well, if we decide that we are going to stop it's because the blood products are all gone and it's a, it's just… nothing's working to keep the blood pressure over 60 or 70 and so, we will just call it. So, it's certainly a team approach*"

This narrative echoes a story Nancy (RN) told where she remembers the surgeon seeking everyone's *"medical opinion, [asking] 'Is there something else we can do?'"* before declaring time of death.

Larry (Anesthetist) named a number of his anesthetist colleagues whom he would turn to for advice and support particularly after a patient death. Nancy (RN) explained that in a situation where debriefing was not endorsed by the team, she had her nursing colleague to speak with which helped, *"I had my [nursing] co-worker at the time to talk about it [the intraoperative death] with so that was kind of… unofficial debriefing. That can, that helped. It helped me. I don't know if it helped her*". All participants shared anecdotes about informally debriefing with peers, a collegial responsibility that seemed to knit individuals together based on common experience and discipline. While in Sophia's (RN) story this informal debriefing was done interprofessionally, all the other participants described debriefing with clinicians of the same discipline (i.e. nurse to nurse, or surgeon to surgeon).

Eschewed responsibility. In contrast to 'assumed' responsibility which was an internal examination of self, participants explored the external behaviour of others when considering

perceptions of unfulfilled responsibility. This presented as a type of oscillating finger-pointing, shifting between disciplines.

> *"The surgical resident, he was asking if the ward clerk could fill out the death certificate. Like, no that's your job, like to him [resident] it was just a burden of a task and he had a billion other things to go do on the floor. So, I don't know if they have time to process the death. I don't know. Or if they even want to".*

Here, Nancy (RN) demonstrated that it mattered to her that her physician colleague not delegate what to her is a meaningful part of the care process surrounding patient death. She expected her physician colleague to take personal responsibility for this aspect of care, and when he did not, she was left wondering whether this eschewing was due to environmental constraints (time pressures) or merely personal disinterest.

Benjamin (Surgeon) spoke of colleagues he referred to as *"shift workers"* (i.e., nurses) saying, *"I do think that they do care but it's a different type of care"* and *"even anesthesia, anesthesia too, I don't feel like they have as much at stake".* He attributed this difference to what he believes is a societal expectation that the responsibility of patient care rests with the surgical staff, although he recognizes this may also be a self-perpetuated expectation:

> *"I often feel that most of the burden of intraoperative death is, or the risk of intraoperative death is on us [the surgical team]… if someone dies it's on us and the first person that they would, that people would or society or maybe ourselves point the finger at is ourselves"*

Eschewed responsibility also surfaced regarding a perceived lack of emotional support given to families or colleagues. Larry (Anesthetist) recounted numerous scenarios that culminated in similar circumstances, when the opportunity arose to sit with families following death and for which his surgeon colleagues were absent. Larry (Anesthetist) felt this absence was because the surgeons felt they were not at fault, and instead attributed the death to an anesthetic error. Larry stated, *"very often I've sat down [with families] with a nurse and no surgeon. The*

surgeon left it to us, saying 'it was an anesthesia misadventure… I[surgeon] did my job, my job was well done'". Nancy (RN) reflected on a situation where she perceived a surgeon's attitude to be indifferent about his colleagues' emotional response following a traumatic death:

> *"He said, 'so I guess we are supposed to be doing these 'team debrief' now, so I will be in this room for ten minutes if anyone wants to talk'. Like it was so nonchalant. Like non-meaningful, like he's just saying it like: 'I have to do this now', 'my next task'".*

Nancy (RN) explained that this attitude discouraged her from attending the debrief, and that she later regretted that another opportunity was never offered.

Nancy's (RN) disappointment was shared by the other participants, all of who had never accessed formal resources and many who felt that the organization was eschewing their responsibility to provide staff support. Each participant spoke of strategies they wished were available following traumatic deaths: interprofessional debriefs, follow-up phone calls with a trauma-informed nurse, individual counselling, or just "*half an hour to sit and talk about it*" (Micheline, RPN).

Benjamin (Surgeon) attributed the organization with creating a culture of disengagement and embedding this within hospital processes and health care environments. "*I think there is this movement towards like, more shiftwork, less responsibility towards a patient: 'I [the shift worker] just come in, I put in my 12-hour shift and then I go home'",* he said. He believes health care is becoming *"more impersonal"*, *"so I can see how intraoperative death will also become less of an issue emotionally for people"*. Larry (Anesthetist) also alluded to the disengagement he observed from his anesthesia colleagues. He described the design of the OR suite as a contributing factor, isolating anesthetists in their *"pocket at the head of the table"*. In her reflection Sophia (RN) provided insight to how clinicians internalize the idea that they need to suffer in silence,

"*Maybe you don't want to be that person that's requesting the debrief, that's asking for support resources for whatever reason. Um, maybe I've felt like because nobody else has brought it up maybe that I shouldn't be so bothered by it, so I won't bring it up either"*.

These perspectives illustrated that along with individual clinicians, the organization contributes to a culture that eschews the responsibility to support clinicians after traumatic experiences.

What are the interpretations of impact? Two main themes surfaced when considering interpretations if impact: impact to participants' external relationships (i.e., with colleagues, patients, and families) and impact to participants' relationships with themselves and their work. The following section expands on these themes.

It is evident that OR practitioners become involved with the intimate moments of a patient's death and their family's grief. All participants described humanizing these individuals as important, conveyed, for example, through non-verbal techniques such as touch. Both physicians and nurses perceived engaging with families as an extension of caring for patients, and felt this was a central aspect of their role. Stories where colleagues were described as violating these expectations—dehumanizing patients or disregarding families—resulted in interprofessional conflict.

Benjamin (Surgeon) expressed his discomfort when his peers engaged in dehumanizing behaviours after a death: "*I know that this is how they deal with it and sometimes I wonder 'are they actually dealing with it? Or ... are they actually psychopathic and they don't have emotion?'"*. In a previous quote, Micheline (RPN) shared a story where her surgeon colleague attempted to rush post-mortem care to facilitate his next case. This perceived dehumanizing and disrespectful behaviour had consequences:

"*I was angry with him. Because I felt as though it was disrespectful to the patient who had passed away to just want to hurry up and finish your next case so you don't get cancelled. Like that to me felt very cold. And so, for a while there I found it hard to work with him because it was just, that was all I could remember was that attitude"*.

Sophia (RN) admitted post-mortem practices hinge not just on professional expectation but are also personally restorative:

> "*I do think it's better for me, personally. I guess there's more closure if I am able to see... witness the experience [of bereavement] through the eyes of the family and make sure that they get what, I think, they need from the experience*"

Physicians also attempted to facilitate bereavement, describing a family-centered-care intention of 'getting patients to the Intensive Care Unit (ICU)' (i.e., keeping them alive long enough for transfer out of the OR). Despite potentially involving futile surgical interventions, providing families with the opportunity to say goodbye in the ICU allowed physicians to feel that they were enabling anticipatory grieving and closure.

Although all participants were critical of characters in their stories who behaved impersonally, they nevertheless held themselves to an expectation of maintaining a dichotomy between the personal and the professional. Across disciplines the belief was reiterated that clinicians could not become emotional with family; participants described this as *"not falling apart"* (Marco, Surgeon) and remaining *"stoic"* (Larry, Anesthetist). These sentiments implied that becoming outwardly upset was incorrect and violated a professional value. This perceived need to quell emotions also permeated into the OR suite. Participants' narratives conveyed a sense that emotions ought to be disconnected from the surgical process because they contaminated clinicians' proficiency and focus. When exploring cardiac deaths, Sophia (RN) described this as almost an unconscious practice, becoming occupied with tasks was a protective mechanism against processing the death of the patient:

> "*It was... traumatic and busy but I think because the cases themselves are so... busy and so... um... there is so much to do as a nurse. I guess I found that a bit distracting. I was able to focus on that rather than the patient. Um, the fact that the patient had passed*".

While she doesn't describe doing this intentionally she conveys a sense that being distracted is helpful and that it insulates her from the emotions of loss.

Unlike his colleagues, Benjamin (Surgeon) recognized his emotions but ascertained that they do not tactically change his performance: *"I am pretty good at, you know, my hands won't shake, because I have a task or a duty... But emotionally it's... it's horrific... it's almost as if your hands are disconnected from your mind".* Although in Benjamin's (Surgeon) case both the professional and the emotional are present, he shares the communal belief that they must remain disconnected.

Shrouding the personal occurs within a culture of silence. Participants repeated phrases of the form, *'we don't talk about it'* (Sophia (RN), Micheline (RPN), Marco (Surgeon), Larry (Anesthetist)). Such statements reflect an unwillingness to collectively acknowledge the link between experience and emotions. Although a perceived responsibility to share these experiences with individual colleagues existed, as described above this rarely expanded to include the entire interdisciplinary team. Culturally rooted explanations were offered for the collective hesitation to engage in open, and potentially vulnerable communication. Examples included heavy caseloads, erratic work hours, other patient priorities, hierarchical intimidation, and a reluctance to explore upsetting memories. Sophia (RN) reflected on this culture of silence. *"It's almost, it's almost like we [the OR staff] don't talk about it [death] and for whatever reason, there seems to be a hesitation on the part of staff to sort of bring importance to it".*

Although participants maintained that professional and personal spaces should remain separate, all clinicians spoke of professional experiences that permeated their personal lives. Following an intraoperative death, participants described difficulty sleeping, fear of driving, strife in their personal relationships, deteriorated professional confidence, and prolonged grief.

Each narrator described turning to a partner for support although, as Micheline (RPN) acknowledged, these conversations are limited because of commitments to patient confidentiality. Larry (Anesthetist) shared how an error made in the OR that resulted in a patient death impacted his personal life, *"that was really traumatic. The thing is you can't take a day off work because you need to be there… but …I thought about that case, in fact, I had several bad dreams about it. For, for about… six months"*.

The belief that the 'professional' and the 'personal' are incongruent creates a lens that influences how participants interpreted their experiences. Although this attitude is not always perpetuated consciously there is a shared mentality that the personal self does not belong in professional contexts. Practitioners struggle to keep these perspectives separate, an arduous task being that they appear intertwined.

Discussion

Examining genre in parallel with narrative themes captures a broad portrayal of the features that characterize practitioners' experiences of intraoperative death. Participants largely positioned situations of intraoperative death as expected or unexpected. This positioning reflects findings articulated by Cynthia Bacon (2017) exploring nurses' experiences of "Failure to Rescue" (p.303). Although the nurses in Bacon's (2017) study believed that unexpected deaths were categorically more emotionally distressing, among our participants, type of death did not exclusively dictate an emotional response. Interpretations of OR death experiences differed by discipline and were defined by an individual's assessment of their responsibilities, relationships, and latitude of personal expression.

Although unexpected deaths were usually described as being more emotionally challenging for clinicians, their experiences of these deaths were not universally categorized as negative. The

nurses and anesthetist voiced that OR deaths were not failures if every possible attempt was made to save the life. These stories were constructed using progressive, comedic or romantic plots and conveyed assumed or shared responsibility. This interpretation was comforting – while these cases were still upsetting, practitioners felt comforted by fulfilling their responsibility and attributed death to the mechanism of injury rather than blaming themselves. Conversely, regardless of predictability, nurse participants felt that intraoperative deaths were more upsetting if they interpreted that the care was incongruent with the purpose or responsibility of practitioners. Recall in Nancy's (RN) story where she perceived care to be *"half-hearted"* and how she and Micheline (RPN) both described the teams as *"going through the motions"*. Nurse participants perceived these behaviours to violate the role responsibility of perioperative teams and had difficulty reconciling their involvement. These stories reflected satire as a channel for criticism or tragedy when narrators felt powerless and regretful.

Physicians presented an alternative perspective to that of the nurses, potentially attributed to differences in what Peter, Mohammed, and Simmonds (2013) refer to as "social location" (p. 466). Their study used a critical narrative approach to explore nurses' moral experiences in situation which they perceived care to be unnecessarily aggressive. Peter et al. (2013) identified social locations as crucial to understanding disciplinary interpretations of moral responsibility and how these change clinicians' perception of care. The concept of social location is understood as an individual's place within society as defined historically through features such as gender, race, social class, age, occupation, religion, and geography (Bishop, 2002). Social locations come with a set of cultural assumptions or master narratives delineating roles, responsibilities, power, and privileges ascribed to particular groups. Peter et al. (2013) explain that team members carry different beliefs about moral responsibility and patient care depending on their

social location. As identified in the findings, physicians described providing families with an opportunity for closure and anticipatory grieving by transferring patients to the ICU. This perspective is an aspect of the care trajectory that OR nurses are not privy to, their social location is limited to the perioperative department while physicians work in different units (Gillespie et al., 2008: Pinto et al., 2013).

In their discussion on witnessing and providing aggressive care, Peter et al. (2013) address two other considerations which are valuable when reflecting on responsibility and team dynamics in our study. The first is recognizing the privileged position of some forms of knowledge over others, namely the dominance of physicians' biomedical knowledge over nursing knowledge. Micheline (RPN) uses this hierarchy of knowledge to impress upon the listener the futility of her patient's condition, explaining that even from her nursing perspective she could tell the surgical intervention would be unsuccessful. As reflected in Nancy (RN) and Micheline's (RPN) stories, nurses in Peter and colleague's (2013) study felt subjected to providing care which was incongruent with their role responsibility. Although these interventions were dictated by physicians the entire team was implicated in the care, a dynamic which has been attributed to the power of privileged biomedical knowledge.

Another feature which is relevant is the idea of time. Time is articulated by Peter et al. (2013) as the period which individuals require to acknowledge death, also defined by their social location. These authors explain that "time and responsibility [are] deeply intertwined in narratives" (Peter al., 2013, p. 569). Meeker and Jezewski (2008) identified that families require time to recognize their loved one's deteriorating health and that aggressive care (e.g., Cardiopulmonary Resuscitation (CPR)) can be an indication that every possible life-saving measure was attempted. This "reframing [of] reality" (Meeker & Jezewski, 2008, p. 165) has

also been speculated to be important for physicians as they have the ultimate responsibility to decide when life-saving interventions are withdrawn (Bratcher, 2010; Visser, Deliens, & Houttekier, 2014). Because of this social location, authors suggest that in order to fulfill their responsibility, physicians require more time to trial interventions and assess patient conditions than their nursing colleagues (Peter et al., 2013; Wilson et al., 2013). Timmermans (2005) explores the concept of "death brokering" which he defines as "the medical activities of authorities to render individual deaths culturally appropriate" (p. 993). Timmermans (2005) identifies that interventions like CPR or surgery are team process that involve many clinicians. When patients die during these interventions the responsibility of this outcome is distributed among a group of clinicians rather than an individual physician. Timmermans (2005) and Peter et al. (2013) allude to the concept of socially acceptable deaths, positioning hospital deaths as socially acceptable in medical contexts if every surgical option was exhausted.

Interestingly, the nurses and anesthetist in our study identified that cases where every life-saving attempt was made were inherently not failures, adhering to Meeker and Jezewski's (2008, p. 165) "reframing reality" ideal that time is required to facilitates death acceptance. Perhaps like Timmermans (2005) suggested, by participating in team processes (i.e., CPR, retrieving necessary equipment, hemodynamically stabilizing the patient) and fulfilling their responsibility these participants felt the outcome of death was shouldered among clinicians, alleviating any one clinician's distress. This perspective echoes the findings from Parker et al. (2012) and Prati and Pietrantoni (2014) that nurses believe accountability for patient outcomes is collectively shared among teams rather than a surgeon's responsibility. Although nurses interpreted some care as futile, it is possible that in these cases the other clinicians required more time to accept the outcome of death. Recall Benjamin's (Surgeon) description of a surgical *"god complex"* a

constant fight in which all attempts to avoid the outcome of death are intertwined with a surgeon's professional responsibility. This mentality was illustrated in Micheline's (RPN) story, although the rest of the team felt care was futile the surgeon needed time to fulfill his responsibility, exhausting all options before determining death. Similarly, in Nancy's (RN) story, the surgeon may have felt morally responsible to attempt surgery and as she identified, to tell the family honestly he did everything he possibly could. Although Nancy did not identify her patient's death as a 'good death' she reflected that the surgeon's behavior may have helped the family accept the loss of their father.

So why do clinicians perceive some cases as requiring a full spectrum of interventions while others are classified as futile? Timmermans (2005) suggests these perspectives are tied to cultural scripts of dying. Clinicians assign these scripts to patients based on the patient's social location (e.g., age, social class) and use these scripts to dictate their clinical responsibility. Timmermans (2005) believes clinicians "broker" different kinds of deaths—the natural death, the good death, the dignified death, and the resuscitated death—to "make sense of apparently senseless deaths" (p. 995). He explains death brokering can be viewed as creating a framework which dictates the medical interventions appropriate to specific social scripts of dying (Timmermans, 2005). In Nancy (RN) and Micheline's (RPN) stories they may be adhering to a different script than that of their colleagues, classifying death as 'natural' due to the age or health status of their patients. The surgeons in these stories brokered 'resuscitation' deaths, employing a cultural script which dictates maximal surgical intervention. Similarly, to Peter and colleagues' (2013) ideas of surgeon responsibility, resuscitation scripts protect against self-blame because everything medically possible was attempted. Different perceptions of cultural scripts of dying

result in interprofessional conflict due to the varying frameworks of moral responsibilities and appropriateness of care.

Narratives from all disciplines were shared that included situations where colleagues were not perceived to be proficient or responsible. All stories resulted in varying degrees of interprofessional conflict. For physician narrators, these stories focused on skills and proficiency while nurses spoke to inadequate leadership and devalued bereavement. These interpretations are further reflected in the research examining the divergent conceptualizations of team held by nurses and physicians. Finn (2008) describes that nurses define teamwork using a "relational repertoire" (p. 104). This perspective focuses on collaborative processes and tends to value interpersonal skills over tactile competence (Bleakley, Allard, & Hobbs, 2012; Gillespie et al., 2010). Conversely, authors exploring the roles of surgeons and anesthetists have identified physicians as embodying a 'technical-instrumental interpretative repertoire' (Finn, 2008, p. 104) that focuses on the culminating goal and prioritizes behaviours that contribute to efficiency (Helmreich & Davies, 1996; Potter & Wetherall, 1987).

Lingard et al. (2002) suggest the concept of "construction of the other" (p. 728) a categorical way that clinicians position their colleagues based on motivations and responsibilities. Building on the work of Burke (1969), they explain that individuals tend to identify each other using one motive, reducing multidimensional roles to one "tonality" (Lingard et al., 2002, p. 732). Tonalities are described as single terms which assign a characteristic to a person or group of people that infers assumptions about their attitudes, responsibilities, or purpose (Lingard et al., 2002). Benjamin (Surgeon) uses the tonality *"shiftworker"* to describe nurses, conveying a message that nurses have less responsibility and are less emotionally involved when their patients die intraoperatively. Burke (1969) explains that human beings tend to use terms that

juxtapose, selecting a tonality that illustrates ourselves favourably and defining others' more critically. Similarly to the physician in Lingard and colleagues' (2002) study, Benjamin (Surgeon) implies (in contrast to the *"shiftworkers"*) the burden of responsibility and emotions associated with intraoperative death rests with the surgical staff. Although tonalities were not always explicit, this counter-positioning was reflected in many other stories told by participants, particularly when criticising their colleagues' behaviours. Nurses positioned themselves as humanizing patients or advocating for bereavement while physicians were depicted as violating personhood. Burke (1969) cautions against oversimplifying tonalities of responsibilities as this can lead to one-dimensional understandings of team dynamics and can inhibit conflict resolution. Lingard et al. (2002) agree that oversimplifications can distort team relationships, decreasing their abilities to identify issues and communicate solutions. Helmreich and Schaefer (1994) and Lingard et al. (2002) warn against this distortion, explaining that perpetuating tonalities isolates clinicians and prevents the necessary evolution of OR teams.

After death care provided to patients and families was a final feature that characterized how narrator's perceived their experience of death. All participants described these interactions: building therapeutic relationships, supporting the family emotionally, facilitating a bereavement space, protecting patients' dignity, and providing spiritual support. Many of these behaviours were reminiscent of features of a 'good death', recreated post-mortem to make experiences meaningful for families and clinicians (Holdsworth, 2015; Kehl, 2006). When elements of a 'good death' were facilitated they were shared using romantic plots illuminating redeemable and emotionally mediating aspects within catastrophic stories. If characters were hindered in providing aspects of a 'good death' they constructed tragic plots in which they felt powerless and emotionally vulnerable.

Scholars have argued that the 'good death' ideology is perpetuated and implemented by clinicians, ultimately making their end-of-life care experiences positive and fulfilling (Hart, Sainsbury, & Short, 1998; Kehl, 2006; McNamara, 2004). As reflected in the research exploring the purpose of a 'good death', Sophia (RN) alluded to the significance of these practices for her own closure. Our study identified that perioperative clinicians hold aspects of delivering a 'good death' as central to their responsibility.

Decades of research in nursing, and more recently for other fields including medicine, have established that when clinicians feel unable to fulfill their perceived responsibilities in care they are vulnerable to experience moral distress (Hamric & Blackhall, 2007; Oh & Gastmans, 2015). Moral distress has been linked to destabilizing psychological and physical manifestations including: avoidance, numbness, fatigue, anxiety, headaches, nausea, anger, guilt, depression, frustration, decreased confidence, and social withdrawal (Epstein & Delgado, 2010; Rushton, Kaszniak, & Halifax, 2013). As illustrated in our study while participants assume and share responsibility they also perceive eschewed or constrained responsibility. All participants described symptoms of destabilization which impacted both their personal and professional lives. Are these symptoms of involvement in a traumatic experience or moral distress resulting from unfulfilled responsibility and interprofessional conflict? If perioperative clinicians make meaning out of experiences based on the degree to which they exercise their responsibility this may be a central feature which protects them against un-rectifiable deaths and moral distress.

Limitations

The intended purpose of this research was to uncover the untold stories of OR teams caring for patients that die intraoperatively; therefore, large sample sizes, data saturation, or informational redundancy were not feasible or even desired (Polit & Beck, 2012). Participants

volunteered to share their stories. These individuals potentially had many experiences or were more comfortable sharing their memories and emotions than their colleagues. Although the study drew participants from both Ontario and Atlantic Canada, both surgeon participants specialized in vascular surgery. These findings might therefore over-represent a surgical mentality or a type of death that is experienced in vascular contexts. There were also no limits placed on when the intraoperative death occurred, participants were largely recalling events that had taken place years prior and their memories may have evolved over time. While these should findings contribute to a conversation regarding interprofessional clinician's experiences of caring for patients who die intraoperatively, they cannot be generalized. Particularly, as there was only one anesthetist participant further investigation is required to help flesh out their roles and perspectives within perioperative teams and surrounding intraoperative death.

Conclusion

These findings are valuable not only because they provide insight into how practitioners live and interpret the experience of intraoperative death, but also because they identify emotionally mediating or destabilizing features. Findings can be carried forward to better inform a conversation around supportive resources, how they can be integrated interprofessionally to address perceptions of responsibility and curb emotional or moral distress. It is important to also consider clinician's interpretations of impact on their relationships with others, themselves and their work. The deterioration of these relationships has been shown to have long-lasting effects, stretching beyond the immediate incident and permeating into other spaces. The reality that participants both perpetuate and resist a culture that polarizes the personal and the professional must be recognized before considering how to appropriately intervene.

While examining genre provided an analytic lens to examine how narrators told stories of caring for victims of intraoperative death, its inherent strength was in identifying how certain messages were shared or silenced. Participants did not openly express feelings of anger, criticism or, regret and masked these sentiments using satire or tragedy. Elements constructed as comedies or romances provided a glimpse into positive features amidst trauma and loss. Some of these reflections developed retrospectively, illustrating that a broader understanding of experiences may develop overtime through encouraged exchanges. These stories create space to consider how to change the narrative of intraoperative death from a story that erodes clinicians both personally and professionally into a conversation that could potentially build resilience. Considering how participants perceive death within their stories facilitates a deeper recognition of the behaviours surrounding this exposure and how practitioners assign meaning to their lived experiences.

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Chapter 6: Integrative Discussion

The research purpose guiding this inquiry was to engage in a narrative exploration of how interprofessional team members storied their experiences of intraoperative death, considering the interpretation of impact on individuals, teams, and patients. This project evolved, resulting in moments of reflection and reorganization, in an effort to authentically capture the multitude of voices and stories. Narrative inquiry provided a paradigmatic framework, which enveloped all aspects of the study, gently encouraging exploration of participants' stories. While narrative inquiry guided us to knit together research, theory, and culture to create a space to voice difficult stories, I realized in retrospect it may have had a more fundamental purpose. The redemptive power of stories positions them not just as an avenue for sharing but also as a process for potential healing and empowerment. I am caught between wondering if this was a 'happy accident' or if it was a place my advisors hoped I would arrive, designing this study to be restorative for both myself and the participants. In the following sections I will hold up aspects of the project in parallel, discussing the intersecting theoretical considerations and identifying how narratives have informed our understanding of the interprofessional experience of intraoperative death. Through this summary, I hope to illustrate a perspective of storying as an approach that transcends research and enhances resilience.

Part 1: Theoretical Perspectives

To understand and authentically represent these stories, an in-depth exploration of perioperative culture was necessary. Various literature reviews were conducted that identified central concepts of perioperative culture—clinician roles and teamwork—as well as a more focused investigation of intraoperative death. Like many graduate students, I experienced the growing pains and necessity of engaging with theory, recognizing it as an intrinsic presence in

hospital practices and a tool for understanding unexplored concepts. This theoretical work culminated in the 'Dead on the table' manuscript (Chapter 3: Theoretical Perspectives), exploring the cultural features of perioperative contexts that create a landscape for clinician victimization following patient death. In the following sections I will examine each source of vulnerability in parallel with clinician's stories, experiences, and interpretations of impact. The purpose is to integrate study results with the theoretical lens offered by master narratives.

Biomedical values. Biomedical values surfaced to different degrees throughout participants' narratives. Schubert (2007) would identify this as indicative of the biomedical focus of the OR, the context in which they practice. The most overt reference to biomedicine came from the surgeons' conceptualizations of responsibility, underpinned by a sense of physiologic control. Stories shared by all disciplines placed surgeons at the pinnacle of the interprofessional team and ascribed them with a jurisdiction over death. Many authors have corroborated this idea of surgical authority, identifying surgeons as ultimately responsible for patient wellbeing (Bleakley, 2006; Gillespie et al., 2008; McDonald et al., 2006). While scholars have not agreed that surgeons have ultimate control over death, Peter et al. (2013) and Timmermans (2005) admit that since technological advances are developing so rapidly and these allow physicians a degree of regulation over the dying process, clinicians have difficulty defining their moral responsibility at end of life. Tucker (2009) agrees that advances in medical technology have created a sense that physicians are able to "fight death" (p. 1106), endorsing a culture of death denial. Recall Marco's (Surgeon) comments from Chapter 5 (Findings), stating that if he had intervened earlier the patient in his story could *"certainly"* be alive. Benjamin (Surgeon) agreed with this mentality and described it as being socially engrained. He identified a *"god complex"* held by surgeons, echoing Tucker's (2009) words when he depicted a perpetual fight in which they attempt to

elude death. Timmermans (2005) explains that medicine's perceived authority over death and

dying is a "self-fulling cultural principle" (p. 995), underpinned by a desire to eliminate

suspicious deaths that promote questions about competence and professional legitimacy.

Hegedus, Zana, and Szabo (2008) explain that physicians are educated to equate death with

failure, a mentality which is further perpetuated by the error-based approach used for identifying

cases for hospital Morbidity and Mortality rounds (Calder, Kwok, Cwinn, Frank, &

Worthington, 2012). Perhaps there is also a disciplinary connection here; Briffa and Seifert

(2001) suggested that cardiac surgeons are at heightened risk for destabilization due to the nature

of the surgeries they perform. Vascular surgeons perform similar surgeries in the sense that they

are responsible to restore immediate functioning to the vasculature which they work on,

potentially heightening interpretations of fault and vulnerability when patients die.

Sentiments of physiologic control characterized how surgeons storied their experiences

and responsibilities. As outlined in Chapter 3 (Theoretical Perspectives), our original

understanding of biomedical values was that it was a model which polarized the body and mind

(Beck, 2007; Bloch and Engel, 1992). The perspectives of the surgeon participants expanded our

understanding of biomedical values to realize it could also contribute to a mentality that dictates

control over life and death. In addition to lacking a framework from which to explore their own

grief experiences, these surgeons struggled to reconcile the outcome of death with their actions.

This struggle was apparent in their repentant statements, questioning past decisions and

expressing fault. Scott et al. (2009) described this questioning as stage 2 of their six-stage model

outlining the recovery of second victims. They explain that in this stage clinicians experience

self-doubt, reviewing decisions and asking, 'what if' questions. Many studies reported physicians

expressing sentiments of fault and attributing the outcome of death as a personal failure (Gillespie et al., 2008; Khaneja & Milrod, 1998; Serwint, Rutherford, & Hutton, 2006).

Narratives also contained more subtle inferences to biomedical values. As discussed in Chapter 3 (Theoretical Perspectives), Zimmerman (2004) suggests that death denial is a manifestation of biomedical values which contributes to a "death denying society" (p. 297). She argues that death denial is encouraged to protect organizational interests but results in unacknowledged intraoperative death experiences. Zimmerman's (2004) idea of death denial appeared in two mutually inclusive ways: denying the outcome of death and regarding death as a taboo subject. Stories were shared about *"futile"* care or *"half-hearted attempts"* in which narrators identified surgeons as being unable to resist intervention and acknowledge death. As discussed in Chapter 5 (Findings) these stories could also be tied to physicians' social location, a need to exercise a full spectrum of interventions and allow time before acknowledging death (Peter et al., 2013). Timmermans (2005) explored cultural scripts of dying, highlighting the potentiality that nurses and physicians have divergent expectations of death and therefore different scripts guiding their behaviour. Tucker (2009) wondered if death denial is in fact inappropriate or if it is a natural progression where clinicians "come to grips" (p. 1107) with their patient's condition. Recall Nancy (RN) reflected on her perception of death denial among medical residents, questioning if they have the time or even the desire to process death. Tucker (2009) argues that despite often engaging with patients who die, medical residents are given little guidance navigating death both academically and clinically. Nancy's (RN) story also reflected Zimmerman's (2004) conclusion that death denial results in unexplored end of life experiences and potentially leads to maladaptive coping.

All narratives referred to the OR as a "death denying society", a community where death is considered a failure and is shrouded in silence (Zimmerman, 2004, p. 297). In some stories this culture was enforced more explicitly. For example, in Nancy's (RN) story where the surgeon *"nonchalantly"* offered a debrief, she perceived this as discouraging a conversation about grief which deterred her from participating. Death as a taboo subject permeated many stories, labelled as an unspoken topic or an indication of personal weakness. Seeley (1996) described a similar mentality, acknowledging the "macho" mentality of medicine (p. 573) which Rose and Brown (2010) summarize as a cultural belief that discourages clinicians from admitting vulnerability. Sophia (RN) alluded to this socially influenced insecurity; she suggested that staff may be hesitant to request support, viewing their colleagues as unaffected and therefore feeling their own emotions are unwarranted.

Although Macro (Surgeon) specifically mentioned the necessity of psychological compartmentalization during surgeries, all participants described the importance of separating out emotions to deliver proficient surgical care. While Gerow and colleagues (2010) identified compartmentalization explicitly, many authors have written about clinicians mentally and emotionally distancing themselves from their patients as a form of coping with death (Gillespie et al., 2007; Meier, Back, & Morrison, 2001; Stayt, 2007; Tucker, 2009). This mentality is reflective of biomedical values, what Beck (2007) describes as prioritizing physical illness or injury and creating dualism between body and mind. Benjamin (Surgeon) alluded to this separation in his reflection, explaining that during surgery his hands felt disconnected from his mind. Sophia (RN) spoke to how the technical realm of her role overshadowed the emotions of loss. She explained that the busyness of acute cases distracted her, allowing her to focus on tasks rather than the death of the patient. Clinician participants in other studies have also identified

busyness as a contextual characteristic which they used to avoid engaging with death (Chan, Macdonald, Carnevale, & Cohen, 2017; Peter et al., 2013). As we saw in Chapter 3 (Theoretical Perspectives), Bull and FitzGerald (2006) explained that in the OR, technical practices are prioritized over therapeutic engagement. Despite examples of 'caring in a technical environment' throughout narratives, Sophia's (RN) statement explaining how the technical overshadows the emotional reminds us that technical competence is ultimately prioritized.

The language used by participants and their approach to storying also provided interesting examples of an embedded biomedical mentality. The antecedent of all stories selected for structural analysis was a person's death. While stories were built around this outcome, patients as characters in the story were underdeveloped or absent. Stories focused on the process in the OR and the aftermath with little or no attention given to the patients themselves. This focus could be indicative of a biomedical lens, limiting the priority given to moments for therapeutic exchanges with patients or focusing on the patient as a physiological object rather than a person (Blomberg et al., 2014; Mottram, 2010; Schubert, 2007).

Tensions with biomedical values. It merits recognition that aspects of participants' narratives illustrated departures from the biomedical ideology of perioperative culture. As discussed in Chapter 5 (Findings), therapeutic engagement with patients and families was described as intensifying the experience of intraoperative death. In these reflections, it was clear that participants did not focus exclusively on patients' physiology as biomedical values would suggest but forged memorable relationships, which humanized end-of-life experiences. Studies by Gagnon and Duggleby (2014), Gerow and colleagues (2010) and Schubert (2007) illustrated similar findings, describing the importance of the therapeutic relationship between patients and clinicians at end-of-life. Benjamin (Surgeon) demonstrated this bond in his tearful explanation,

explaining he perceives death as most difficult when a pre-existing relationship with patients exists.

As explored in Chapter 5 (Findings), participants also used different genres to convey interpretations of other characters' behaviours. Romantic and comedic plots were used to describe moments where colleagues exemplified the narrator's own values, often stories about expressing emotions or prioritizing therapeutic behaviours. These stories did not describe the biomedical values of efficiency or deconstructed personhood but spoke to facilitating family bereavement and humanizing patients. Conversely, satires were an avenue for criticism, highlighting moments where narrators perceived others' behaviours negatively. These stories comprised moments of characters dehumanizing patients or de-valuing the grief associated with their death. That narrators criticized these behaviours ultimately shows the value that they themselves place on acknowledging the grief and loss that is inherent to operating room deaths. Micheline (RPN) shared a story where she described becoming *"angry"* with a surgeon. From her perspective he was prioritizing the next case over post mortem care, disrespecting and dehumanizing their patient and her opportunity for bereavement. It becomes apparent from considering these tensions that biomedical values are not unilaterally accepted and can actually create discord between individuals. It is valuable to consider both how biomedical values are sustained as well as challenged to recognize the complex intersection of the professional surgical world with personal responses to death.

Normative death discourses. All participant narratives depicted elements of 'wild deaths', features which undermine the 'good death' ideology (Hart et al., 1998; Kehl, 2006). Narratives were coloured with language and stories depicting violence perpetrated against the body. Participants described cutting patients open, performing rib-breaking compressions, and

watching vasculature fall apart in their hands. Their stories were bloody, whether it was in reference to their chaotic surroundings, cleaning a patient's saturated belongings, or about seeing a patient bleed to death. While these experiences are a reality of perioperative care, the stories were often fueled with emotion and shared tearfully. Although these moments were underpinned with a life-saving intention, they conveyed trauma, not just experienced by the clinicians but also perpetrated by them. To illustrate the concept of second victimization, Hall and Scott (2012) shared a similar narrative about an unsuccessful resuscitation in which a young nurse performed CPR as her patient's blood poured from the stretcher. This story was used to convey the trauma inherent in the practitioner role, while the resuscitation was conducted with the purpose of saving the patient, the nurse contributed to her physical injuries. This story ends with the nurse expressing psychological distress and choosing to leave her job.

In addition to describing 'wild deaths' participants shared many moments in which elements of a 'good death' were absent or unavailable. I used a lens offered by Kehl's (2006) concept analysis of 'good death' to identify these elements, focusing on appropriateness of death, acceptance of death, closure, and trust in health care providers. Participants repeatedly identified inappropriate deaths, all sharing poignant tragedies exploring the death of young victims. Participants described the OR environment as inhibiting the patient and family's ability to consciously recognize and accept death. While they perceived this barrier as intensifying the family's grief, these sentiments likely also reflected their own inability to recognize and accept loss prior to the occurrence of death. Zimmerman (2012) highlighted acceptance of death as central, not to patients and families, but to health care practitioners. Benjamin (Surgeon) provided a statement illuminating death (un)acceptance. He identified the most traumatic part of an intraoperative death as being the patient's unawareness that he would *"never actually [wake]*

up again", reflecting that for him this unawareness was most significant. Zimmerman (2012) interpreted findings from a study Rousseau (1995) conducted, emphasizing that physicians must accept the death of their patients without feeling that it is a result of a personal and/or professional failure. She also identified acceptance and denial are "opposite poles of the same discourse" (Zimmerman, 2012, p. 222), raising the question is death acceptance available to clinicians who perpetuate death denial.

Experiencing closure at end-of-life has been identified as a component of a 'good death' although like Zimmerman (2012), scholars have noted that the 'good death' ideology is typically defined and upheld by clinicians rather than the patients and families they care for (Hart et al., 1998, Kehl, 2006; McNamara, 2004). The desire to facilitate end-of-life experiences as an avenue for practitioners to derive meaning and gain closure was also apparent in the OR. This mentality was evident in the statement Sophia (RN) shared, explaining that her personal closure is contingent on witnessing the family's reactions, which are an early indication into how they will experience bereavement. She acknowledged that this process is based on more than watching a family mourn, in order to gain closure she must ensure that *"they get what [she/I] thinks they need from the experience"*.

Despite this desire, narratives were often characterized by a lack of closure. All participants expressed strong, unresolved emotions arising from intraoperative death, especially experiences that were perceived negatively. Although Benjamin (Surgeon) attributed *"shift workers"* as *"having less at stake"* and therefore being less emotionally invested, all nurse participants described becoming emotionally destabilized following the loss of their patient. Chapter 5 (Findings) speaks to tonalities, recognizing that categorizing clinician responsibility by single, often contrasting terms, limits open communication and collective understandings (Burke,

1969; Lingard et al., 2002). While Benjamin's (Surgeon) perspective identifies differences in responsibility he fails to recognize how the social location of a *"shift worker"* excludes them from valuable end of life moments. As Sophia (RN) alluded and researchers have corroborated, the absence of closure is potentially attributed to clinicians' incapability to deliver elements of a 'good death' to families during the loss of their loved one (Hart et al., 1998; McNamara, 2004). In a sense, clinicians experience intraoperative death twice: the initial death of the patient and the subsequent disclosure to the family. Authors have identified these conversations as extremely upsetting for clinicians, potentially more traumatic than the initial death itself (Aitkenhead, 1997; Clegg & MacKinnon, 2013; Gazoni et al., 2008; White & Akerele, 2005). These interactions lacked many of the aspects central to facilitating a 'good death': minimizing burden, building trusting relationships, and acceptance of death (Kehl, 2006).

While the patient and family's trust in health care providers has been identified as a central feature of a 'good death', in these narratives, lack of trust between health care providers themselves and relational strain was a reoccurring negative theme of intraoperative death (Holdsworth, 2015; Walters, 2004). Researchers have suggested that trust is an imperative factor connecting complex teams (Gillespie et al., 2008; Newell & Swan, 2000; Rydenfält et al., 2012). Newell and Swan (2000) denoted three types of trust crucial for effective collaboration: companion, competence, and commitment. Companion trust describes relationships built on honesty that allow practitioners to feel supported in practice. Competence trust is based on a perception of an individual's ability to do their job which may be grounded in experience, reputation, or social identity. Commitment trust depicts clinicians' dedication to their team, formally outlined by divisions of labour and responsibilities (Newell & Swan, 2000). Satire was used to criticise colleagues' behaviours, illustrating moments of eroded trust between

practitioners; trust in these stories mirrored the types and descriptions offered by Newell and

Swan (2000). Similarly to Marco's (Surgeon) story about feeling constrained by his colleague's

actions, narratives were shared that depicted interprofessional conflict stemming from a

perceived lack of professional ability and threatening competence based trust. Gillespie et al.

(2008) identified competence as defining a clinician's value in the OR, relating poor competence

with decreased peer support, collegial collaboration, and opportunities for professional

development. Participants also shared memories in which they interpreted their colleagues'

behaviours as violating the potential for companionship trust. One example was the story told by

Nancy (RN) in which the surgeon *"nonchalantly"* offered a debrief, devaluing a collegial

process that she needed. Larry (Anesthetist) alluded to many situations following a patient death

in which his surgical colleagues decided to eschew their responsibility, leaving the rest of the

team unsupported to speak with bereaved family members. His story represents many narratives

describing damaged relationships due to a deficit of commitment trust among professionals. As

discussed in Chapter 1 (Introduction), interprofessional conflicts are concerning not only because

of the harm caused to clinicians themselves, but also because of the link between team conflict

and decreased patient safety (Awad et al., 2005; Gazoni et al., 2008; Mazzocco et al., 2009;

Wahr et al., 2013).

Tensions with normative death discourses. As discussed in the discussion section of

Chapter 5 (Findings), the predominant example of recreating a 'good death' is in the aftercare

provided to family. Practitioners described establishing strong, trusting relationships with the

families of patients through dignified post-mortem and bereavement care. Perioperative nurses in

particular have been situated as responsible for this care (Boyle, 2005; Bull & FitzGerald, 2006;

Schroeter, 2004). The Operating Room Nurses Association of Canada (ORNAC) (2015)

standards, which guide perioperative nursing practice, specify "perioperative Registered Nurse shall provide nursing care to support the patient to a dignified death" (p. 303) although no tangible examples or mention of the family are provided. Participants' stories exemplified many traditional aspects of a 'good death': creating a safe space for families to spend time with their loved ones, providing them latitude over how the time might be spent, integrating their wishes and beliefs into end-of-life moments and trying to alleviate burden by mobilizing supportive resources (e.g., calling social workers, chaplains and, funeral home directors) (Hart et al., 1998, Kehl, 2006; McNamara, 2004). These moments were generally shared using romantic or comedic plots, finding meaning through providing for spiritual and psychological needs despite tragic loss. In one story, Nancy (RN) described her colleague as advocating for a bereavement period despite the pressures of continuing with surgical cases. Nancy (RN) reflects that because of this colleague's mentorship, she is now better positioned to advocate for families and protect time for families and staff to mourn. In this narrative, she described a greater purpose of attending to features of the 'good death' idea, not just for the immediate individuals who are impacted but as an empowering experience for clinicians to learn from and to facilitate better care for future families. Nurses in Anderson, Kent and Owen's (2015) study echoed similar sentiments, benefitting from the mentorship and role-modelling offered to them when coping with patient death.

Romantic and comedic stories illustrated building strong relationships between health care providers resulting in rich, long lasting support systems. Notions of 'trust' and 'optimized relationships' are patients, families and health care providers are attributes of the good death concept (Kehl, 2006), however, in this study these notions became more relevant between practitioners. All stories spoke to the interpersonal connections developed through

collaboratively engaging in challenging and traumatic cases. Participants in Lawrence (2011) and Perrin and colleagues' (2013) studies also described close friendships and interpersonal bonds that develop as a result of 'togetherness' during life or death cases. Stories from Perrin et al.'s (2013) study echoed themes of shared responsibility, describing situations during or following cases in which individuals turned to their colleagues for support. Gillespie and colleagues (2008) explained, "in an unpredictable environment where control was delicately poised, peer support was unanimously identified as the universal glue that bonded members together" (p. 270). Following intraoperative death clinicians were particularly concerned that their colleagues would perceive them as incompetent or place blame, intensifying the need for peer support (Gazoni et al., 2008; Scott et al., 2009; Seys et al., 2013; Wahr et al., 2013). Marco (Surgeon) alluded to the benefit of team decision making when patient conditions deteriorated, while Sophia (RN) described a comedic plot line to explain how staff collaboratively shouldered emotions and supported each other following a traumatic loss. These interprofessional connections are valuable as they have been identified as protective against stress and vicarious trauma (Beck, 2011; Craun & Bourke, 2014; Kessel, 2013; Seys et al., 2013).

Participants also shared elements of a 'good death' unique to the OR environment, inspiring questions about how this theoretical lens adapts to different care contexts. Again, these were romantic or comedic stories and were indicative of the narrator's perception of responsibility. Among the nurses and anesthetist there was a collective sense that intraoperative death could be viewed positively if every possible attempt had been made to save the individual. These findings were discussed in detail in Chapter 5 (Findings), introducing ideas of social location and cultural scripts of dying which frame clinicians' responsibilities. D'Amour and Oandasan (2005) suggested that such stories are indicative of narrators that perceive a common

goal but also successfully negotiate varying roles, responsibilities, and power dynamics to provide optimal patient care. When these dynamics are ignored and conflicts arise clinicians have difficulty recognizing issues embedded within teams that seemingly have a collective purpose (D'Armour & Oandasan, 2005).

As seen in the discussion of Chapter 5 (Findings), all participants develop different interpretations of intraoperative deaths that resonate with features outlined by normative death discourses. Considering intraoperative death exclusively as a 'wild death' ignores the therapeutic and individualized behaviours clinician's value when caring for patients at end-of-life. This perspective has made us re-think traditional notions of 'good' and 'wild' death and the relevance of these discourses in atypical end-of-life contexts such as the OR. It is valuable to consider how clinicians make use of these concepts in their work as they reconcile with the death of their patients. In the stories told by participants, we see potential for alleviating the negative impacts of reoccurring exposure to 'wild deaths' and for the creation of space to enact features of 'good deaths', even within tragic circumstances.

Socially (un)sanctioned grief. Clinicians' difficulty legitimizing their emotional roles and grief reactions was palpable throughout interviews. As they shared accounts of intraoperative deaths they recognized that these situations were unquestionably sad, however, they had difficulty positioning themselves within the emotions of the story. This was particularly reflected in satirical plots and when participants had difficulty identifying feelings of sadness or anger. Doka (1989) described this process as disenfranchised grief, situations in which clinicians experience loss but do not have the "socially recognized right, role, or capacity to grieve" (p. 3). As stated in the 'Dead on the table' manuscript (Chapter 3: Theoretical Perspectives), disenfranchised grief is both an internal and external experience (Doka, 2002; 2008). This

process was reflected in this current study in the sense that participants both constrained their own grief responses and felt that their latitude to express grief was limited by their colleagues and environment. The following sections will outline how the concept of socially (un)sanctioned grief manifested in participants' narratives, with particularly attention to how it shaped participants' interpretation of impact.

Marco (Surgeon) introduced us to the idea of *'compartmentalization'* a psychological distancing he believed was necessary to protect clinicians from the impact of traumatic experiences (Gerow et al., 2010 Gillespie et al., 2007; Meier et al., 2001; Stayt, 2007; Tucker, 2009). As discussed in Chapter 5 (Findings) all participants shared their version of *'compartmentalization',* reiterating the importance of supressing emotions particularly in the surgical space. Kamerman (1993) and Bento (1994) suggested that socially normative boundaries around grieving may be designed to protect organizational interests. Sudnow's (1967) ethnography of dying in hospital identified institutional processes which render dying routine, emphasizing efficiency over personhood. In this study, participants reiterated a culturally held belief that emotions interfered with clinical competency, potentially perpetuating a norm that favours the organization by promoting efficiency. By doing so, these participants are contributing to an occupational definition of an individual's 'right to grieve', positioning themselves and their colleagues as disenfranchised grievers (Doka, 2008, p. 224). In an effort to understand why grief is illegitimate for clinicians, Bento (1994) conducted a theoretical analysis of work roles within an organizational context. She noted that individuals who are more routinely exposed to death (e.g., clinicians) have narrower restrictions on their grief role than those who do not (e.g., bankers). According to this logic, if a 'banker' experienced death in their workplace they would be given more latitude to grieve than a clinician who experienced a

similar outcome. She attributes this restriction to the organizational mentality that emotionalizing grief will destabilize practitioners and "contaminate" their ability to provide efficient care (Bento, 1994, p. 6). By polarizing professional from emotional, participants reinforced Bento's (1994) findings; they communally suggest that a grief reaction is not just incongruent with their roles but also a potential threat to patient safety. Ironically, this conclusion is contradictory to the substantial body of research which states stifling emotional reactions results in poor role performance (Awad et al., 2005; Gazoni et al., 2008; Seys et al., 2012).

Many examples surfaced regarding attempts to disconnect the personal from the professional as described in the results section examining 'interpretations of impact' in Chapter 5 (Findings, p. 89). These reactions indicated that while participants felt unable to mourn at work, they still grieved; as Awad et al. (2005), Gazoni et al. (2008), and Seys et al. (2012) identified, the cultural (un)sanctioning of grief did not eliminate the emotions of loss. As Nancy (RN) mentioned, she had been involved in the death of a car accident victim and the story still made her cry in her car. Larry (Anesthetist) experienced nightmares for six months following an error that resulted in intraoperative death but was adamant that he could not have taken time off to recover. These stories substantiate findings that by attempting to quell the emotions of grief, clinicians elongate and possibly complicate the bereavement experience (Bento, 1994; Hazen, 2008; Onstott, 1998; Ringold, Cassio, & Glass, 2005). From an emplotment perspective, the ways that stories were told suggested that clinicians were attempting to disengage from the emotions of their stories. Satire was often used to convey quiet criticism, feelings that participants felt they were unable to openly vocalize. Participants appeared unwilling to own their negative reactions; they were hesitant to admit when they felt angry or upset. Perhaps this reluctance is an example of attempted coping through cognitive dissonance or maybe teams are

discouraged from acknowledging conflict (Gerow et al., 2010 Gillespie et al., 2007; Tucker, 2009). Bento (1994) would argue this avoidance could protect organizational interests but it could also be attributed to a fear of interprofessional conflict which has widely been attributed to medical errors (Awad et al., 2005; Gazoni et al., 2008; Mazzocco et al., 2009; Wahr et al., 2013; WHO, 2009).

In addition to being situated as disenfranchised grievers, the practitioner-patient dynamic may also present a disenfranchised relationship (Corr, 1999; Doka, 1989; 2002). Disenfranchised relationships are considered non-traditional, individuals who lack socially sanctioned closeness typically rooted in kinship (Carton & Hupcey, 2014). Codes offered by professional organizations (e.g., Canadian Medical Association [CMA], 1999, 2004; Canadian Nurses Association, 2008; College of Nurses of Ontario, 2009; College of Physicians and Surgeons of Ontario, 2008) suggest that the practitioner-patient relationship is located in a boundary zone between two territories, that of engaged caring and that of professional distance. Thus, clinicians can find themselves lost in a metaphorical 'grey area', without guidance about how to process their own grief. One way participants seemed to navigate this position was introducing a character from their personal lives to help clarify their emotional reactions to intraoperative deaths. This 'sphere of self' (p. 100) was discussed in Chapter 5 (Findings) and as I previously stated, it cannot be determined if these characters were included as an explanation or a justification. This technique was interesting; if the participants felt — consciously or unconsciously — that they were illegitimate in their feelings of grief because of their professional positioning, linking these emotions to a personal association might suggest that moving outside the professional context is necessary to validate grief. This tactic could circumvent the disenfranchised relationship position, clearly associating their feelings with a

socially sanctioned relationship that positions them to access their emotional expression (Carton & Hupcey, 2014). While this personal disclosure made their stories compelling, it also raised questions whether divulging these emotions was possible without introducing a personal rationale.

During this project I was regularly reminded that intraoperative deaths are disenfranchised deaths: hidden, stigmatized, and laced with assumptions of fault (Corr, 1999; Doka, 1989; 2002; Rando, 1993). At times it felt like an uphill battle, seeking these stories despite many clinicians asserting that 'no one dies in the OR'. As elucidated in Chapter 5's (Findings, p. 79) discussion of 'eschewed responsibility', participants predominantly attributed the organization with creating a culture that shrouds intraoperative death. This belief substantiates Bento's (1994; 1998) argument that organizations perceive grief as threatening, a deeply engrained taboo that becomes heightened when death is incongruent with clinical expectations or potentially attributed to fault. Participants felt that little attention was given to their own needs following an intraoperative death and that the priority was to continue with the surgical list. As in Brosche (2003) and Costello's (2013) studies, none of the participants had sought supportive resources, nor had they been encouraged by their colleagues or superiors to do so. All participants recalled deaths as we moved through their stories, evoking other memories which they had never explored. Although clinicians felt rooted in a context which ignored death, the reality is that they themselves also promoted a 'culture of silence'.

> "*Maybe you don't want to be that person that's requesting the debrief, that's asking for support resources for whatever reason. Um maybe I've…felt like…because nobody else has brought it up maybe that I shouldn't be so bothered by it so I won't bring it up either*"

This reflection by Sophia that was presented in Chapter 5 illustrates the layers of unsanctioned grief: suffered *and* perpetuated by clinicians.

Participants were caught in an impossible space: required to participate in traumatic end-of-life events while prohibited from engaging with the emotions of loss. This conflict is complicated by the fact that they themselves create the social norms that constrain their own emotional expression. Benjamin (Surgeon) and Larry (Anesthetist) explained how they believe disengagement is embedded in hospital environments. Although Benjamin (Surgeon) believed that health care in general is becoming more impersonal and therefore intraoperative death will have less of an emotional impact on clinicians, studies show that disenfranchised grief intensifies symptoms of anguish (Bento, 1994; Carton & Hupcey, 2014; Hazen, 2008; Onstott, 1998; Rickerson, 2005).

Tensions with socially (un)sanctioned grief. While participants positioned themselves and others as disenfranchised grievers they appreciated when their colleagues endorsed and supported their grief. All participants mentioned turning to their colleagues for support or informal debriefing. These interactions were central to notions of 'shared responsibility' (Chapter 5, Findings, p. 89), the accountability to one another to give and receive collegial support following traumatic experiences. Building on the work of Doka (1989), Hazen (2008) explains "support from others is not just nice; it is necessary to heal from loss" (p. 80). Despite the mentality of disenfranchised relationships, participants reiterated that relationships with patients and families were important. As discussed in Chapter 5 (Findings), participants' narratives revealed that engaging with families was blended with the responsibility to care for patients and often seen as an avenue for building rich therapeutic relationships. In Breen, O'Connor and Hewitt's (2014) interdisciplinary study exploring secondary trauma in oncology units, participants recognized the importance of caring for both patients and families as a central component of holistic end of life care.

In their narratives participants shared thoughts which contributed to a 'culture of silence', however, by choosing to participate in this study each of them brought voice to an unexplored and often concealed practice reality. Through the sharing of stories these clinicians contributed to the investigation of intraoperative deaths with the intention of better understanding the experiences of clinicians and this practice context. They brought light to socially stigmatized and often unrecognized deaths, unravelling barriers that sequestered disenfranchised deaths (Corr, 1999; Doka, 1989). Looking back at the language describing disenfranchised deaths in Chapter 3 (Theoretical Perspectives) is interesting:

> "Socially stigmatized deaths provoking anxiety or embarrassment can result in disenfranchised grief because they are culturally ignored and can be fraught with assumptions and questions of responsibility or fault" (Corr, 1999; Doka, 1989, 2002; Rando, 1993)

Participants' narratives illustrated exactly this message: sharing interpretations of responsibility and perceptions of fault. Rather than choosing to accept these stories as disenfranchised deaths and remain silent, these clinicians bravely shared their vulnerabilities, dissolving a little of the taboo surrounding intraoperative deaths.

Second victimization. Based on the definitions offered by McCann and Pearlman (1990) and Wu (2000) participants described experiencing vicarious traumatization and second victimization: the psychological and physical impacts of exposure to the intraoperative deaths of their patients. In terms of psychological stress participants spoke of unreconciled emotions: anger, sadness, anxiety, grief, regret, horror, and guilt. The majority of narrators became tearful and all participants recalled ignored experiences during the storytelling process. All participants alluded to physical and behavioural manifestations of stress including: difficulty sleeping, nightmares, a fear of driving, irritability, challenges concentrating, unexpected emotional reactions, and relational conflicts (Badger, 2001; Hall & Scott, 2012; Martin & Roy, 2012). As

discussed in Chapter 5 (Findings), these impacts seeped into practitioner's personal lives,

shaping their demeanor, relationships, and daily activities for an indeterminate amount of time.

The long-term effects of traumatization or victimization on these practitioners were less

clear. Participants had never sought formal supports but all had engaged in an informal approach

to debriefing and critical incident support. Nancy (RN) mentioned that this process *"helped her"*

but the degree to which participants' psychological and physical symptoms persisted was vague.

In tandem with notions of separating the professional and the personal there was a general

attitude that clinicians should be continuously moving forward and emotions would diminish if

ignored. This mentality was so pervasive that participants seemed shocked with their own

emotional reactions to sharing stories; they were surprised to the extent that sharing stories

moved them. Hernàndez, Gangsei, and Engstrom (2007) may argue this reaction is indicative of

emotional numbing resulting from a culmination of traumatic experiences while Doka (1989)

and Carton and Hupcey (2014) would identify a death denying intention of repressing memories.

Michael and Jenkins (2001) explain that the culmination of symptoms resulting from second

victimization have been linked to emotional numbing and isolation, so perhaps these reactions

are representative of long-term effects. While there is an undercurrent ideology that ignoring

these experiences is a form of coping (i.e., compartmentalization), Rickerson et al. (2005)

maintain that clinicians who are exposed to death suffer from a culmination of grief if

experiences go unrecognized.

Second victimization requires an interdisciplinary perspective because of the potential

that individuals' symptoms may infiltrate teamwork and decrease patient safety (Gazoni et al.,

2008; Mazzocco et al., 2009; Wahr et al., 2013; WHO, 2009). There was a collective idea among

participants that experiencing an intraoperative death did not alter team dynamics and even

potentially bonded individuals over shared experience. While in some cases this solidarity may be true, their stories communicated a different message, illustrating interprofessional conflict particularly when considering the use of tragic or satirical genres. Few participants explicitly associated these conflicts with a change in team functioning, however Micheline (RPN) admitted she had difficulty working with a colleague who enacted dehumanizing behaviours. Based on the stories told all interpersonal conflicts were ignored or unresolved, leaving space to wonder if intraoperative deaths did in fact alter team functioning and potentially patient care.

Through the examination of master narratives, tensions, and study results it is clear that the discourses that contribute to a landscape of victimization/traumatization are both endured and disseminated by practitioners. This position of perpetuating and resisting became particularly pronounced when considering the tensions reflected in each concept, illuminating layers of contradictions engrained in individuals' expectations, behaviours, and language. The practitioners' identities as both victims and perpetrators became clear. In large part, participants seemed oblivious to this duality of role. A lack of awareness was evident in some of their statements, for example explaining the need to supress emotional expression in a professional setting while becoming upset with colleagues who enforced this same expectation upon them. Some of the more subtle narrative examples (e.g., styles of storytelling, use of language, design of plots) illustrated the degree to which practitioners are unaware of their victim/perpetrator status. The circuity of this problem is disheartening; these practitioners and their colleagues are suffering due to an unfeasible ideology that they are sustaining. The 'unfeasible ideology' is the attempt to separate the personal and the professional, as we are reminded particularly by nursing literature the reality is that they are intertwined (Carper, 1978; Watson, 2009).

Part 2: Insights into Perioperative Storytelling and Traumatic Narratives

As mentioned in the introduction there were challenges to this project, one of which was related to remaining in a narrative space during participant interviews. Narrators were initially prompted with the open-ended question, *"can you tell me a story of caring for a patient who died intraoperatively?"* While the initial dialogue with participants was built around this probe, interviewees would often move to the abstract (i.e., away from a specific 'story') when exploring larger concepts: teamwork, emotions, and roles. I found it difficult to determine the reason for this shift, and whether it was because of my novice status as a researcher that I felt hesitant to re-orient the conversation toward specific stories. As a perioperative practitioner, I have likely absorbed some of the cultural norm of disenfranchised deaths— ignoring and stigmatizing intraoperative deaths — and therefore experienced some discomfort when discussing them (Corr, 1999; Doka, 1989). At times, I also felt that my expectations may be unrealistic; I was asking a lot of individuals to volunteer to share these difficult and potentially traumatic stories and orienting them back to those painful moments seemed callous.

The tendency for participants to speak in the abstract could also be related to the study design itself, leaving little room to build a therapeutic exchange from which to explore vulnerable memories. To access what Holloway and Freshwater (2007) described as "inner narratives" (p. 6) (i.e., identities, interpretations, and underlying meanings embedded in individual's stories), East, Jackson, O'Brien, and Peters (2010) explain that creating time to build rapport is fundamental. In addition, the study atmosphere must be one of acceptance, making the participant feel safe and supported (East et al., 2010). One of my committee members, Dr. Pamela Grassau (2015) embedded this approach directly into data collection when conducting a narrative study exploring a relational understanding of how mothers and daughters experience

end of life. She designed her interview schedule to include a pre-interview session with participants for the purpose of building rapport and setting the tone for "how mothers and daughters are witnessed and heard" (p, 105). While a mutual association as fellow perioperative practitioners provided the participants and me with some shared ground, it was not necessarily enough to invite the sharing of "inner narratives" (Holloway & Freshwater, 2007, p. 6). Openness generally developed throughout the course of the interviews, participants would build on previous memories or remember untold stories. While our interactions eventually moved past the superficial, sharing stories was rarely linear and participants all vacillated between stories and more abstract narrations in their interviews.

Some narrators also described many instances of intraoperative death, a totality of experiences featuring different patients and colleagues (Benner, Tanner, & Chesla, 1992). Rather than storying about specific people, they spoke to 'the patients', 'my colleagues', 'the nurses', thereby diluting storied specifics. This type of storying reflected the concept of "narrative accrual" originally coined by Bruner (1991, p. 8). This idea gained momentum academically because of its recognition of the human tendency to convert individual stories into larger narratives. His belief is that we "cobble together" (Bruner, 1991, p. 8) stories to create autobiographies of ourselves acting within a societal framework. Autobiographical narratives have similarities to abstract narratives, connecting the person with the past, the present, and the future and establishing them and their behaviours within a context, ultimately creating meaning. Perhaps, if as opposed to Riessman's (2005) 'typology' story, an 'archetype' narrative begins to develop in individuals who have had numerous experiences with intraoperative death.

When I considered storytelling in retrospect, after examining the theoretical considerations in conjunction with study findings, other possibilities were illuminated. Perhaps

the tendency to speak in abstract is a tangible example of disenfranchisement, an unconscious example of distancing from intimate end-of-life moments, relationships, or shameful deaths (Doka, 1989; 2002). These narratives could also be an extension of biomedical values, a framework which does not lend itself to storying, failure, or exploring personal memories (Beck, 2007; Bloch & Engel, 1992).

Researchers have highlighted different communication styles between nurses and physicians as a barrier to effective communication (Gillespie et al., 2010; Lingard et al., 2002). While historically nurses have been socialized to speak narratively, communication tools and current hospital documentation processes (e.g., ticks on flow sheets and prepopulated charting options) discourage nurses from creating narrative accounts (Cameron & Turtle-Song, 2002; Horte & Visconti, 2014). Physicians are trained to be succinct and focus on the facts (Gillespie et al., 2010; Lingard et al., 2002; McDonald et al., 2006; Sexton et al., 2006). These socially constructed communication patterns potentially shaped participants' ability to story; physicians in particular focused on medical details and tended to generalize cases. It is also possible that OR nurses had absorbed these communication techniques because, as discussed in Chapter 2 (Literature Review), the hierarchical environment influencing perioperative clinicians tends to favour medical practices and values (Steelman, 2014; Undre et al., 2006).

This movement away from 'micro level' (i.e., particular) stories could have also been a coping mechanism for participants, a way of creating distance between themselves and the events of the story (Gillespie et al., 2007; Meier et al., 2001; Lifton, 1988). It merits recognition that sharing these stories involves reflecting on difficult and perhaps traumatic events. There is literature exploring the experiences of traumatized individuals attempting to verbalize their stories (Eastmond, 2007). "Muted memories" was introduced as a concept representing stories

that were difficult to share due to fragmentation or resistance of verbal expression resulting from trauma (Eastmond, 2007, p. 257). Abell and colleagues (2011) echoed this idea in their examination of trauma narratives, stating "trauma silences the storyteller" (p. 5). They explained that storying has the potential to evoke pain and anxiety, deterring narrators from wanting to revisit these memories (Abell et al., 2011). They also described the term "Ceteris Paribus" as the absence of narratives, a significant finding illuminating the "(non)storyteller" position in relation to the events (Abell et al., 2011, p. 5).

Abell et al. (2011) considered additional circumstances limiting the vocalization of trauma narratives: 1) some communities may value a culture of silence, in turn constraining storytelling, and 2) powerful institutions or groups may prohibit and impede the telling of stories. This project has illuminated both possibilities. Participants' stories depicted a self-perpetuated culture of silence, enforced through perceived expectations around professional behaviours. Clinicians believed they existed in a context that valued silence and by doing so, created this cultural norm. Eastmond (2007) reminds us that "collective narratives reflect and at the same time shape social memory. Powerful institutions exert influence over what is remembered and what is forgotten, and define moral positions in relation to critical events" (p. 257). The master narratives we explored represented powerful organizational discourses, many of which contribute to silencing practitioners. These master narratives are tangled with ideas of fault, unprofessionalism, and potential threats to organizational efficiency. An example from the study was participants' perception that emotions must be partitioned out or *"compartmentalized"* to preserve clinical performance, positioning themselves as disenfranchised grievers. The assumption is that remaining unemotional promotes surgical competence, allowing practitioners to be able to perform more cases and practice more efficiently (Bento, 1994; Carton & Hupcey,

2014). While this mentality protects the organization's interests (for example by continuing to the next surgical case) it discourages clinicians from sharing the impact of these experiences and over time limits their ability to convey their stories. Perhaps in these circumstances (i.e., traumatic stories or constraining social contexts) it is easier to narrate in the abstract.

Part 3: Narrative Inquiry and Resilience

Here, I arrive back at the opening statements of this chapter, suggesting that the narrative design of this study served an emancipatory purpose in addition to inquiry. The 'Dead on the table' manuscript highlighted thoughtful reflection, a practice which has been endorsed for promoting clinical resilience (College of Nurses of Ontario, 2015; Dyer & McGuinness, 1996; Jackson et al., 2007; Royal College of Physicians and Surgeons of Canada, 2017; Rutter 1999; Wald, 2015). Reflection is described as empowering, positioning clinicians to cope with adversity and productively engage with their practice (Dryer & McGuinness, 1996; Earvolino-Ramirez, 2007; Masten & Coatsworth, 1998; Wald, 2015; Walsh, 2003). Storytelling moves reflection one step forward by verbalizing this reflective process and sharing the values, emotions, and support strategies embedded in narrators' accounts (East, Jackson, O'Brien, & Peters, 2010).

Personal stories provide insight and allow individuals to gain new perspectives and redefine their experiences (Frank, 1995; Murry, 2003). This emancipated perspective was particularly evident when examining use of genre: while participants shared tragic stories, romantic or comedic plots illuminated positive elements embedded in their experiences. The fractured, non-linear patterns to storytelling implied that these were not thoughts they had 'turned over' often and that they themselves were developing new perspectives on what they had lived. One example was in Sophia's (RN) interview; a focus on family and caring for family

became more prominent as her narrative developed. We spoke during the debriefing following the interview and she reflected on how this aspect of her practice was significant to her and she requested to go back on tape to emphasize this perspective. Roberts and Strayer (1996) referred to storytelling as a tool for gaining emotional insight, another aspect which was apparent in this project. While interactive storytelling provided a glimpse of participants' emotional state, individuals were given space to reflect on and share previously unexplored emotional responses. Based on the structural analysis, emotional disclosure was often done hesitantly, communicated using satire and shared towards the end of narratives. As Robert and Strayer (1996) indicated storying seemed to be a process of discovery for participants, labelling feelings, which they had previously ignored.

Storytelling has been described as cathartic, a tool when used in a supportive environment can stimulate personal resilience (Jack, 2010). It provides space to bring attention to hidden experiences and celebrates the inherent strength and survival of the narrators (East et al., 2010; Jack, 2010; Reichert, 1998). Atkinson (2002) explains that storying connects us with ourselves, our colleagues, and our contexts, recognizing meaning and validating our experiences. As Leseho and Block (2005) identify, both telling and hearing stories can initiate healing following traumatic experiences. Frank (1995, p. 18) wrote, 'storytelling is for another just as much as it is for oneself'. Therefore, unlike individual reflective practice, storytelling is a dynamic process that has the potential to comfort the listeners as well as the narrators. Previous studies have illustrated that storytelling can create social bonds, connecting individuals through shared emotions and fostering coping strategies (East et al., 2010; Frank, 1995; Gillespie, Chaboyer, Wallis, & Grimbeek, 2007). Validating experiences is powerful, particularly in contexts where stories have been previously silenced or ignored (Abell et al., 2011; Atkinson,

2002; East et al., 2010; Reichert, 1998). The psychology community offered the original concept of 'Vicarious Trauma' and they have developed the new idea of 'Vicarious Resilience': the process of learning and absorbing strategies to cope with adversity through engagement with traumatic stories (Hernàndez et al., 2007). While participants' stories were characterized by catastrophes and powerlessness, they were also threaded with adaptation, courage, and empathy. Similarly to psychologists, clinicians of all disciplines could benefit from the reciprocal resilience achieved through exchanging stories (Atkinson, 2002; Frank, 1995; Leseho & Block, 2005).

Although I did not fully recognize it initially, narrative inquiry facilitated many of my goals for this project. As East et al. (2010) and Jack (2010) emphasized in their discussions of storytelling, it was and continues to be important to me to recognize and celebrate the strength of these participants. Acknowledging not only the challenges of caring for patients that die in the OR but also the intangible therapeutic relationships and tensions of navigating death in a life-sustaining culture was important to me. There was personal intention embedded in this desire because, as seen in the introduction, this was not something that was offered to me in my clinical experience. I originally wanted to 'bring voice' to these unexplored stories, validating memories and giving them the importance I felt they deserved. I hope that, as suggested, this research platform also created a restorative space, potentially contributing to healing and the recognition of personal strengths.

Features of the concepts of 'Second Victimization' and 'Vicarious Trauma' appeared throughout participants' stories (McCann & Pearlman, 1990; Wu, 2000). Wald (2015) proposed that storytelling is a tool that mediates against symptoms of vicarious victimization and as Cowling (2005) suggested, motivates positive change. I hope these experiences may be

reconciled through the act of storytelling and that these exchanges contribute to the development of Vicarious Resilience (Hernàndez et al., 2007). All participants reflected either during the debriefing or in follow up phone calls that they were appreciative of the interview process and found it challenging but fulfilling. I believe we forged a supportive connection that facilitated the exploration and recognition of their professional-personal strengths. It is my hope that through these positive and potentially healing experiences, participants were motivated to engage with their colleagues: initiating conversations about intraoperative death, building collegial support, and disseminating the restorative potential brought forth through storying their experiences.

It should not go unnoticed that the narrative intention of this project contributed to my own healing. As previously mentioned, I experienced numerous intraoperative deaths, which left me feeling disoriented and unheard. During this project, I voiced and shared my experiences of intraoperative death often. I believe through this process I was embodying the idea of empowerment, a positive element emerging from vicarious trauma that has been highlighted by numerous scholars (Hall & Scott, 2012; Nicol, 2015; Michael & Jenkins, 2001; Seys et al., 2012). During the data collection period I had the privilege of hearing other clinicians' stories and perspectives, emotions and experiences that I could relate to or learn from. While I said very little, I benefitted from hearing these accounts; as identified by Frank (1995), Leseho and Block (2005), healing through the stories of others. Despite not knowing these individuals previously, I felt proud of them both during the interviews and in the many hours of analysis following. Their ability to share, persevere, and develop an enlightened perspective illuminated a collective human power that transcended master narratives. I used to worry that the message of this project would get lost among dominant discourses; on the contrary, these participants have reminded me

that if we give each other the space to share, our stories have the potential to be transformative.

Implications for Nursing

After completing this thesis I will begin a position as Professional Practice Specialist (PPS) in perioperative services. Although this role does not fall under the umbrella definition of Advance Practice Nursing outlined by the Canadian Nurses Association [CNA] (2008a), I do hope to emulate its core competencies: clinical, research, leadership, and consultation and collaboration. By considering practice, education, policy, and research, in the following sections I will outline the impacts of this study and how they can enhance the landscape of nursing and interprofessional care.

While tempting, it seems overly ambitious and unrealistic to suggest revolutionizing culture, adapting disciplinary communication styles, or eliminating medical hierarchies. This project has reiterated that culture and dominant discourses are deeply engrained and sustained, pervasive in the contexts in which clinicians are socialized. Some master narratives are arguably necessary, as described in Chapter 3 (Theoretical Perspectives), biomedical values give rise to certain practices that are essential for patient safety. Rather than making grandiose and unrealistic recommendations, I intend to highlight change that can be initiated on an individual and organizational level and accessible to all the disciplines involved in this research. Since practice, education, policy, and research are intertwined, I have chosen to weave together considerations for each of these elements as I discuss what I see as the three key implications of my research: interprofessional dynamics, staff support, and a culture of resilience.

Interprofessional dynamics. A recurring theme throughout our project (i.e., Chapter 2: Literature Review, Chapter 3: Theoretical Perspectives, Chapter 5: Findings and Chapter 6: Discussion) is that interprofessional dynamics are complex and at times problematic. Differences

created and perpetuated through training, communication styles, hierarchies, and interpretations

of responsibilities and relationships result in diverse disciplinary stances (Bate, 2000; Bleakley et

al., 2012; Epsin & Lingard, 2001; Finn & Waring, 2006; Finn, 2008; Gillespie et al., 2008;

Gurses et al., 2012; Kaplan et al., 2010; Mitchell et al., 2011; Sax, 2012; Schwam, 1998; Undre

et al., 2006). While interprofessional care is unquestionably valuable in the OR, it is naïve to

expect a singular intervention will address the complex needs of all involved practitioners (Awad

et al., 2005; Gillespie et al., 2010; Gurses et al., 2012; Mazzocco et al., 2009; Schaefer et al.,

1995). Research has noted the varying and often conflicting perspectives of nurses, surgeons, and

anesthetists concerning teamwork and leadership. Despite these differences there remains a lack

of supportive resources or education tools which account for interprofessional dynamics

(Bleakley et al., 2012; Finn, 2008; Helmreich & Davies, 1996; McDonald et al., 2006; Parker et

al., 2012; Sax, 2012). Traditional disciplinary silos are still common in educational institutions

and the workforce (Blane, 1991; Gillespie et al., 2010; Helmreich & Davies, 1996; Undre et al.,

2006). These silos create boundaries between clinicians.

This study highlights the need to better understand interprofessional dynamics: the benefits,

the pitfalls, the conflicts, and the resolutions. In order for this endeavour to be effective there

must be a commitment from all levels: front line clinicians, educators, management, and

organizational leaders (Brysiewicz & Bhengu, 2000; ORNAC, 2015; Schwam, 1998; Shermont

& Krepcio, 2006; Taylor, 2014; Smith, 2010; WHO, 2009). For intraoperative death specifically,

conversations around responsibilities and relational expectations should be facilitated among

practitioners. McAllister and MacKinnon (2009) suggest facilitating a safe discussion around

team practices that allows individuals to question and challenge their colleagues in a respectful

manner. If teams have an appreciation for their colleagues' perspectives prior to an intraoperative

catastrophe, they may be better positioned to understand the impacts throughout the aftermath. This discussion could stimulate necessary dialogue about teamwork: a chance to openly voice what surgeons need from nurses, anesthetist, and vice-versa. As social locations limit the positioning of disciplines, it may be valuable for nurses to know that while they provide care to their patient after death, the surgeon is speaking with and providing emotional support to the family. While these appear different, both activities are underpinned with the intention to provide care. It may be constructive to illustrate that while spaces and actions vary, the underlying intent and responsibility are unifying.

Participants reiterated that they believed teams became stronger following the challenges of intraoperative death but could not identify how this collective belief was communicated. Initiating an exploration of this idea and harnessing the strengths developed through traumatic experiences could inform interprofessional support strategies. Considering how to build relationships and resolve interprofessional conflicts during non-critical events when clinicians experience lower levels of stress would be valuable (Wald, 2015; Newell & Swan, 2000; Rydenfält et al., 2012). Creating shared ground for disciplines to understand perspectives and appreciate interprofessional roles can result in better team performance and enhanced collegiality (CIHC, 2010; Gillespie et al., 2007; Michael & Jenkins, 2001; Wahr, 2013).

As a PPS I hope to continue the work I began here thereby facilitating the creation of space for conversations about intraoperative death and interprofessional dynamics (Hall & Scott, 2012; Scott et al., 2008). Engaging with my teams in the clinical setting will allow me to assess their needs and develop unit-specific interventions for facilitating interdisciplinary teamwork (CNA, 2008b; Hall, 2012; Lingard et al., 2004). As Rudolfsson et al. (2007) acknowledged, to build trust in perioperative departments nursing leaders need to be present and engage with staff

through clinical work. I aim to empower teams, enabling them to identify their own needs and potential strategies for change (Daiski, 2004; Gillespie et al., 2007; Wahr et al., 2013). Identifying and celebrating disciplinary differences recognizes these features as a benefit of interprofessional collaboration and collectively validates their strengths (CIHC, 2010; Cox et al., 2009; Hall, Weaver, & Grassau, 2013; WHO, 2009). It is also important to readily acknowledge the presence of interprofessional conflict, the antecedents and impacts to practitioners and patient care (Bleakley et al., 2012; Makary et al., 2006; Pinto et al., 2013; Sexton et al., 2006). Although a cultural analysis would be required before initiating any intervention, potential evidence-informed programs could include: interprofessional workshops, care pathways, simulations, mentorship programs, and critical case debriefings (Bleakley et al., 2012; Clegg & MacKinnon, 2013; Deneckre et al., 2013; ElBardissi & Sundt, 2012; Gillespie et al., 2009; Hall et al., 2013; McAllister & McKinnon, 2009; Schmidt, 2011; Thornton Bacon, 2017; Wald, 2015). Muller-Juge and colleagues (2014) provide guidance in creating interprofessional resources, identifying that shared leadership is possible if involved members have strong autonomy and if colleagues demonstrate effective communication and mutual listening. These findings suggest a layered approach may be appropriate, mentoring individuals to build autonomy and then bringing them together in team-based workshops. I will endeavour to consult with other hospital units, educators and leaders to share strategies and collaboratively build best interprofessional practice (CIHC, 2010; CNA, 2008b; Hamric, Hanson, & Tracy, 2013).

Implications for research and policy should be considered at local and global levels. Within my own practice, it is imperative to use current interprofessional literature to best facilitate and support interprofessional collaboration and education (Cox et al., 2009; Hall et al., 2013). For example, care pathways are an interprofessional intervention gaining recognition for

improving conflict management, team culture, practitioner competence, and protecting against burnout (Deneckre et al., 2013). Remaining aware of research trends in interprofessional collaboration will help identify effective interventions best suited to my clinical environment. Utilizing evidence-informed approaches, measurable evaluation strategies, and monitoring our own initiatives will engage teams in achieving their own development (Fiabane, Giorgi, Sguazzin, & Argentero, 2013; Hall & Scott, 2012; Lowe, 2012). Advocating for interprofessional policies will bring organizational attention to interdisciplinary care and endorse educational initiatives (CIHC, 2010; Finn, 2008; Gillespie et al., 2010; McAllister & McKinnon, 2009; Riley & Manias, 2009). Clear policy language will provide guidelines for staff to integrate into their own practice as well as objectives from which to structure care plans (Hall & Scott, 2012; Ullström et al., 2014). A wealth of research is required to understand the intricacies of interprofessional teamwork and particularly team dynamics following intraoperative death. Without studies investigating relationships and effective team-building interventions we are at risk of implement ineffective programs, jeopardizing clinician engagement and further engraining disciplinary silos (Bleakley et al., 2012; Finn, 2008; Gillespie et al., 2010; Scott et al., 2009. While this study was valuable, a much larger conversation is needed in order to examine the stories and experiences (inclusive of the inherent tensions) of clinicians embedded in OR culture. This conversation should include practitioners from different specialities, various practice contexts, and the many disciplines not included in this project (e.g., respiratory therapists, perfusionists, students).

   Staff support. The second recommendation which has numerous implications for nursing is the need to provide and endorse interprofessional supports following intraoperative deaths (Hall & Scott, 2012; Seys et al., 2012). All narratives in this current study reflected themes of second

victimization or vicarious traumatization; despite this none of the participants admitted to engaging with formal resources (e.g. counselling, employee assistance programs, organized debriefing), nor felt they were readily available. Intraoperative death is a reality of surgical care; the question is how to facilitate these experiences to develop more positive death experiences. This study emphasized the value of narrative inquiry as an approach which invites participants to share hidden stories, recognizing and validating their experiences (Abell et al., 2011; Atkinson, 2002; East et al., 2010; Reichert, 1998). Additional research is necessary to design interventions that appropriately acknowledge and encompass interprofessional dynamics, however based on our analysis of romantic and comedic stories we know interpersonal dynamics are crucial to enhancing death experiences.

As a PPS I recognize the positive and negative features of death experiences as well as the interpretation from clinicians that they feel unsupported by their organizations. In tandem with creating interprofessional interventions, processes are required that address the physical, psychological, and sociological impacts researchers suggests are associated with trauma (Brysiewicz & Bhengu, 2000; Scott et al., 2009; Seys et al., 2012). Continuing to utilize a narrative approach will facilitate the previously mentioned benefits: validation, potential healing, and channels for collegial support. As suggested by Hall and Scott (2012) and Wahr and colleagues (2013) debriefing must be tailored to the needs of the participants, assessing if the situation merits education, a critical review, or the opportunity to explore the professional *and* personal challenges associated with experiences. Carol Kirkwood explained at the 2016 ORNAC conference, critical incident debriefing requires commitment, a consistent implementation to encourage acceptance from involved practitioners and instigate a culture change. Tracy and Hanson (2014) highlighted that it is instrumental to collaborate with individuals who are

positioned to catalyze these initiatives, "opinion leaders" (p. 277) who can endorse and encourage change within their practice context. In addition, inviting leadership and professionals with an expertise in bereavement (e.g., social workers, chaplains, and palliative care clinicians) will enrich these programs and communicate an organizational commitment (Brysiewicz & Bhengu, 2000; Scott et al., 2009).

It is important that leaders, particularly in perioperative services collaborate with policy makers to integrate staff support processes directly into organizational policies, explicitly making the link between critical incidents (e.g., codes, deaths) and the need to interprofessionally debrief. Authors identify that endorsing these programs on an organizational level will encourage staff to admit a need and access support (Pratt & Jachna, 2014; Wahr et al., 2013). I have begun and will continue to dialogue with perioperative educators about the need to address intraoperative deaths and support strategies during training, focuses which I will introduce in the clinical setting while orienting incoming staff. Future research should explore the dissemination of organizational support strategies as currently many are unrecognized and underutilized by staff. Perhaps support strategies should be implemented at a unit-level to encourage accountability, interpersonal connections, and a culture of recognition (Wahr et al., 2013). Evidence-informed tools are required to guide institutional leaders in the delivery of these initiatives and would be a valuable future research focus (Chochinov, Hack, McClement, Krisjanson & Harlos, 2002; Hall & Scott, 2012; Scott et al., 2009).

A culture of resilience. The potential to change the narrative of traumatization to resilience can have a powerful impact on individuals and organizations (Gillespie et al., 2008). Researchers have highlighted a possible empowering aspect to second victimization as well as the potential to develop vicarious resilience through collaborative dialogue (Hall & Scott, 2012; Nicol, 2015;

Michael & Jenkins, 2001; Seys et al., 2012). This study used a structural analysis to gain insight on how stories are told and the meaning behind them. This analysis illuminated themes which contributed to positive interpretations of intraoperative death. Using this information may provide the beginning of a framework for facilitating a culture of resilience, originating from experiences of trauma.

In my role as a PPS I will build on my clinical support initiatives to encourage a culture of resilience. This endeavour would involve being honest with staff, recognizing the necessity of some practices as realities of the OR (e.g., prioritizing injuries in emergency cases) but also acknowledge culturally embedded practices that are damaging (e.g., polarizing professional and personal). One approach could involve validating and voicing experiences through narrative, in private spaces designated for these conversations (McAllister & Mackinnon, 2009; Wald, 2015). Encouraging clinicians to share their interpretations in a non-judgemental setting may free them from using narrative devices like satire to conceal their struggles. There are other possibilities for recognizing intraoperative loss and honouring the contributions of practitioners. Drawing on research and practice from other clinical contexts such as palliative care may illuminate useful strategies for grieving and collective bereavement (Jack, 2010). Educational workshops which nurture coping strategies and foster self-reflection have been linked to enhancing practitioner resilience and improving culture (McAlister & Mackinnon, 2009; Wald, 2015). Strategies that encourage disciplinary mentorship can build on the existing bonds which practitioners use to 'informally debrief' challenging cases (Pinto et al., 2013; Seys et al., 2013; Gazoni et al., 2008). Providing staff with professional development opportunities related to their experiences can also allow them to explore and apply their strengths in new contexts (Gazoni et al., 2008; Gillespie et al., 2008; Tabour, 2011).

In addition to feeling supported by their colleagues, participants identified other features which they perceived as improving their death experiences (Chapter 5: Findings). These including fulfilling responsibilities and facilitating moments of 'a good death' (Kehl, 2006). Despite tragic outcomes, practitioners should be encouraged to recognize what they did well and fulfilled responsibilities should be acknowledged. Providing clinicians with the time to engage in end-of-life moments will allow them the latitude to build supportive relationships and derive meaning from traumatic experiences (Kehl, 2006; Walters, 2004). Initiatives like the 'Three Wishes Program' could provide guidance on how to personalize the dying process in a highly technical environment. Cook and colleagues' (2015) study illustrated that facilitating family wishes resulted in dignified dying, a more positive experience for families, and fostered a compassionate culture. Clinicians felt their practice was meaningful and forged stronger relationships with colleagues and families (Cook et el., 2015). These initiatives require organizational commitment, supporting units to allocate time to these activities rather than focusing solely on surgical efficiency.

Advocating for resources that contribute to a culture of resilience is imperative, particularly to encourage leadership and local stakeholders to champion these endeavours (Scott et al., 2009; Wahr et al., 2013). This advocacy would require reaching outside institutional boundaries to work with Professional Practice Organizations and collaborate with experts in bereavement and loss (e.g., Trillium Gift of Life Network) (Seys et al., 2013). Rewording professional codes (e.g., ORNAC Standards) to recognize the interrelationship between professional roles and personal selves would provide a framework to support clinicians as they experience grief in the workplace. These changes would need to translate to the clinical setting, appreciating the tensions felt by clinicians coping with loss and supporting them in their recovery. These changes

could include tangible policy amendments, outlining how to safely report symptoms of vicarious trauma and obtain protected time off (Gazoni et al., 2008; Hall & Scott, 2012; Pratt & Jachna, 2014). Research on vicarious resilience looks specifically at psychologist while empowered victimization examines physicians and nurses (Hernàndez et al., 2007; Michael & Jenkins, 2001; Seys et al., 2012). Bringing together these bodies of research to consider how experiences and storying can build resilience across disciplines will be valuable in the endeavour to change culture.

Limitations

As my advisor, Dr. Wright (2012, p. 275) reminds us, limitations are not synonymous with weakness but rather, "they are features arising from the epistemological and methodological commitments of this research that affect the extent to which the interpretations offered here can be read and transferred to other contexts". I have mentioned some of the limitations of this study throughout the previous chapters: my positioning as a perioperative practitioner with intraoperative death experiences as well as the transferability of these findings. Our intention throughout this work was to remain transparent. I oriented readers to my subjective perspective and highlighted methodological safeguards designed to authentically explore and represent the data. I spoke honestly to the challenges during this project, describing my novice as a researcher and evolving interpretations of narratives, stories, and analysis. Rather than reiterating these points I will use this section to highlight some of the limitations which I feel are relevant when considering pursing research in this field.

We have already highlighted participant related limitations in Chapter 5 (Findings), however I would like to draw attention some additional considerations. Although participants were of different cultural backgrounds they were all English speaking. Perspectives from French

Canada would have been valuable to gain insights on how language shapes stories and if interpretations of responsibility or relationships surfaced differently. Since this project was a Masters level thesis there were boundaries around time which did not allow for a true multidisciplinary investigation of intraoperative death. The reality that nurses, surgeons, and anesthetists make up the nucleus of intraoperative teams ignores the other professionals involved in perioperative care. Future research should consider these roles: respiratory therapists, perfusionists, health care aids, porters, clinical clerks, residents, students, and anesthesia assistants as they can also be involved in intraoperative deaths as well.

As previously mentioned the purpose of this study was not to create generalizable findings but to give voice to multiple expressions of reality. Although initially I wanted to include interprofessional narratives through the use of focus-groups this approach would result in collective stories rather than the untold personal narratives. Treating stories and narratives as the unit of inquiry requires protecting these accounts for outside influence, a challenge for a novice researcher attempting to build rapport with participants. As such, findings need to be considered judiciously as a co-construction between myself and participants and not necessarily reflective of all intraoperative death narratives.

Conclusion

This project began with my own story of caring for a woman who died intraoperatively. Each story and each loss compounded, becoming the motivating narrative of this thesis. Every step provided insight, illuminating new understandings of my own experiences and the stories of others. While literature exploring the lived reality of intraoperative death was sparse, the wealth of research on OR practitioners and teamwork brought awareness to the tensions embedded in perioperative care. A theoretical lens was used to identify master narratives, conceptual

foundations which shape perioperative care on an individual, team, and organizational level. Approaching analysis using two methods allowed us to faithfully account for overarching narratives as well as 'micro' level stories. These analytical lenses compelled us to reposition our perspectives, accounting for the way in which participants told stories as well as what was shared.

The participants used tragic, satirical, comedic, and romantic plots to convey their stories of caring for victims of intraoperative death. Narratives revealed that interpretations of responsibility were central to perioperative clinicians' stories of intraoperative death and that these experiences impacted their professional and personal relationships. Looking at findings in tandem illustrated different perspectives of death, features which could render the experience more positive or engrain negative connotations. Overlying findings with master narratives clarified meaning embedded in participants' narratives: their interpretation of responsibility, ability to mediate loss, and choice of storytelling language. This analysis also accentuated tensions as sources of vulnerability, lived and perpetuated by perioperative practitioners.

I hope that this work resonates with clinicians and that by reflecting on our analytical and methodological journey they may reap some of the restorative benefits I experienced. While no aspect of this project is more important than another, the power of narrative inquiry surfaced as a valuable tool that I will carry with me in my new clinical role. I do not recommend revolutionizing OR care but rather recognizing its complexities and how to best support practitioners navigating the death of their patients in this context. Continuing to recognize and encourage vulnerability through the open sharing of stories will contribute to a culture of recovery and perhaps even resilience. I feel I am ending where I began, revisiting my original story but with an enlightened, hopeful perspective.

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Appendix A: Research Ethics Board Approval Certificate

Date (mm/dd/yyyy): 08/17/2016

Université d'Ottawa   University of Ottawa
Bureau d'éthique et d'intégrité de la recherche   Office of Research Ethics and Integrity

Ethics Approval Notice

Health Sciences and Science REB

Principal Investigator / Supervisor / Co-investigator(s) / Student(s)

First Name	Last Name	Affiliation	Role
David	Wright	Health Sciences / Nursingy	Supervisor
Brandi	Vanderspank-Wright	Health Sciences / Nursingy	Co-Supervisor
Heather	Hartley	Health Sciences / Nursingy	Student Researcher

File Number: H06-16-11

Type of Project: Master's Thesis

Title: Intraoperative deaths: The untold stories of perioperative teams.

Approval Date (mm/dd/yyyy)	Expiry Date (mm/dd/yyyy)	Approval Type
08/17/2016	08/16/2017	Approved

Special Conditions / Comments:
N/A

File Number: H06-16-11   **Date (mm/dd/yyyy):** 08/17/2016

Université d'Ottawa   University of Ottawa
Bureau d'éthique et d'intégrité de la recherche   Office of Research Ethics and Integrity

This is to confirm that the University of Ottawa Research Ethics Board identified above, which operates in accordance with the Tri-Council Policy Statement (2010) and other applicable laws and regulations in Ontario, has examined and approved the ethics application for the above named research project. Ethics approval is valid for the period indicated above and subject to the conditions listed in the section entitled "Special Conditions / Comments".

During the course of the project, the protocol may not be modified without prior written approval from the REB except when necessary to remove participants from immediate endangerment or when the modification(s) pertain to only administrative or logistical components of the project (e.g., change of telephone number). Investigators must also promptly alert the REB of any changes which increase the risk to participant(s), any changes which considerably affect the conduct of the project, all unanticipated and harmful events that occur, and new information that may negatively affect the conduct of the project and safety of the participant(s). Modifications to the project, including consent and recruitment documentation, should be submitted to the Ethics Office for approval using the "Modification to research project" form available at: http://www.research.uottawa.ca/ethics/forms.html

Please submit an annual report to the Ethics Office four weeks before the above-referenced expiry date to request a renewal of this ethics approval. To close the file, a final report must be submitted. These documents can be found at: http://www.research.uottawa.ca/ethics/forms.html

If you have any questions, please do not hesitate to contact the Ethics Office at extension 5387 or by e-mail at: ethics@uOttawa.ca.

Signature:

Germain Zongo
Protocol Officer for Ethics in Research
For Daniel Lagarec, Chair of the Health Sciences and Sciences REB

Appendix B: Demographic Data Questions

Demographic Data Questions

The following demographic data will be collected at the beginning of the initial interview:
Professional Designation (Nurse, Surgeon, Anesthetist):
University Degree (Yes/No):
Gender:
Age:
Years of experience in professional designation:
Years of experience in perioperative care:
Years of experience in current perioperative setting:
Surgical specialty (if applicable):
Any specific training or previous experience in end-of-life care (details):

Appendix C: E-mail Script

Dear _____(name of participant)_____,

      My name is Heather Hartley and I am a Master's of Science in Nursing student who is conducting research exploring interprofessional narratives of intraoperative death. I am working with two University of Ottawa professors, Dr. David Wright and Dr. Brandi Vanderspank-Wright. The purpose of this study is to explore how members of the interprofessional team (perioperative nurses, surgeons and anesthetists) narrate their experiences of intraoperative death within an interprofessional team context. The study objectives are: (1) to explore what stories reveal about practitioners' experiences of caring for patients who die intraoperatively and, (2) to examine how these individual stories illustrate participants' interpretation of impact; on themselves, on the team and on patient care. With this study I hopes to give voice to a relatively unexplored reality of perioperative end-of-life care and understand how this phenomenon is narrated by front-line staff.

      We are hoping that you might be willing to participate and share your stories of intraoperative death. The commitment for this study is fully articulated in the attached information sheet but would involve an individual, audio-recorded interview lasting approximately 60 – 90 minutes with the potential for one follow-up interview. These interviews would be facilitated based on your availability and at a location of your choosing. Phone and Skype interviews are also possibilities, however I am able to travel within the Champlain LHIN. Please see the attached information for more details on the study.

      We appreciate your consideration of this project. Your participation would be invaluable in the process of uncovering the untold stories of perioperative clinicians and teams caring for patients at end-of-life in intraoperative settings. Please don't hesitate to contact me should you require any additional information.

Sincerely,

Heather Hartley, RN, BScN
University of Ottawa, Master of Science in Nursing Student
██

Dr. David Wright, PhD, RN, CHPCN(C)
Assistant Professor, School of Nursing, Faculty of Health Sciences, University of Ottawa,
██

Dr. Brandi Vanderspank-Wright, RN, MScN, CNCC(C), PhD
Assistant Professor, School of Nursing, Faculty of Health Sciences, University of Ottawa
███

Appendix D: Letter of Information

Title of the Study: Intraoperative deaths: The untold stories of perioperative teams

Principle Investigator:
Heather Hartley, RN, BScN
University of Ottawa, Master of Science in Nursing Student
███

Supervisors:
Dr. David Wright, PhD, RN, CHPCN(C)
Assistant Professor, School of Nursing, Faculty of Health Sciences, University of Ottawa,
██

Dr. Brandi Vanderspank-Wright, RN, MScN, CNCC(C), PhD
Assistant Professor, School of Nursing, Faculty of Health Sciences, University of Ottawa
███████████████████████████████████

Invitation to Participate: You are invited to participate in this study exploring the stories of interprofessional teams caring for patients that die intraoperatively conducted by Heather Hartley. These stories are an avenue for perioperative nurses, surgeons and anesthetists to narrate their experiences of intraoperative death.

Purpose of the Study: The purpose of this study is to explore how members of the interprofessional team (perioperative nurses, surgeons and anesthetists) narrate their experiences of intraoperative death within their team context. Your stories will bring attention to the unexplored reality of end-of-life care in the Operating Room.

Participation: Your participation in this study will consist of one to two individual interviews facilitated by Heather Hartley that will last approximately 60 minutes. Depending on your geographical location and availability these interviews will take place in person, on the telephone or using Skype. These interviews will be audio-recorded. Your interview will be conducted at a location (if applicable) and time of your choosing. During the interview you will be asked to share your stories of caring for patients that die intraoperatively and how you perceive this impacts you and your team.

Benefits: In this study participants will have the opportunity to discuss and share their experiences about a relatively unacknowledged aspect of the perioperative clinician role. Sharing these stories has the potential to be a relieving process, clarifying experiences and processing emotions. Personal narratives of caring for patients that die intraoperatively will help develop a rich understanding of end-of-life experiences in Operating Room team contexts.

Risks: The process of sharing stories of intraoperative death may evoke difficult memories, uncomfortable feelings or emotional responses. Every effort will be made by the research team

to minimize these risks. Participation in this study is voluntary, participants may withdraw at anytime, choose to not answer any questions or request rest periods. A debriefing session and additional resources will be offered following the interview.

Confidentiality: Any shared information will remain strictly confidential and will be only be accessible to the research team. All personal identifiers will be removed and any direct quotes will be represented by pseudonyms. Data will be analyzed and disseminated in academic forums: scholarly publications, presentations and the Masters thesis (final paper) of the primary researcher.

Conservation of data: At the end of the study, interview transcripts will be kept in a securely locked location within the University of Ottawa, School of Nursing for seven years. These documents will be securely and confidentially destroyed after the seven-year period.

Voluntary Participation: Participation in this study is voluntary. Potential candidates do not have to take part in this study and can elect to withdraw participation at any point. During the interview process participants can refuse to answer any questions without retribution.

Study Results: Results will be disseminated through a Master's Thesis project that will be published in the University of Ottawa digital repository. These findings will also potentially be disseminated through academic presentations or publications in scholarly journals.

If I have any questions about the study, I may contact the researcher or her supervisor at the phone numbers or email addresses provided above.

If I have any questions regarding the ethical conduct of this study, I may contact the Protocol Officer for Ethics in Research, University of Ottawa,

Please keep this form for your records.
Thank you for your consideration.

Heather Hartley, RN, BScN

Appendix E: Facebook Recruitment Poster

perioperative nurses:
WE NEED YOUR STORIES

Title of Nursing Research Study: Intraoperative deaths: The untold stories of perioperative teams

What is the study? The purpose of this study is to explore how members of the interprofessional team (perioperative nurses, surgeons and anesthetists) narrate their experiences of intraoperative death within an interprofessional team context.

Who is eligible to participate? English speaking, Perioperative Nurses that have experienced an intraoperative death and are currently working in a perioperative unit.

What is included in participation? If you are willing to participate, you will be invited to partake in individual interviews where you will be asked to tell your stories of caring for patients that have died intraoperatively. Interviews can be done in person, by telephone or using Skype. There is potential for one follow-up interview.

WANT TO GET INVOLVED?

Contact Heather Hartley (Primary Researcher: University of Ottawa,

Appendix F: Interview Guide

Open-Ended Questions for Individual Interview:
During the individual interview process, participants will be asked:

Individual Experience:

Can you tell me your story of caring for a patient that died intraoperatively?

- Possible Probe: What was your role?
- Possible Probe: How do you feel this experience impacted you (professionally and/ or personally)?

Team Experience:

Can you tell me about the experience of your team caring for a patient that died intraoperatively?

- Possible Probe: How did you feel about your colleagues during and/or after intraoperative care?
- Possible Probe: How do you feel this experience impacted your team performance?
- Possible Probe: How do you feel this experience impacted patient care?

Ongoing Experience:

Can you tell me about your experiences following a case that resulted in intraoperative death?

- Possible Probe: Can you tell me about any personal or professional supportive strategies you sought out following an intraoperative death experience?
- Possible Probe: Were there any support strategies you wished had been available to you or your team?
- Possible Probe: How has the passing of time impacted how you feel or think about this experience?

Conclusion

Is there anything else you would like to share about this topic that you feel is important for me to know?

Appendix G: Debriefing Guide

A time period of 60 – 90 minutes will be made available following each interview to allow for adequate debriefing time. This will provide a safe space for participants to close their session and process any emotions raised during the interview. This will be directed by the needs and wishes of the participants. A list of supportive resources is provided to each participant in the study consent form should they require additional support moving forward.

Following the Semi-Structured Individual Interview participants will be asked:

Thank you for your participation in this study. I realize this is a sensitive topic that is often challenging to recall and discuss. Your stories are invaluable to the process of giving voice to these unexplored experiences and we appreciate your time and effort.

At this point the audio recording has been stopped and anything said will not be included in the interview transcript or research study.

Do you have any additional questions or thoughts you would like to share?

Did anything about this interview process raise concerns for you?

Do you feel that you require additional support following this interview? (A list of resources will be provided to participants regardless of need, see consent form)

Is there anything else you wish to discuss or any comments you would like to make?

Appendix H: Consent

Consent Form

Title of the Study: Intraoperative deaths: The untold stories of perioperative teams

Name of researcher:
Heather Hartley, RN, BScN
University of Ottawa, Master of Science in Nursing Student

Supervisors:
Dr. David Wright, PhD, RN, CHPCN(C)
Assistant Professor, School of Nursing, Faculty of Health Sciences, University of Ottawa,

Dr. Brandi Vanderspank-Wright, RN, MScN, CNCC(C), PhD
Assistant Professor, School of Nursing, Faculty of Health Sciences, University of Ottawa

uOttawa

Université d'Ottawa
Faculté des sciences de la santé

École des sciences infirmières

University of Ottawa
Faculty of Health Sciences

School of Nursing

Invitation to Participate: You are invited to participate in this study exploring the stories of members of interprofessional teams who care for patients that die intraoperatively. The study will be conducted by the research student Heather Hartley and her research supervisors Dr. David Wright and Dr. Brandi Vanderspank-Wright. You have been approached to take part because you are a member of a perioperative team and have experienced a patient death in the intraoperative setting. This study has received ethics clearance from the University of Ottawa Research Ethics Board.

Purpose of the Study: The purpose of this study is to explore how members of the interprofessional team (perioperative nurses, surgeons and anesthetists) narrate their experiences of intraoperative death within their team context. Your stories will bring attention to the unexplored reality of end-of-life care in the Operating Room. Embedding these findings in an interdisciplinary framework will acknowledge the interprofessional dynamics that characterize surgical teams. The study objectives are: (1) to explore what stories reveal about practitioners' experiences of caring for patients who die intraoperatively, (2) to examine how these individual stories illustrate participants' interpretation of impact; on themselves, on the team and on patient care. This study will help build knowledge that

may be used to improve support available to staff following an intraoperative death. Your first-hand accounts and interpretations are invaluable in this process.

Participation: The study will include approximately 6-9 participants. If you choose to participate a meeting will be facilitated by Heather Hartley. The meeting will include an interview of approximately 60-90 minutes, as well as a debriefing session. Depending on your geographical location this meeting may be conducted in person, on the telephone or using Skype technology. This interview will be audio-taped and transcribed verbatim to allow an accurate analysis and representation of your experience. During the interview you will be asked to share your stories of caring for patients that die intraoperatively and how you perceive these deaths to have impacted you and your team. Your interview will take place at a location and time of your choosing. You will also be invited to debrief your experience of the interview as soon as it is over. The debriefing portion of the meeting will not be audio-recorded. The total time of participation will likely be approximately two hours – although the meeting can be shorter or longer than that, depending on your personal preference. A follow up interview may be requested to ask follow-up questions about your experiences of intraoperative death. This second session would also be audiotaped and transcribed.

Risks: As part of your participation, you will be asked to share personal stories about your experiences with intraoperative death. Telling your stories may cause you to recall difficult memories, feel uncomfortable or experience a negative emotional response. Every effort will be made by the research team to minimize these risks. Your participation in this study is voluntary, you may withdraw at any time or choose to not answer any questions. You will be offered a debriefing session following the interview to ask any questions you may have or to express concerns. Additional resources will be provided to you during the interviews, please see an example list of resources appended to this consent form (See Appendix A: Example of Supportive Resources). A list tailored to your geographical location will be provided by the Researcher at the time of your interview.

Benefits: The benefit of participating in this study may be an opportunity to discuss and share your experiences about a relatively unacknowledged aspect of your perioperative role. Sharing your story has the potential to be a relieving process, clarifying your reactions and processing emotions. Your personal narratives of caring for patients that die intraoperatively will help develop a rich understanding of end-of-life experiences in Operating Room team contexts. This has the potential to aid in the development of programs and policies to help support clinicians during these experiences and improve staff recognition. This will also contribute to a culture that acknowledges intraoperative death and recognizes this phenomenon as a difficult reality of the perioperative practitioner's role.

Confidentiality: All shared personal identifiers and information will be kept strictly confidential by the researcher, Heather Hartley and the research team. All members involved in the research process are bound by the policies of the University of Ottawa to keep study participant information and interview data confidential. Each interview participant will be assigned a pseudonym and all personal identifiers will be removed. Master lists will be securely stored separately from the data. Audio-recordings and transcripts of interviews will be physically and digitally protected using locks and passwords accessible to only the researchers.

June 1, 2016

The information you share will be analyzed and shared in academic forums: scholarly publications, presentations and the Masters thesis (final paper) of the primary researcher. Confidentially will be maintained during the writing process; clinician or patient identities will not be revealed in any publication or presentation. Participation in this study will have no impact on your professional role. The aim of the study is to gain an enhanced understanding of intraoperative death using a teamwork approach, **not to assess accountability or decipher errors**. Only the researcher and her supervisors will be aware of your participation in the study.

Conservation of data: At the end of the study, data will be kept in a securely locked location within the University of Ottawa, School of Nursing for seven years. These documents will be securely and confidentially destroyed after the seven-year period.

Voluntary Participation: Your decision to participate in this study is voluntary. You do not have to take part in this study and no one will be informed if you decide not to participate. If you decide to participate in this study you can choose to withdraw at any period of time. Please inform Heather Hartley verbally or in writing if you choose to withdraw from the study and wish to have any information already collected destroyed. During the interview process you can refuse to answer any questions without any consequence to your involvement in the study.

Study Results: Results will be disseminated through a Master's Thesis project that will be published in the University of Ottawa digital repository. These findings will also potentially be disseminated through academic presentations or publications in scholarly journals.

Consent: I, _____ _____agree to participate in the above research study conducted by Heather Hartley, of the University of Ottawa, Master of Nursing program, under the supervision of Dr. David Wright and Dr. Brandi Vanderspank-Wright.

If I have any questions about the study, I may contact the researcher or her supervisor at the phone numbers or email addresses provided above.

If I have any questions regarding the ethical conduct of this study, I may contact the Protocol Officer for Ethics in Research, University of Ottawa, ███████████████████████████████
███

There are two copies of the consent form, one of which is mine to keep.

Participant's signature: _____ ___   Date: _____

Researcher's signature: _____ ___   Date: _____

June 1, 2016

Appendix A:
Example of Supportive Resources

Recruitment for this study includes a small number of participants that are not limited by geographical location. Prior to recruitment is is not feasible to know where these participants are located and what specific resources are available in their vicinity. Before each interview research will be done to identify relevant resources in the participant's area. These resources will include "face-to-face" options as well as telephone and/or internet programs. The examples provided below are the resources that will be offered to participants who are based in the Ottawa region. The process of identify and providing resources will be repeated in other geographic locations to ensure support is tailored to each participant's location.

Ottawa Based Resources:

University of Ottawa Health Services: Mental Health Program. Family Health Team Psychiatrists and Mental Health Counselors available to patients enrolled with a family physician in the University of Ottawa Health Services Family Health team or to patients who have a referral from their family physician. Professionals work with clients in a confidential manner to build capacity to deal with a continuum of mental health related situations. Care is tailored based on individual needs and nature of presenting issues. Resources available by phone at 613-564-3950 or online at https://www.uottawa.ca/health/services/mental-health.

The Walk-In Counselling Clinic: Located in a multitude of community centers throughout the City of Ottawa. No referrals or appointments are required and many locations are open evenings and weekends in addition to weekday hours. Services are free to all members of the community and counsellors specialized in helping individuals work through personal and job related stress. Information regarding all locations is available at: http://walkincounselling.com.

Crisis Line: Professionally trained Crisis Line Responders are available 24-hours a day, 7 days a week at 613-722-6914 (1-866-966-0991 for individuals outside of Ottawa). This service is available to support individuals with any concerns about their personal mental health or that of their loved ones. A crisis can include difficulty coping with stress, feeling overwhelmed, symptoms of depression, anxiety, psychosis or suicidal thoughts. Rapid response teams, referral services and follow-up care plans are available through this resources. More information is provided online at http://www.crisisline.ca/english/about-us/about-us.html.

June 1, 2016