Death Education:
Simulating the End of Life to Beginning Healthcare Providers

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ABSTRACT

The national Quality End-of-Life Care Coalition of Canada report advocates that professional healthcare education must become even more important for a systems-wide approach to handling hospice palliative and end-of-life care in order to ensure that the soaring numbers of dying Canadians receive quality care in all settings where they die over the next 10 years. Recognizing this critical societal need and addressing it as an educational challenge, this grounded theory study examines undergraduate student experiences with high fidelity simulation labs in *death education* or interprofessional palliative care. This study is guided by the central questions: What forms of knowledge and processes of learning are generated in an interprofessional palliative care simulation learning environment? And what is the experience and impacts of the interprofessional palliative care simulation from the undergraduate healthcare learner's perspective? This research study recognized that learner participation in the instructional technological platform of simulation prompts questions about the nature of experiential learning and how it is that learning arises out of simulation.

The design for this study followed standard processes in grounded theory by using constant comparisons throughout the data analysis process and by adopting a constructivist perspective toward the research process. Nine participants, all enrolled in an Ontario university and accredited an Introduction to Palliative Care course, completed two palliative care simulation lab experiences designed to provide opportunity to test drive their knowledge using a palliative approach, and to start a conversation about their role as future palliative care practitioners. The data

were collected from student group debrief sessions following the simulation labs; from the study's 3 phases' interviews that each participant individually engaged in (each participant x 3 interviews); and finally, from my own extensive observations and field note journals. Analysis followed grounded theory procedures and initial, focused, axial and theoretical coding was performed. The substantive emergent theory is an explanatory model to address the studied phenomenon: the undergraduate interprofessional palliative care learning experience using high fidelity simulation. This new theory, 3H of Head, Heart & Hands, attempts to capture the student experience in simulated death education as it pertains to learning processes, perceptions of learning, impacts on learning, and meanings associated with learning that resulted from their participation in the study. The findings and 3H theory that emerged have significance and implications at individual, organizational, and societal levels of analysis pertaining to the fields of simulation in higher education, undergraduate interprofessional programs, and palliative care of the dying and their families.

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Dedicated to Allegra and Dawson
May you find joy and adventure in life long learning

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CHAPTER ONE

DYING TO KNOW: INTRODUCTION TO THE STUDY

BACKGROUND

Each death in Canada affects the immediate well-being of at least five other people on average, or more than 1.25 million Canadians each year (Canadian Hospice Palliative Care Association, 2011). The Quality End-of-Life Care Coalition of Canada reports that over the next 10 years, professional healthcare education will be critically important for a systems-wide approach to handling hospice palliative and end-of-life care, to ensure that Canadians receive quality care in all settings where they die. Most healthcare associations and organizations agree that quality palliative care "is about living well every hour of every day" (Senator Carstairs, 2010, p. 20). Thus, any palliative care education will undoubtedly impact both professional caregivers and recipients of their palliative care. Former Senator Carstairs (2000), who was named Federal Minister with Special Responsibility for Palliative Care and a Secretariat on Palliative and End-of-Life Care, refers to palliative care as the "right" of every Canadian. Many other policy-makers and healthcare spokespeople are predicting that imminently, a very vocal representation of the Canadian population, the "baby boomers," will be demanding that "right" to die as they want. Our educational systems need to be in place to assist the healthcare system in preparing for that swelling demand for palliative care. Undergraduate healthcare programs in North America are striving to respond to the soaring and ever-demanding healthcare needs of an exploding aging population. Recognizing this challenge or imminent crisis, this doctoral study explores undergraduate student learning experiences with high fidelity simulation in interprofessional palliative

care education, as the pedagogical means for improving the healthcare profession and providing a system to cope with soaring palliative care demands.

This chapter provides the reader with an introduction and overview of the rationale for this study, outlines the contextual background of the research, and describes the study's purpose and potential significance. Specifically, it introduces the three substantive areas or multidisciplinary education fields of this study: (a) palliative care education, (b) interprofessional education, and (c) high fidelity simulation technologies. The chapter finishes with a set of terms and definitions that aim to outline the study's multidisciplinary scope, and guide the reader with key terminology.

Palliative Care Education

Palliative care is defined by the World Health Organization as an approach to care that "improves the quality of life of patients and their families facing the problem associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual" (2010).

The goal of palliative care education is to foster knowledge and skill development among students and healthcare professionals, to improve the care of individuals who are dying. The ultimate goal of palliative care is to ensure that the individuals who are dying—including their families and loved ones—receive excellent end-of-life care. Palliative care education includes the skills to care for those who are dying (as well as their families or caregivers) and learning to know what to do, how to do it well, and to exercise critical judgment when delivering that care (Wee & Hughes, 2007).

Palliative care education efforts have been targeted at those professions already providing clinical care, such as physicians, nurses, and social workers (Grant, Elk, Ferrell, Morrison, & Von Guten, 2009). Yet there has been an increase in pre-professional or undergraduate education programs in Canada in the last decade, as the recognition of the impending explosion of palliative care needs has been communicated (Carstairs, 2010). As Gillan, van der Riet, and Jeong (2014) describe from their literature review on undergraduate curriculae, death education and palliative care education still do not have a firm and established presence within undergraduate healthcare curricula, while opportunities for clinical experiences are even more scarce and inadequate. They recommend that, "urgent attention be given to embedding theoretical content in sufficient depth combined with teaching strategies to promote critical reflection in end of life care" (p. 332). The literature also indicates that both the amount of time dedicated to the content and the type of delivery methods of palliative care education are quite important (Gillian et al., 2014).

Interprofessional Education

Interprofessional education (IPE) has been defined as "any situation where two or more health professions are gathered together to learn with, from and about each other to improve collaboration and quality of care" (Barr, 2002, p. 17). The World Health Organization (1988) has long recognized the importance of IPE and defines it as the following:

> A process by which a group of students from health-related occupations with different educational backgrounds learn together during certain periods of their education, with interaction as an important goal, to collaborate in providing promotive, preventive, curative, rehabilitative and other health-related services. (pp. 6-7)

Uni-professional education, the focus on one healthcare domain such as nursing in university programs, remains the dominant model for healthcare education in Canada (Reeves, Perrier, Goldman, Freeth, & Zwarenstein, 2013). Yet there is a growing shift in the focus of healthcare education curricula, from isolated domains or "silo" fields of learning to a new, multi-health field of education that provides more opportunity for interactive learning between and among students from related health disciplines (Robertson & Bandali, 2008). This new shift requires the development and implementation of innovative strategies within healthcare education curricula that advance the skills and competencies necessary for interprofessional collaborative practice (Masters, O'Toole, & Jodon, 2012). Although teamwork is increasingly recognized for its critical role in the effective delivery of healthcare, undergraduate or pre-licensure healthcare education as a whole has been slow to adopt or incorporate interprofessional curricula (Baldwin, 1996; Reeves, Perrier, Goldman, & Zwarenstein, 2013; Zwarenstein, Goldman, & Reeves, 2009).

Education in health field silos perpetuates misperceptions about healthcare roles, scope of practice, and knowledge among different healthcare providers that results in miscommunications, ineffective care, or disruptions of care (Baldwin, 1996). Educators of future healthcare providers have a responsibility to prepare institutionally capable and ready healthcare graduates who can effectively practice as members of interprofessional teams. IPE provides opportunities to develop interpersonal skills and favourable collaborative attitudes and behaviours amongst healthcare providers at a pre-licensure stage.

Simulation Technologies in Healthcare Education

Simulation in healthcare education "refers broadly to any device or set of conditions that attempts to present patient problems authentically" (Issenberg & Scalese, 2008, p. 33). It strives to "replicate some or nearly all of the essential aspects of a clinical situation so that the situation may be more readily understood and managed when it occurs for real in clinical practice" (Morton, 1995, p. 76). Healthcare simulations attempt to imitate real-patient situations, anatomic regions, clinical tasks, and real-life scenarios (Issenberg & Scalese, 2008). Simulation can be defined as "an educational technique that allows interactive, and at times immersive activity by recreating all or part of a clinical experience without exposing patients to the associated risks" (Maran & Glavin, 2003, p. 22).

In healthcare education, simulation is a broad term that encompasses basic human models, such as those used during the past several decades, to life-like mannequins that have simulated voices, pulses, blood pressure, body fluids, and more (Ellis & Hughes, 1999). Healthcare educators have used simulation actively for almost 40 years, but in the last 15 years there has been a more widespread adoption of this technology in both teaching and assessment (Gaba, 2004; Issenberg & Scales, 2008). This adoption demonstrates a significant shift in healthcare training from more traditional approaches to healthcare education that primarily relied on live patients (Issenberg & Scales, 2008) to a technology that provided an intermediary stage—an in-between stage that bridges the text-based or hypothetical patient situation and the actual clinical settings of real live patients. Simulation has continued to develop and has been found to be useful in crisis management, team building, emergency care, and skill practice (e.g., physicians learning laparoscopy). It has become popular in medical and nursing education because it allows the stu-

dent to experience and manage medical crises in a simulated clinical setting where a "real" patient is not at risk (Bradley, 2006). Simulation labs are designed to replicate a hospital room setting, often with an educator controlling the high fidelity mannequin. Via a computer with voice response, the educator controls the simulation via the "patient" who responds in the moment as a response to student communications, and reacts to their interventions (Parker & Myrick, 2011).

Simulation has been found by a couple of researchers to be an effective educational tool, particularly suited to a constructivist pedagogy (see Parker & Myrick, 2011). The simulation environment is designed to be a safe and supportive environment where new skills can be practiced and experienced without the threat of bodily harm to an actual patient. Educators in the simulation lab are able to facilitate scenarios in a controlled manner using specially designed software. Drawing on their own knowledge and accumulated practice, these simulation educators orchestrate opportunities for students to practice and develop their skills and knowledge in a secure environment. Simulation provides a chance for learners to test newly acquired skills prior to applying them in real clinical settings with human patients (Issenberg, McGaghie, Petrusa, Gordon, & Scalese, 2005). Simulation scenarios are often videotaped to allow learners and educators the chance to review actions and responses, and engage in reflective practice during debriefing sessions. Debriefing "provides an outlet for critical reflection and builds linguistic perspectives on meaning and knowledge that are relevant to the learners" (Parker & Myrick, 2011, p. 78).

The use of simulation in healthcare education is viewed as a potential solution to a number of current healthcare challenges, including the decrease in availability of patients for student practice, the decreasing rate of societal acceptance of students learning on patients, and the challenges faced by educational institutions to find clinical education sites for their healthcare stu-

dents (Bandali, Parker, Mummery, & Preece, 2008). Advancements in simulation have been highly influenced by changes in the healthcare climate over the last few decades, such as the increased use of technology (Gaba, 2007), increased focus on patient safety resulting in less opportunities for training (Kahn, Pattison, & Sherwood, 2011), and a need for new graduates to be immediately prepared to "hit the ground running" in their new employment positions (Jeffries & Battin, 2012, p. 8). The "see one, do one, teach one paradigm" of the past is no longer acceptable, nor is practicing on animals, let alone real human beings (Kahn et al., 2011, p. 2). These changes in the healthcare climate have had profound and reaching effects in healthcare education. The changes in healthcare delivery, the vast expansion of knowledge, rapid developments in healthcare research and technologies, and increasingly strong emphases on quality of care and patient safety have all impacted the manner in which healthcare education is expected to be delivered (Kneebone, 2010; Nehring, 2010). The strong desire in our present-day healthcare climate for patient safety and continued system improvements are major drivers for expanding our understanding of the impact of simulation in healthcare education. With continued cutting edge technological and educational advances, simulation technologies have the potential to bridge the gap between what is learned in the classroom and what is needed at the patient's bedside (Kahn et al., 2011).

Introduction to the Study

Statement of Purpose and Research Questions

The Quality End-of-Life Care Coalition of Canada reports that over the next 10 years, professional healthcare education will be even more critically important for a systems-wide approach

to handling hospice palliative and end-of-life care, to ensure that Canadians receive quality care in all settings where they die.

Purpose. The purpose of this grounded theory study was to examine the core experiences of undergraduate students as they explored the pedagogical uses of simulation technologies and how they may enhance and support interprofessional palliative care education at a small university in Ontario. The aim of simulation-enhanced, interprofessional palliative care education is to provide learners with opportunities to integrate multiple dimensions of clinical knowledge pertaining to palliative care—including psychosocial/spiritual care, physiology of dying, and communication skills—in order to develop competency and reflective practice to improve patient and family care at the end-of-life stage. The intended audience for this research is healthcare educators, specifically those with an interest in palliative care, interprofessional education, and simulation technologies. It is also anticipated that this research will contribute to the education literature for professionals interested in intersectional collaboration or intersectionality research (Allison, 2007; Barr, 2002; Oandason & Reeves, 2005), reflective and reflexive professional practice (Dewey, 1938; Fenwick, 2003; Schön, 1983), and communities of practice (CoP) learning (Lave & Wenger, 1991; Michelson, 1996; Wenger, 1998; Wenger, McDermott, & Snyder, 2002).

Research questions. My research recognizes that learner participation in the instructional technological platform of simulation prompts questions about the nature of experiential learning and how it is that learning arises out of simulation. The overarching questions guiding my dissertation research are the following: *What forms of knowledge and processes of learning are generated in an interprofessional palliative care simulation learning environment? And what is the*

experience and impacts of the interprofessional palliative care simulation from the undergraduate healthcare learner's perspective?

Additional questions that direct the study include:

- How can simulation encourage greater interprofessional communities of practice for undergraduate students' learning?
- How can simulation impact the palliative care education experiences of undergraduate students?
- What meanings or purposes can the pedagogical use of simulation provide undergraduate students in their higher education healthcare programs?

Nature of the Study

In my work, I use and examine high fidelity simulation, a type of computer-enhanced palliative care clinical simulated lab, to enable learner-centred experiential learning and to simultaneously educate undergraduate students from different healthcare fields and disciplines. The design for this study followed standard processes for grounded theory using constant comparison throughout the data analysis process, and by adopting a constructivist perspective toward the research process. There were 9 participants in this study who completed two palliative care simulation lab experiences and were interviewed about their experiences over a 6 month period. Participants were all enrolled in a university in Ontario and had completed an Introduction to Palliative Care course before beginning this study.

Ultimately, it is my hope that this work will contribute to the understanding of the comprehensive delivery of interprofessional palliative care education, which then serves to improve the care of the dying and their families. I am addressing my research to other interprofessional

palliative care educators who, like me, are challenged by the lack of research in this area and who strive to use different pedagogical strategies to enhance our teaching, and thus the overall learning experience for healthcare learners.

The current dilemma in the literature is that there is a fair amount of research directed toward *what* should be taught in interprofessional palliative care education, but very little that addresses *how* that should be taught (Wee & Hughes, 2007). For example, Simpson (1979) states that, "We are not free to choose whether anyone will learn about death, though we have some choice about how they will learn" (p. 170). This dissertation strives to develop the foundational thinking critical for this "how" piece and the improved preparation of future interprofessional palliative care providers.

Theoretical Approach

I am working from a constructivist perspective of educational research (Charmaz, 2000, 2005; Eggen & Kauchak, 1999; Vygotsky, 1987) that holds that all educational technologies, including simulation education, need to be both pedagogical and purposeful for the learner (Parker & Myrick, 2011). As an approach to teaching and learning, a constructivist approach maintains that learners create their own meaning through interaction with the environment (Dabbagh & Bannan-Ritland, 2005). Constructivism is a theoretical framework focusing on both psychological and social ways of knowing (Charmaz, 2006; Laurillard, 2002; Phillips, 2000). This framework posits that individuals use previous experiences, knowledge, and understanding as building blocks from which to construct knowledge for themselves (Anderson, 1999). Philips (2000) identifies social constructivism as knowledge influenced by social forces, tools, and ideologies. It is through psychological constructivism that learners develop their own knowledge through inter-

nalizing and processing meaning. While both psychological and social constructivism recognize meaning and knowledge as being actively constructed, Richardson (2003) acknowledges important differences in focus:

> social constructivism focuses on how the development of that formal knowledge has been created or determined within power, economic, social, and political forces. Psychological approach focuses on the ways in which meaning is created within the individual mind and more recently, how shared meaning is developed within a group process. (p. 1625)

Technology has an important role to play in supporting a social constructivist learning environment. It has been identified as a way to support groups in developing their collective intelligence or knowledge base (Hoadley & Kilner, 2011). Collaborative technologies are emerging that are being used to support interprofessional undergraduate learning, and high fidelity simulation is one of those. As Parker & Myrick (2011) argue, high fidelity simulation can be utilized to create a subjective, social endeavour leading to "the collaborative creation of knowledge and meaning" for the undergraduate learners engaging in this learning activity (p. 74).

Constructivist pedagogy. Richardson (2003) defines constructivist pedagogy as the "creation of classroom environments, activities, and methods that are ground in a constructivist theory of learning, with goals that focus on the individual learner, who develop deep understanding in the subject matter of interest and habits of mind, that aid future learning" (p. 1627). Lunenburg (1998) identified five principles of constructivist pedagogy:

- Posing problems of emerging relevance to the learner

- Structuring learning around big ideas or primary concepts
- Seeking and valuing learners' points of view
- Adapting curriculum to address learners' suppositions
- Assessing learning in the context of teaching (p. 78).

As Lunenburg's proposed framework concentrates primarily on student development, Richardson (2003) proposes the need for higher education to foster constructivist pedagogy as it is important for educators to understand how adult learners interact with the world around them (Laurillard, 2002). Constructivist pedagogy argues that knowledge is not passively transmitted from the teacher to student, but rather is created by individual learners within their learning environment. This knowledge transmission occurs in high fidelity simulation with groups of learners as they interact and collaborate within the simulated environment and process those experiences (Yilmaz, 2008). Constructivism assumes that the learner shapes knowledge from everything and connects both personal attitude and aptitude to previous constructed knowledge (Roblyer & Knezek, 2003). Collis (as cited in Docherty, Hoy, Topp, & Trinder, 2005, p. 532) summarizes constructivist pedagogical learning as "more of a process of making links and connections than of working through someone else's way of developing thought."

Communities of Practice (CoPs). "Communities of Practice are groups of people who share a concern, set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis" (Wenger, McDermott, & Snyder, 2002, p. 4). This dissertation work is also informed by a social cognition perspective or situated learning theory (Lave & Wenger, 1991), where competence is both historically and socially defined. Wenger (2000) recognizes learning as "interplay between social competence and personal expe-

rience" (p. 227), a dynamic relationship that combines an individual's personal transformation with the social structures in which they participate. Simulation technologies are mostly social activities involving simulated reality tools and learning through experience, or social learning that forefronts the experiential (Fenwick, 2003). Quality palliative care most often requires that care is delivered by a member of any one of a number of professions (MacLeod & Egan, 2007). Communities of Practice is a useful conceptual structure for understanding group work in the delivery of healthcare because it is considered to be a type of learning community, similar to an interprofessional team (Li, Grimshaw, Nielsen, Judd, Coyte, & Graham, 2009). In the case of palliative care, a community of practice is a purposefully developed joint endeavour in which a group of professionals engage in shared activities that result, as a whole, in the delivery of palliative care (MacLeod & Egan, 2007).

The concept of communities of practice may be used to offer direction and guidance in the development of groups and teams within healthcare. Li et al. (2009) identify key characteristics of communities of practice, including support for formal and informal interaction between novice and experts, an emphasis on learning and sharing knowledge, and the investment to foster the sense of belonging among members, which is a good fit for an interprofessional palliative care team.

While high fidelity simulations are not communities of practice in and of themselves, they may be considered a form of legitimate peripheral participation because simulation provides opportunities for students to become immersed in active learning, which is an approximation of full participation in and exposure to actual practice. As a form of legitimate peripheral participation, simulation can offer, as Wenger (1998) articulates, "lessened intensity, lessened risk, special

assistance, lessened cost of error, close supervision, or lessened production pressure" (p. 100). Opportunities for learning with high fidelity simulation may be considered a first step toward a community of practice as a form of legitimate peripheral participation.

From a palliative care educational perspective, it is important that learners, regardless of the profession they belong to, have some understanding of the values, beliefs, and philosophy of palliative care, and the work that healthcare professionals do to provide quality end-of-life care. In addition, it would be helpful to have knowledge of the roles of others working in the field, to understand the need for effective communication in a team setting and to develop the skills required to function within an interprofessional palliative care team (MacLeod & Egan, 2007). Interaction and active learning within communities of practice will help facilitate interprofessional teams in palliative care education.

Rationale for Research

Educators in undergraduate education wrestle with very difficult questions: what really works in education, for whom, how, when, and with what outcomes (Tashiro, Hung, & Martin, 2011). As digital media technologies become increasingly prevalent in daily life, educators are faced with needing to examine if the emerging generation of undergraduate learners have different needs in their approaches to learning and if our current methods for delivery of education are ill-designed for these new learners (Prensky, 2001). The aim of simulation-enhanced, interprofessional palliative care education is to provide learners with opportunities to integrate multiple dimensions of clinical knowledge and develop competency and reflective practice, thus improving patient and family care at the end of life.

Many higher education analysts have outlined the concern that, in the face of all the claims of technology, it is difficult to understand the slow pace of technological innovation in higher education. Digital technologies continue to be a visible agenda item in many universities and colleges, due to increasing social expectations of an advancing technological society and expectations of current university learners as members of the "digital net generation" (Kobulnicky, 1999; Kyle & Murray, 2008; Tapscott, 2009). Simulation, a particular type of digital technology, strives to resemble reality. While simulation-enhanced, undergraduate education has been used for the last decade to provide learners with experiences to integrate multiple dimensions of professional knowledge-practice (Gaba, 2004; Kyle & Murray, 2008), little research has been conducted to assess simulation's value for palliative care professional learning (Bates & Poole, 2003; Gaba, 2004). There is pressure for undergraduate healthcare educators and programs to find and utilize teaching, learning, and assessment methods that improve patient safety, reduce cost, and provide experiences that the healthcare learner may not otherwise receive during their university pre-licensure education. This in turn may result in educators using new training approaches and methods lacking in research evidence, to support their efficacy and ability to transfer to real world situations (Tashiro, Hung, & Martin, 2011).

Palliative care education is directly tied to any reform or concrete policy changes in patient care at the end of life in clinical settings (Grant et al., 2009). To put it quite simply, if there are few to rare university-trained palliative care professionals with the vision and skills to address the complexities and growing demands by patients/families for institutionalized palliative care services, then there will be a serious system failure to cope with the growing number of individuals requiring a palliative approach to care in Canadian society. Canadian society requires

that our educational systems are ready to assist the healthcare system in preparing for a swelling demand for palliative care. It recognizes that patient and family care at the end of life will only be improved when interprofessional palliative care education is enhanced and supported by evaluation and research in undergraduate, graduate, and continuing education (Ferrell, 2010). Undergraduate healthcare programs in North America are striving to respond to the soaring and ever-demanding healthcare needs of an exploding aging population to improve this form of care. Educational research is lacking for palliative care education (Gillan et al., 2014) and the exploration of the use of simulation in palliative care education is just beginning (Leighton & Dubas, 2009). Very little research has been conducted to assess the impact of palliative care education on undergraduate learners and within university learning communities (Gillan et al., 2014).

Situating Myself

I have come to my area of research by recognizing a common thread throughout my professional work and education: a passion for palliative and end-of-life care. This link is present in my education, clinical work, teaching, and research endeavours. Having experienced a serious health crisis just before beginning my PhD, I am motivated by my lived experience to research and educate even more. I want good care for myself and for those I love when I die. Education can play a key part in this.

During my serious health crisis, I was distressed by what I perceived as my healthcare providers' inability to discuss the possibility I could die. I had hoped that perhaps my caregivers would have been prepared to do this; perhaps it was lacking in their healthcare education? It ap-

peared to me that they were more in denial than I was. I know that talking about death is not an easy task: I have had to do it as a healthcare provider who fumbled through as I learned on the job since this was not a part of my education, and more recently, I have had to do it as a patient. But for me, it is essential. I now know that when I am dying, I want to be cared for by people who do not avoid the "elephant in the room" or the reality of death. And I am not alone in this perception of the healthcare system, as demonstrated in Kuhl's (2003) book, *What Dying People Want*. I, along with all palliative care patients, will need skilled, compassionate, and active inter-professional providers who have received quality education in palliative and end-of-life care. I will need healthcare providers who are willing to listen, and give witness, as I process my dying and end-of-life options and decisions. I will need healthcare practitioners who are empowered to use their heads (knowledge), heart (compassionate caring), and hands (skills) in their healthcare practice. And if they are to be able to do this, they need to have an opportunity to actively learn this knowledge and associated skills, and to develop caring communication as a part of their in-terprofessional palliative care education. I will need them to accompany me (Yoder, 2005) and those I love on that journey. I need these professionals as companions who act as death educators and providers of palliative care, but who still find space for *me*, the patient as an active agent, to educate them on *my* dying. So, while I am not "actively dying" (an expression commonly used in the field of palliative care) today, I can say that I have found a research focus about which I am "dying to know."

Bracketing the personal story. According to Parker (2000), knowledge is best created and advanced when the researcher recognizes and acknowledges her assumptions. The

following is a list of personal assumptions that I recognize as pivotal to contributing to this research process:

1. Education in palliative care is important for undergraduate learners, not only in their future career development but in their personal lives as well.

2. Undergraduate students should be leaders in their own education processes.

3. Death education can contribute to the quality of living.

4. Today's undergraduate learners want to engage with their learning material and not solely be passive recipients of information.

5. Canadian universities are not adequately providing enough palliative care education opportunities for undergraduate healthcare students (Brajtman, Fothergill-Bourbonnais, Casey, & Fiset, 2007; Brajtman, Fothergill-Bourbonnais, & Fiset, 2009).

6. IPE promotes personal and professional growth (Alison, 2007; Baker, Pulling, McGraw, Damon-Dagone, Hopkins-Rosseel, & Medves, 2008).

7. Many established learning theories, including experiential learning (Kolb, 1984) and situational learning (Lave & Wenger, 1991) can be utilized during simulation education.

Significance of the Dissertation Study

There is much work to be done to advance interprofessional palliative care education. Patient and family care at the end of life will only be improved when interprofessional palliative care education is enhanced and supported by evaluation and research in undergraduate, graduate, and continuing education (Ferrell, 2010). Healthcare providers encounter death in every work setting, and thus need their education to prepare them with the knowledge, skills, and experience to deliver palliative and end-of-life care. A lack of education is a major contributing factor for

inadequate palliative care (WHO, 2004). This reality underlines the need for undergraduate healthcare students to receive palliative care education so they can provide competent and compassionate care (McClement, Care, & Dean, 2005). It is unethical for students to work in situations where they have no previous knowledge or experience. Exposure to death and dying in undergraduate education will provide healthcare students with a secure foundation to deliver care in a safe environment. This environment will be safe not only for the patients, as the care they receive will be from an educated, compassionate care provider, but also for the healthcare providers, as they will be equipped with the knowledge and tools to provide the care required. As 100% of the individuals that student healthcare providers will serve will eventually die, it is imperative that palliative care educators improve and develop pedagogies to assist future healthcare providers in providing the best care possible for individuals who are dying and their families. To do otherwise might be considered "pedagogical malpractice."

An additional goal of this simulation-enhanced, interprofessional palliative care education research is to contribute to the literature by developing education strategies and grounded theory in this area. Grounded theory methods provided the opportunity to develop a theory explaining the processes shaping student professional learning while concentrating on the learner experience with high fidelity simulation in interprofessional palliative care education. Grounded theory methods facilitated the exploration of not only a plausible relationship, but a potentially effective pedagogical relationship between palliative care, IPE and the use of simulation technologies. High-fidelity simulation is increasingly being recognized as a pedagogical strategy for palliative and end-of-life care education (Gaba, 2004; Leighton & Dubas, 2009; Smith-Stoner, 2009; Sperlazza & Cangelosi, 2009). It is an appropriate teaching strategy for end-of-life care management

(Leighton & Dubas, 2009) that enables experiential, learner-centred education in a safe environment (Cioffi, Purcal, & Arundell, 2005), and can be used with novice and experienced practitioners from different disciplines (Issenberg et al., 2005). This pedagogical strategy is an effective way to bridge theory and practice. It allows for the experiential training of skills, knowledge, and decision-making; is transferrable to real-patient situations; and enables learners to remain in a safe, nonthreatening environment (Leighton & Dubas, 2009; Sleeper & Thompson, 2008; Solnick & Weiss, 2007). Very little research has been undertaken to investigate the social processes and pedagogical principles that guide student engagement and learning using high fidelity simulation (Parker & Myrick, 2011). As Walton, Chute, and Ball (2011) write, "It is time for the discovery of new knowledge and the development of pedagogy of high-fidelity simulation" (p. 299).

Summary

Through this research study, I analyzed the lived experiences of interprofessional undergraduate learners engaging in palliative care education using high fidelity simulation. It is my goal to develop a theory of interprofessional palliative care education using high fidelity simulation that facilitates the discussion of pedagogical strategies including communities of practice and reflective-reflexive learning to promote safe, effective, interprofessional palliative care that is responsive to patients' needs while they are dying. I was motivated by my desire to participate in the interprofessional palliative care education of the kind of healthcare provider that I want to be taking care of me at the end of my life: compassionate, skilled, and knowledgeable.

This study focused on the healthcare learners' experiences in an effort to develop new theoretical thrusts that examine the "how" of delivery of interprofessional palliative care educa-

tion. Through the process of examining this "how" piece, this research will contribute to the advancement of interprofessional palliative care education and help to form a foundation for future studies, which is a common application of the theory that arises from grounded theory methodology research (Parker & Myrick, 2011). This study will contribute to program design and decision making for future interprofessional palliative care education and curriculum development. It will also contribute to educational theory for simulated learning activities in undergraduate education. Finally, this research intends to lead to the development of increasingly effective pedagogical strategies for interprofessional palliative education, resulting in better care for individuals who are dying, and for their families, through improved knowledge, skills, and attitudes of palliative care providers.

Canadians are facing an aging and palliative care tsunami in our healthcare system. It behooves undergraduate healthcare educators to inquire into digital tools, such as simulation, to explore how they can provide effective and beneficial learning experiences for healthcare students as they enter the storm of end-of-life needs. Our healthcare system will be challenged by this tsunami and it is imperative that we arm our new, developing healthcare providers with the knowledge and skills in their undergraduate healthcare education to ride this wave successfully.

Organization of the Dissertation

This chapter has presented an introduction to the substantive areas explored, outlined the contextual background for the research, and described the study's purpose and potential significance. This dissertation is structured into seven chapters. Chapter 1, "Dying to Know: Introduction to the Study," presents the foundation for the research as previously described. Chapter 2, "Considering Death in Undergraduate Healthcare Education," provides a review of the relevant literature and major concepts, expanding on the ideas introduced in Chapter 1 and contextualizing the study. These first two chapters present the background and the purpose of this dissertation. The next three chapters focus on the methodology, methods and data analysis procedures employed in this study to lay the foundation for the development of the theory. Chapter 3, "Simulating Dying and Death in Undergraduate Education," offers a description of the methodology and the methods employed in this study. Chapter 4, "The Simulation Lab Experience," explains in detail the framework used in the simulation labs and introduces the participants in this study. Chapter 5, "Data Analysis and the Development of a Theory; Focusing on the "How" in Palliative Care Education" provides an overview of the data analysis processes used in the study. Chapter 6, "Learning with Head, Hands, and Heart," outlines the theory that emerged from the data and offers a discussion of the key elements of the emergent grounded theory. This chapter also focuses on larger implications, analyses and significances, extending findings from the more micro levels of the study's data. And finally Chapter 7 "A Matter of Life and Death: Educating the Pal-

liative Care Providers of Tomorrow" concludes the dissertation by providing a review of the study using Tracy's (2010) eight key markers of quality in qualitative research as a guide and presents implications and recommendations for specific areas of pedagogy, practice and research as they relate to undergraduate interprofessional palliative care education.

Terms of Reference

Definitions of key terminology are important to guide a common understanding of this study. These definitions assist in understanding the research questions, defining the boundaries explored in the context of this research, and offering clarification of the terms used throughout the dissertation. Although the literature offers conceptualizations and terms of references for the terminology provided here, definitions are often varied across professions, geographical boundaries, and institutions; thus, it is important to establish a common ground. These definitions are provided to offer points of entry into the multidisciplinary scope of this dissertation, and to provide guidance to the reader.

Collaboration: "an active and continuing partnership based on sharing, cooperation and coordination in order to solve problems and provide a service, often between people from diverse backgrounds" (Howkins & Bray, 2008, p. xviii).

Debriefing: The period of reflection offered in simulation education is called "debriefing" and generally is facilitated by the educator as a guided discussion, exploring the events and learning that occurred. Debriefing of the simulation experience should occur immediately after the scenario and is recognized as an essential element of the learning process to promote reflection and

critical thinking. It "provides an outlet for critical reflection and builds linguistic perspectives on meaning and knowledge that are relevant to the learners" (Parker & Myrick, 2011, p. 78).

Experiential Learning: is learning through the development of meaning from direct experiences. Experiential learning offers a cyclical model of learning: Do (concrete experience), Observe (reflective observation), Think (abstract conceptualization), and Plan (active experimentation) (Kolb, 1984).

Fidelity: is a term used within simulation to describe "the extent to which the appearance and behavior of the simulation imitate the appearance and behavior of the simulated (real) system" (Issenberg & Scalese, 2008, p. 33).

Healthcare Simulation: "a technique that uses a situation or environment created to allow persons to experience a representation of a real healthcare event for the purpose of practice, learning, evaluation, testing, or to gain understanding of systems or human actions. It is the application of a simulator to training, assessment, research, or systems integration toward patient safety" (CAHSP, 2012, p. 45).

High Fidelity Mannequins: Mannequins designed in the form of human begins with realistic anatomy and clinical functionalities including talking, breathing, heart sounds, pulses, voiding, bleeding, etc. The mannequin's mechanisms are managed via computer programs that can be controlled by an educator. A compressor is used to mechanically simulate respirations

(Bradley, 2006).

High Fidelity Simulation: A form of clinical simulation involving technology, comprised of a fully-body mannequin, integrated monitor, and computer-driven programming to represent realistic patient health conditions. Alongside the HFS technology is the development of scenarios and the implementation of a dynamic case study. This serves to immerse the learner into a realistic care situation in which they are challenged to respond, act, and experience consequences (Gredler, 2004).

Interprofessional Education: "an intervention where the members of more than one health or social care profession, or both, learn interactively together, for the explicit purpose of improving interprofessional collaboration or the health/wellbeing of patients/clients, or both" (Reeves, Perrier, Goldman, Freeth, & Zwarenstein, 2013, p. 2). It aims to promote collaboration and enhance the quality of care by bringing people from different professional disciplines together to engage in activities promoting interprofessional learning
(Freeth, Hammick, Reeves, Koppel, & Barr, 2005).

Mannequin vs Manikin: After lengthy dialogue and debate in the field of healthcare simulation, in 2006 the term "mannequin" was recommended by Simulation in Healthcare (Gaba, 2007); thus, this is the adopted term for this research. A mannequin (French origin) "is a form representing the human figure" (Webster, 2012, para.1).

Palliative Approach: allows certain aspects of palliative care to be accessed by individuals and their families at appropriate times throughout their illness trajectory, and not just the last few weeks, days, or hours before death. The palliative approach concentrates on the individual and their family, and their quality of life throughout the illness, not limiting this important holistic care to the end of life (Ramjan, Costa, Hickman, Kearns, & Phillips, 2010).

Palliative Care: Palliative care is a field of healthcare that specializes in the care for the dying and their loved ones. The focus of this field is to relieve symptoms experienced by individuals who are dying and improve their quality of living, not prolong their lives. Palliative care is active care that neither prolongs life nor hastens death (Hadad, 2009).

Realism: relates to the quality of the simulation, as it is perceived by the participants, that enables them to engage as if the situation or scenario was real. External factors that may influence a participant's experience of realism include the simulation equipment, the environment, and the activities of the educators and/or simulation facilitators (CAHSP, 2012).

Scenario: experiential learning exercises developed to enable the undergraduate learner to develop a basis for understanding why and how the knowledge they acquire may be applicable in other settings (Bradley, 2006). In this study, the scenario took the form of a case study that was developed in as realistic manner as possible, to portray a setting in which the learner would need to provide palliative care.

Simulation: "a technique that uses a situation or created environment to allow persons to experience a representation of a real event for the purpose of practice, learning, evaluation, testing, or to gain understanding of systems or human actions" (CAHSP, 2012, p. 46).

Teamwork: "the process whereby a group of people, with a common goal, work together to achieve that goal" (Freeth et al., 2005, p. xvi).

Uni-professional Education: students of a single profession learning together (Freeth et al., 2005; Howkins & Bray, 2008).

Acronyms Employed

E-O-L	End of Life
GT	Grounded Theory
CGTM	Constructivist Grounded Theory Methods
HFS	High Fidelity Simulation
IPE	Interprofessional Education

CHAPTER TWO

CONSIDERING DEATH IN UNDERGRADUATE HEALTHCARE EDUCATION: A REVIEW OF THE RELEVANT LITERATURE

This chapter provides an overview of an extensive literature review and research related to the body of knowledge most relevant to my grounded theory study. My study crosses over several disciplines, in an attempt to address the interdisciplinary nature of my research purpose: to examine the core experiences of undergraduate students as they explored the pedagogical uses of simulation technologies and how they may enhance and support interprofessional palliative care education at a small university in Ontario.

The purposes of this literature review are threefold: (a) to survey the present state of interprofessional education and palliative care education in Canada, (b) to explore the potential use of HFS as a digital education strategy and undergraduate engagement tool for learning palliative/end-of-life care, and (c) to identify and extend the socio-cultural education theories that connect to this multidisciplinary research in undergraduate healthcare pedagogy.

The multiple research entry points in this study—high fidelity simulation (HFS) or technologies-enhanced undergraduate teaching, interprofessional collaborative work, and palliative care education—are all necessary components to address in order to integrate the multiplicities of clinical knowledge, interprofessional competencies, and reflective practices required for improving patient and family care at the end of life.

This review of the literature begins with a discussion of the use of simulation technologies in four different areas relevant to this research: (a) undergraduate healthcare education, (b) interprofessional education, (c) palliative care education, and (d) interprofessional palliative care education.

Healthcare Education and Simulation

Simulations strive to resemble reality or "the imitation of a process or real world experience for the purpose of practicing skills such as problem solving and situational judgment" (Rosen, 2008, p. 158). Simulation in healthcare education "refers broadly to any device or set of conditions that attempts to present patient problems authentically" (Issenberg & Scalese, 2008, p. 33). Healthcare technologies, such as HFS labs, strive to "replicate some or nearly all of the essential aspects of a clinical situation so that the situation may be more readily understood and managed when it occurs for real in clinical practice" (Morton, 1995, p. 76). Simulation in undergraduate healthcare education can be defined as "an educational technique that allows interactive, and at times immersive activity by recreating all or part of a clinical experience without exposing patients to the associated risks" (Maran & Glavin, 2003, p. 22). Often simulation is categorized along a spectrum according to the level of realism, or fidelity to real life. For example, on one side of the spectrum is low fidelity, which may use textual case studies or role plays as techniques. On the other end of the spectrum is high fidelity, or "the use of technologically lifelike manikins with provision for a high level of realism and interactivity" (Jeffries & Rogers, 2007, p. 28).

In modern healthcare education, the first use of simulators occurred with the introduction of "Resusci Anne," which was used in cardio pulmonary training. This simulator was a full-body mannequin possessing mechanical motors and components that made the chest move to imitate breathing. Within undergraduate healthcare education there has been a steady progression in both the demand for and the refinement of technologies that will create more realistic learning opportunities and environments for students. As computer technology continues to advance, so do simulators and simulations that are now commonly used in a variety of professional disciplines, including medicine and nursing (Hovancsek, 2007). There is a rapidly growing body of research into technology-based learning tools such as simulation for healthcare education, but there continues to be insufficient evidence produced to guide simulation's use to meet the needs of the undergraduate healthcare student. One of these important needs is to gain experience working with patients, yet the opportunity for this has diminished over time due to patient safety and ethical reasons (Ziv, Ben-David, & Ziv, 2005). This lack of opportunity to learn and practice on patients has fueled the need to find alternatives to reproduce that experience, and provide different opportunities for learning (Alinier, Hunt, Gordon, & Harwood, 2006). As institutions of higher education strive to prepare their undergraduate healthcare students for the field, they are finding a need to integrate and utilize new and innovative teaching methods as a part of their response to technological advances and changes in healthcare (Blake, 2010).

The use of simulation in healthcare education is viewed as a potential solution to a number of current healthcare challenges, including the decrease in the availability of patients for student practice, the decreasing rate of societal acceptance of students learning on patients, and the challenges faced by educational institutions to find clinical education sites for their healthcare

students (Bandali, Parker, Mummery, & Preece, 2008). Issenberg, McGaghie, Petrusa, Gordon, and Scalese's (2005) review of the literature analyzed the relationship between HFS and learning and concluded that simulation is educationally effective and complements healthcare education in patient care settings. Particularly relevant to this study are the following outcomes that Issenberg et al. (2005) found effective for healthcare education: curriculum integration, the ability to capture clinical variation, the ability to offer a controlled environment, and opportunity for individualized learning.

Advancements in simulation have been highly influenced by changes in the healthcare system over the last few decades that have, in turn, had profound and reaching effects in health care education. The changes in healthcare delivery, the vast expansion of knowledge, rapid developments in research and technology, and a strong emphasis on quality and safety have all had an impact on the manner in which healthcare education is delivered, and how simulation has been accepted and integrated into that education (Kneebone, 2010; Nehring, 2010).

Advantages of High Fidelity Simulation

The advantages of using HFS in healthcare education are many. Some of the attractive features of HFS include that the simulation experience may be designed so that it will closely resemble the clinical work that students will encounter. Simulation offers a more controlled environment than a clinical encounter might with a live person allowing for opportunity to assess the student and provide relevant feedback. The safe environment of the simulation lab encourages students to reflect on their learning and identify their education needs, and the simulation lab experience can be varied to adapt to these needs. The simulation research also supports that stu-

dents are generally quite motivated and willing to participate in HFS experiences (McGaghie, Issenberg, Petrusa, & Scalese, 2010).

Simulation is used in all years of undergraduate or pre-licensure healthcare education, as well as in a variety of healthcare specializations, because HFS simulation can be modified easily to meet the needs of students or the particular foci of curriculum. For example, the insertion of an IV with a "talking patient" in an HFS situation is different, yet more realistic than starting to learn IV insertion on an arm without a body or patient attached to it (Bradley, 2006). Simulation permits the instructor to do performance evaluations on learners through a large range of scenarios of case studies that may be hard to design in real clinical settings. For example, rare yet critical events such as a "Code Blue" can be simulated and rehearsed multiple times at the convenience of the learner and educator, within the safety bubble of the simulation lab (Bradley, 2006). "One of the great advantages of simulation enhanced education is the opportunity for the student to learn from error without causing peril to a patient" (Bandali et al., 2008, p. 185).

Further benefits of simulation in healthcare education include: (a) improving knowledge acquisition, (b) promoting understanding and application of cognitive and psychomotor skills, and (c) bridging the gap between theory and communication (Gillan, Jeong, & van der Riet, 2013).

In addition to the potential for technical skill development, HFS clinical learning sessions have also been designed for subjective experience by students, and can provide scenarios for social learning focused on collaboration and the exploration of knowledge and meaning of healthcare decisions and interactions (Gillian et al., 2013; Parker & Myrick, 2011). There is strong evidence of learner satisfaction with the use of HFS when learners report that it meets their learning

needs (Kardong-Edgren, Willhaus, Bennett, & Hayden, 2012), and this learner satisfaction enhances student engagement that connects to student learning (Gillan et al., 2013; Kardong-Edgren et al., 2012; Lapkin, Levett-Jones, Bellchambers, & Fernandez, 2010). Unfortunately, the majority of research conducted on simulation thus far has focused primarily on the more scientific or technicalities of healthcare practice that "in turn risks devaluing the subjective voices of our students" (Parker & Myrick, 2011, p. 74).

Challenges of Simulation in Undergraduate Healthcare Education

Healthcare educators using simulation report that barriers for continued use of simulation in education are costs and resources (McGaghie, Issenberg, Petrusa, & Scalese, 2010). Adamson (2010) reported that while there may be grants to support the initial purchase of simulation equipment, there are minimal funds accessible or dedicated to maintenance, faculty training, or replacement of disposable supplies. It is important for the sustainability of simulation technologies in higher education that administrators begin to address the realistic costs associated with simulation education technologies. At this time, there are reports of many healthcare education programs purchasing simulation technologies at great cost, but not utilizing it at its greatest potential (Adamson, 2010). Other challenges include a lack of healthcare educator knowledge of simulation pedagogy. Kardong-Edgren et al. (2012) found that healthcare educators are concerned that simulator vendors and salespeople are providing the majority of faculty members' training in the use of simulation, and that vendors and salespeople are more interested in sales than pedagogy. Health care educators report there not being enough opportunity for simulator

operator training, and a lack of faculty expertise in technology and simulation are barriers and contribute to the underutilization of this education technology. Another challenge reported by many simulation educators are difficulties with scheduling the equipment, as there is a high demand for simulation equipment but not enough access, and large numbers of students needing access but not enough mannequins (Palaganas, Epps,& Raemer, 2013). Educators also report that they do not have enough time to prepare for and integrate simulation into their curriculae. Time is a common barrier for healthcare educators in regards to using simulation (Adamson, 2010).

While the use of simulation has potential to enrich the learning process, in reality the experience can be costly and labour-intensive. It is the process of learning with simulation technologies that is important, and thus the quality of instructional design of the simulation experience for the undergraduate learner is of great importance. This requires a sound knowledge of education, an understanding of learning theory, and an affinity for using technology in education (Blake, 2010). As Adamson describes, the "failure to tap the vast potential of HFS as an educational tool reflects poor use of limited resources and missed opportunities for improving education" (p. e76).

Debriefing and Reflection

The period of reflection facilitated in simulation education is called "debriefing," and generally is facilitated by the educator as a guided discussion exploring the events and learning that occurred. This reflective process immediately follows the simulation and assists learners in connecting theory and practice. It is considered an essential component of simulation and is identified by some as being perhaps the most important feature for learning (Jeffries & Rizzolo,

2006; Morse, 2012). This debriefing "provides an outlet for critical reflection and builds linguistic perspectives on meaning and knowledge that are relevant to the learners" (Parker & Myrick, 2011, p. 78). It is a process during which educators and learners review or re-examine a simulation event that fosters the development of clinical judgment and critical thinking. Video and audio recordings can be made of the simulation experience and are a vital part of the recommended debriefing session, during which much of the student learning occurs (Decker, Sportsman, Puetz, & Billings, 2008). Debriefing of the simulation experience should occur immediately after the scenario and is recognized as an essential element of the learning process, to promote reflection and critical thinking (Parker & Myrick, 2011).

The educator guides the students in reviewing their participation and identifying strengths, gaps in knowledge, and key learning points (Durham & Alden, 2008). This time spent debriefing is also a critical opportunity to correct any misconceptions or misinformation, to prevent any negative transfer of wrong information into the clinical, "real life" setting (Morse, 2012). It is essential that during this debriefing the educator maintains a safe environment for students to share, receive feedback, and reflect on their learning. The use of simulation to teach, reinforce, and assess self-reflection is a relatively new idea, and is perceived as a strong model for encouraging reflective practice (Bandali et al., 2008). By using simulation, the educator is able to create and develop multiple contexts and scenarios relevant to the learner's clinical work environment and can be designed for students at varying stages of their learning. As Parker and Myrick (2011) state, "the use of simulation can empower students, make them autonomous thinkers and create meanings through peer-driven discourse" (p. 79).

Despite the literature supporting the integration of simulation into education curricula, outside of nursing, few undergraduate healthcare programs with the potential to access simulation, actually provide integrated simulation learning opportunities for students. And fewer still have attempted to explore how the use of simulation might be utilized to effectively meet program learning objectives (Gaba, 2004; Ziv et al., 2005). The 2010 literature synthesis by McGaghie et al. found clear evidence that simulation technology produces substantial educational benefits. Issenberg et al.'s (2005) review of the literature, which explored the relationship between HFS and learning, concluded that simulation is educationally effective and complements healthcare education in patient care settings. Currently, the simulation literature is rich with research describing the efficacy of simulation as a tool for healthcare education. The gap in the research lies in the exploration and examination of how, when, and why simulation works as a pedagogical tool.

Interprofessional Education and Simulation

Student interprofessional learning is "education specifically designed to help students to function as part of the health care team when they graduate" (Allison, 2007, p. 565). It is well-recognized in the literature that learners and practitioners of one profession know little about other professions (Institute of Medicine, 2003; San Martin-Rodriquez, Beaulieu, D'Amour, & Ferrada-Videla, 2005). These normative expectations of isolating and autonomous professional cultures in healthcare are some of the main barriers to interprofessional collaboration. Illingworth and Chelvanayagam (2007) support the idea that interprofessional education (IPE) is beneficial not only to the patient and their family, but also to the care providers and student learners. Winterbottom and Seoane (2012) report that student satisfaction with IPE participation is gener-

ally quite positive. They found that this student satisfaction originates from learning through collaboration and dialogue with others, and in experiential learning through examination of real-life clinical scenarios.

Student participation in HFS has found to be both an effective and efficient tool for deepening the learning process (Baker, Pulling, McGraw, Damon-Dagone, Hopkins-Rosseel, & Medves, 2008; Decker et al., 2008; Masters, O'Toole, Baker, & Jodon, 2012). There is support in the literature for the use of simulation to develop and improve students' knowledge of team and communication skills, attitudes toward teamwork, and ability to identify effective teamwork skills (Masters et al., 2012; Robertson, Kaplan, Atallah, Higgins, Lewitt, & Ander, 2010). Studies have demonstrated that simulation enhanced IPE effectively prepares students to enter professional practice, ultimately leading to improved patient care (Bandali et al., 2008; Reese, Jeffries, & Engum, 2010; Robertson & Bandali, 2008). The result of IPE simulation learning is that students have the opportunity to learn with, from, and about one another (Bandali et al., 2008), and can deepen their understanding of their shared roles and responsibilities in caring for patients (Masters et al., 2012). As Winterbottom and Seoane (2012) state, "Enhancing interprofessional skills in education and clinical practice allows diverse professionals to work together to deliver high-quality, efficient, team-based care and to improve health outcomes" (p. 393).

There is a clear need for IPE initiatives to be grounded in educational contexts. Educational theory impacts the pedagogy, curriculum, and teaching strategies used in university IPE, and depends on the successful implementation of this critical initiative (Hall & Weaver, 2001). IPE is found to be constructivist in nature as IPE facilitators need to possess facilitation skills to engage learners, to support interpersonal interaction and learning, and to develop a collaborative

approach to practice (Winterbottom & Seoane, 2012). Barr, Koppel, Reeves, Hammick and Freeth (2005) report that IPE has been linked to a number of different theories including: adult learning (Knowles, 1985; Schön, 1983), experiential learning (Kolb, 1984), and situated learning (Lave & Wenger, 1991). Interprofessional collaborative learning is a piece of what is required to improve undergraduate healthcare education. Simulation learning offers an innovative approach to providing an opportunity for students from different disciplines to work together and learn from one another. Research that is grounded in education theory is needed to further develop teaching methods and understand the undergraduate student experience, to support the use of simulation technologies in interprofessional collaborative learning (Reese et al., 2010).

Palliative Care Education and Simulation

The majority of deaths in today's society occur in a healthcare environment. This places responsibility on healthcare providers to possess the competencies and capabilities to provide care for individuals who are dying and their families (Ramjan, Costa, Hickman, Kearns, & Phillips, 2010). Palliative care education is directly tied to any reform or concrete policy changes in patient care at the end of life in clinical settings (Grant, Elk, Ferrell, Morrison, & von Gunten, 2009). To put it quite simply, if there are few to rare university-trained palliative care professionals with the vision and skills to address the complexities and growing demands by patients/families for institutionalized palliative care services, then there will be a serious system failure to cope with the growing numbers of aging individuals in Canadian society. To overcome these mounting challenges, education in palliative care and training in "the palliative approach" are both identified as critical reforms needed (Bruera & Hui, 2012; Fitzsimmons, Mullan, Wilson, & Conway, 2007; Wilson, Birch, & Sheps, 2008). With the recent increase in awareness of the need for quality compassionate care at end of life, palliative care is gaining more recognition as a clear priority in healthcare education (Billings, Engelberg, Curtis, Block, & Sullivan, 2010). Research findings, however, demonstrate that undergraduate healthcare students are not appropriately prepared to care for people at the end of their lives (Gillan et al., 2013; Johnson, Chang, & O'Brien, 2009; Mallory, 2003) because students report feeling anxious about dealing with death and dying (Mallory, 2003) and unprepared to provide this type of care (Johnson et al., 2009). This lack of

education and inadequate preparation of future healthcare providers is reflected in the quality of palliative care delivered to individuals and their families (Gillan et al., 2013; Mallory, 2003).

A comprehensive palliative care education experience requires multiple competencies and interprofessional knowledge designed to include the following 10 core competencies. They are specifically identified for palliative care education by leaders in the field such as Gamondi, Larkin, and Payne (2013), and include the following: 10 core competencies

1. Apply the core constituents of palliative care in the setting where patients and families are based.
2. Enhance physical comfort throughout patient's disease trajectory.
3. Meet the patient's psychological needs.
4. Meet the patient's social needs.
5. Meet the patient's spiritual needs.
6. Respond to the needs of family carers in relation to their goals.
7. Respond to the challenges of clinical and ethical decision-making in palliative care.
8. Practise comprehensive care co-ordination and interprofessional teamwork across all settings where palliative care is offered.
9. Develop interpersonal and communication skills appropriate to palliative care.
10. Practice self-awareness and undergo continuing professional development.

(pp. 140-143)

Competent palliative care practice is the integration of these many factors, which can only be achieved through interprofessional collaboration and teamwork, to successfully care for an individual who is dying and their family (Muir, 2008). Overall, the goal of implementing and

identifying these core competencies is a better experience for the individual who is dying and their family. The priority is to develop the confidence levels of healthcare providers so they are able to anticipate palliative care needs, respond appropriately and effectively, have awareness of their own needs and limitations, and know where to ask for help and support (Gamondi et al., 2013). It is important that the education be both relevant and realistic and easily translated into the work environment of the healthcare provider. Education in palliative care should have a strong integration of theory and practice and provide opportunity for the learner to share their experiences in collaboration with those facilitating the education (Hopkins & Field, 1997).

It is important that palliative care education be relevant, realistic, and easily translated into the work environment of the healthcare provider. Education in palliative care should offer learners opportunities to integrate theory and practice and to share their experiences in collaboration with others (Hopkins & Field, 1997). Overall, the goal of implementing and identifying a "palliative approach" to care is a better experience for the individual who is dying and their family.

Palliative care education should not be limited to didactic content. The traditional form of lecturing to students does not provide opportunity for learners to examine their personal reactions and experiences as they pertain to dying and death (Gillan et al., 2013). Preparing learners to care for individuals who are dying and their families should also include opportunities to examine individual values, beliefs, personal experiences, and culture (Sheehan & Malloy, 2010). It is necessary for comprehensive interprofessional palliative care education to integrate not only knowledge and skills integral to providing care at the end of life, but also pedagogical strategies to best enhance compassion, empathy, and the "existential aspect or 'art' of palliative

care" (Sheehan & Malloy, 2010, p. 1196). The application of palliative care education is required to improve clinical practice and to develop champions who will serve to advocate for the needed institutional change to improve the care for individuals who are dying and their families (Grant et al., 2009). Recently there has been an emergence of palliative care education using an experiential learning approach. This experiential learning includes hospice visits, intensive death and dying education programs, problem-based learning, and the use of audio-visual aids such as film, art, and music (Gillan et al., 2014).

Palliative care education utilizing HFS can provide a safe and flexible learning environment that emotionally engages the learner and encourages reflection during and following the simulation exercise. However, most of the research conducted on the use of simulation and healthcare education around death focuses on acute or critical care scenarios, related to situations concentrating on emergencies or advanced resuscitation and not death as a normative life event (Feingold, Calaluce, & Kallen, 2004; Gillan et al., 2013). In 2009, the use of simulation in palliative and end-of-life education began to emerge in the literature (Gillan et al., 2013; Leighton & Dubas, 2009).

In a review of the literature on end-of-life care simulation conducted by Gillan et al. (2013), 16 articles were identified on this topic: 6 being original research and 10 being more descriptive, reporting on projects using simulation for palliative and end-of-life education. This review identified four main themes found in the literature; "1) Increased knowledge of end of life care through 'experiential learning' 2) Impact of family presence on student learning; 3) The debriefing imperative and 4) Methodological issues raised from the studies" (Gillan et al., 2013, p. 2). Two of these themes have particular relevance for my research: (a) increased knowledge of

end-of-life care through experiential learning, and (b) the debriefing imperative. These themes speak to my interest in learning more about the student experience and the processes shaping student professional learning, while concentrating on the learner experience with HFS in inter-professional palliative care education.

Increased Knowledge of Palliative Care through "Experiential Learning"

Many of the educational approaches used in simulation in healthcare education have emerged from the experiential learning theories of Dewey (1938), Lindemann (1961), Schön (1983), and Kolb (1984). Learning from experience is instinctive (Wee & Hughes, 2007). As Dewey (1938) states, "all education comes about through experience" (p. 25). Experience is one of the most fundamental and natural means of learning available to everyone, and experiential education joins together other learning theories in a unified whole, such as reflective learning and communities of practice (Wee & Hughes, 2007). Experiential education is very promising as a pedagogical approach to join together three diverse but interconnected theories in undergraduate death education: interprofessional learning, palliative care training, and simulation technologies.

Dewey (1938) suggested that learning tends to lean toward the abstract and that it becomes "concrete only in the consequences which result from their application" (p. 20). He also posited that students learn best or more deeply through experience. Traditionally, this opportunity for experiential learning for healthcare students has come from students' participation in clinical placements and training opportunities; however, simulation offers an opportunity to provide more role-based experiences and experiential learning options.

Experiential learning is grounded in the assumption that people possess a natural capacity to learn, and this learning involves an interaction between knowledge acquisition and knowledge transformation (Kayes, 2002; Kolb, 1984). Michelson (1996) takes this assumption one step

further, preferring to refer to experiential "learning" as experiential "knowledge" to "connote a socially-constructed understanding of the world rather than an internalized, developmental process and to focus on the ways in which theories of 'experiential learning' are theories of knowledge, not cognition: in other words, epistemologies" (p. 187).

There has been a long history of valuing experiential learning in the field of adult education (Fenwick, 2003). As Michelson (1996) suggests, experiential learning is arguably one of the most significant areas for research and practice in adult education. Within professional education there is a strong belief that important forms of learning are best developed with opportunity to practice and develop required skills in the context of the environment in which they will be needed. This is evident in a long history of apprenticeship training for trades and clinical placement learning opportunities for healthcare and education students.

Experiential learning developed recognition within adult education as it became popular to acknowledge and legitimize people's experience in their development of knowledge. It was one of the ways used to acknowledge the importance of the process of learning, alongside that of new skill and concept development. This acknowledgement of the learner's experience has challenged deep and well-established ways of thinking about education, including thinking of the educator as an expert and knowledge as theory (Fenwick, 2003). Experiential learning is a good fit with interprofessional palliative care education, which strives to link personal experiences of dying and death with professional knowledge and skills.

Dewey, and contemporary theorists such as Lindemann, have played important roles in the growth and development of experiential learning as a historical movement (Fenwick, 2003). Dewey (1938) provided a justification for education on the basis of learning by doing in his sem-

inal book, *Experience and Education*. Even at the turn of the 20th century Dewey recognized that not all (text-based) learning educates, and this continues to be a current emphasis in educational theory, echoed more recently by Bereiter and Scardamalia (1993) and Rose (2013). Dewey prioritized the idea that education and experience need to include interaction with the social environment. He cautioned, however, that not all experience educates, and he wrote that for learning to occur, an experience must include both continuity and interaction. Continuity recognizes that the learner needs to be able to connect aspects of a new experience with something already known, which provides opportunity for this knowledge to be adapted. Interaction involves the learner connecting with her/his environment and examining the learning developed within that environment.

As another supporter of the inseparability of learning and doing, Lindemann (1961) identified four foundational beliefs driving adult education that Fenwick (2003) has interpreted as: (a) learning occurs in everyday experience, (b) learning puts meaning into the whole of life, (c) learning must be based on experience resulting from actual situations, and (d) the learner's experience is a valuable resource. Dewey used experience as a lens through which he could analyze the interactions of people and their environments (Boud, Cohen, & Walker, 1993).

Other scholars have since continued supporting Dewey and Lindemann's recognition of the important relationship between learning and doing. Freire's (1970) theory of *conscientization* and praxis demonstrated that learning, when combined with critical reflection, can occur through radical action. In his seminal book, *Pedagogy of the Oppressed,* he wrote that: "Knowledge emerges only through invention and reinvention, through restless, impatient, continuing, hopeful inquiry men [sic] pursue in the world, with the world, and with each other" (1982, pp. 45-46).

Other contributors include Schön (1983), who developed the "reflection-in-action" that is now often found in professional education. As learners are presented with a developing simulation scenario, they are challenged to draw on their past experiences and knowledge and reflect on the best way to problem-solve the difficulties presented in the current situation. Kolb (1984) positioned experiential education in what is now a popular model for adult educators, specific to my work in palliative care education, offering a connection between action and reflection. He also identified listening, watching, doing, and then reflecting as the components of a continuous experiential cycle of learning. Kolb found that experiential learning provided a foundation for approaching education and learning as a lifelong process, providing opportunities for individuals to develop to their full potential as citizens, members of families, and overall human beings. There has also been a postmodern recognition of experiential learning, which articulates the tacit and unpredictable nature of learning, that is becoming more recognized explicitly within the curricula of adult educators (Pinar, Reynolds, Slattery, & Taubman, 1995; Slattery, 2006).

Race (2005) provided another model for experiential learning, conceptualized as four layers of "ripples," that is a good fit for the experiential learning that occurs in HFS. At the centre is the need or desire to learn. The next "ripple" is the doing: engaging with real experience, followed by the "ripple" of downtime: opportunity for review and reflection. The final "ripple" is feedback: from self, peers, and educator.

Defining exactly what is meant by experiential learning continues to be a challenge. As Boud et al. (1993) state, defining experience alone is difficult:

For the sake of simplicity in discussing learning from experience, experience is

> sometimes referred to as if it were singular and unlimited by time or place. Much experience, however, is multifaceted, multi-layered, and so inextricably connected with other experiences that it is impossible to locate temporally or spatially. It almost defies analysis as the act of analysis inevitable alters the experience and the learning that flows from it. (p. 7)

The term "experiential learning" has been used to differentiate meaning-making from theory, and "informal" life experiences from "formal" education (Fenwick, 2003). Reeve and Gallacher (2000) argue that "taking experience as the starting point for learning has the potential at least to erode traditional boundaries between knowledge and skills, vocational and academic learning and between disciplines" (p. 127). However, experiential education is being more readily adapted and merged into more formalized systems of education, as recognized by Griffin (1992), who makes the claim: "We are witnessing the transformation of experiential learning from a progressive education movement towards reconstruction as an object of institutional policy and professional good practice" (p. 31).

In the literature on palliative care/end of life education using simulation, students reported a perception of increased knowledge and confidence in providing care for individuals who are dying and their families (Gillan et al., 2013). In their work educating nursing students, Gillan et al. (2013) reported that simulation provided students with an opportunity to witness a death and begin to understand what their professional role might be. Kopp and Hanson (2012) found that the participant learners in their study were able to transfer the insights gained from the simulation to their clinical practice opportunities. Two studies, conducted by Eaton, Floyd, and Brooks (2012), and Ladd, Grimley, Hickman, and Touhy (2013) further reported that students found their

learning to be enhanced by HFS because learning occurred in a non-threatening and controlled environment. Students have also indicated that the “hands-on” aspect of the simulation allowed the caring role to appear more real (Gillan et al., 2013), and that this was helpful in providing them with opportunities to integrate the learning from the classroom setting (Leighton & Dubas, 2009).

The Debriefing Imperative

In the meta-review conducted by Gillan et al. (2013), all 16 articles reviewed acknowledged the importance of debriefing in simulation. All debriefings discussed in the articles took place in a group discussion format following the simulation. Morse's (2012) research, which examined the debriefing component of simulation, found that students value the opportunity to engage in critical self-reflection and receive feedback. Often, one of the first questions asked in a debriefing is "how do you feel?" This question allows learners to identify their emotions, provide some release, and move forward to a discussion more focused on critical thought. This question also begins to provide some insight into the students' thinking and clinical reasoning. Learners are encouraged to reflect on their learning experience, provide explanation, and synthesize information with the goal of improving future clinical interactions.

A variety of benefits of debriefing were identified in the literature, including opportunities for learners to: examine feelings and responses involved with providing palliative care (Gillan et al., 2013; Ladd et al., 2013; Twigg & Lynn, 2012), reflect on their own previous life experiences (Gillan et al., 2013), observe other's reactions and interactions (Ladd et al., 2013), support and heighten understanding of curriculum content (Twigg & Lynn, 2012), and experience reflective learning (Gillan et al., 2013; Kopp & Hanson, 2012).

Reflective Learning

A linking idea that joins experiential and reflective learning is that both are an extension of formal education, and can be a form of self-managed continuing education (Moon, 2004). Pal-

liative care educators will be tasked to facilitate learners from a variety of professional backgrounds to learn through reflecting on their experiences. The simulation experience, as part of its design, creates opportunity for learners to reflect on their actions, attitudes, and feelings arising from the simulated learning experience, as it includes an opportunity for debriefing and purposefully reflecting on the experience. This educational design strives to what Dewey (1933) stipulates as an essential component to education: a reflective practice. He describes reflective thought as "the active, persistent and careful consideration of any belief or form of knowledge in light of the grounds that support it and the conclusions to which it tends" (p. 9).

The awareness that purposeful reflection can transform experience into learning developed in the field of adult education, but has gained importance in IPE and healthcare education over the last two decades (Gould & Taylor, 1996; Hughes, 2007; Schön, 1983). There is a recognition that the activities of learning do not exist in isolation, but rather are attached to a larger system in which they have meaning. The learner is both defined by these relationships and also plays a role in defining them (Brockbank & McGill, 2007). It is the process of learning that builds the identity of an individual (Brockbank & McGill, 2007; Lave & Wenger, 1991). Palliative care education, regardless of the context in which it occurs, plays a part in providing a place in which new ways of knowing can be explored and enhanced through reflective practice (Brockbank & McGill, 2007; Hughes, 2008). Wenger (1998) found that "reflective practice combines the ability both to engage and distance – to identify with the enterprise as well as to view it in context with eyes of an outsider" (p. 217). Brockbank and McGill (2007) define reflective learning as:

> ...an intentional social process, where content and experience are acknowledged, in which learners are active individuals, wholly present, engaging with others, open to challenge, and the outcome involves transformation as well as improvement for both individuals and their environment. (p. 36)

Reflection also offers the potential for educators to examine their underlying philosophies, assess its usefulness in the context of interprofessional palliative care education, and to consider other approaches (Brockbank & McGill, 2007; Hughes, 2007). For many educators who recognize the delivery of healthcare as rooted in interpersonal relations, it is apparent that self-awareness is a critical piece for interprofessional learning, and reflection is viewed as the path to this much needed self-awareness (Hughes, 2007). However, it is not solely the responsibility of the student to engage in this process, as it is unlikely they will develop habits of reflection if those they are learning from do not do the same. Educators need to design strong opportunities for students to connect their learning within and among courses and contexts, alongside modeling the reflective approach themselves (Huber & Hutchings, 2004). Dewey's work describing four conditions required of educational activities is useful to support and guide educators in planning a simulated learning experience that assists students in the development and application of new knowledge. These conditions state that educational activities must elicit and hold the interest of the individual, have intrinsic value, arouse a curiosity and desire for new information, and provide appropriate time to achieve the learning goals (Dewey, 1938).

Continuing on from Dewey, the work of Schön (1987), concentrates on the learner's experience. Today's healthcare practice is challenged by what Schön describes as "indeterminate zones of practice - uncertainty, uniqueness and value conflicts" (1987, p. 6). For him, the art of

learning includes the application of knowledge to concrete situations, the basis for this being "learning by doing." He encourages educators to create learning environments wherein students are able to learn through experience, and the role of the educator involves facilitating students merging their skills with theory. Schön (1987) believes that students "try to educate themselves before they know what it is they're trying to learn" (p. 10). This process of discovery facilitates bridging the gap between theory and practice, and the educator's role is to facilitate the student's interpretation and this integration. Experiential learning in a simulated environment can assist to fill the gap between theory and practice by offering a safe environment for students to learn by "doing," as they are supported by an educator in the role of a "coach" (Schön, 1987).

Kolb (1984) identifies a learning cycle that involves the integration of thinking, feeling, and action, and found that there is the potential for failure to learn, alongside the risk of emotional or cognitive distress, if the cycle is not completed. However, the reward of completing the cycle and the adoption of a practice of reflective learning can be a depth of insight which stimulates commitment to practice and the delivery of interprofessional palliative care in new and productive ways (Hughes, 2008). Within the HFS learning process, learners are engaged in discourses that challenge them to reflect on their schema of personal meanings, ultimately leading to developments in how they interpret and integrate learning and knowledge as it relates to practice (Parker & Myrick, 2011). A well-rounded set, or more developed simulation opportunities in higher education, could successfully integrate Kolb's learning cycle of thinking, feeling, and action.

Interprofessional Palliative Care Education and Simulation

Students graduating from undergraduate healthcare education programs need to be "prepared with foundational palliative approach knowledge and capabilities" (Ramjan et al., 2010, p. 86) because they will inevitably and regularly encounter death and dying in their future professional practice as healthcare providers. They are the future healthcare providers who will be caring for us, dying Canadians. Higher education is not meeting this increasing societal need of situating death in education and into our daily lives. This in turn results in new professional graduates feeling unprepared, isolated, and anxious about caring for people who are dying and their families (Gillan et al., 2013; Johnson et al., 2009; Mallory, 2003; Masters et al., 2012). Presently, there is a noticeable dearth in the literature that links IPE and palliative care education. There is a need for a closer examination of the use of simulation as a pedagogical strategy in higher education and undergraduate healthcare training (Parker & Myrick, 2011; Reese et al., 2010). Developments in educational technologies offer simulation as a potentially effective pedagogical option for an effective experiential and active learning experience (Fluharty et al., 2012; Gillan et al., 2013). This dissertation will certainly add to these literatures in its address and integration of these topics, as well as advance the improvement of a death-focused curriculum and pedagogy in undergraduate studies.

Summary

Higher education that employs HFS can provide safer and flexible learning environments that emotionally engage learners and seamlessly encourage reflection, both during and following the simulation case scenarios. Currently, the simulation literature is rich with research describing the promise of efficacy by simulation as a tool for healthcare education. The gap in the research lies in detailing how and when simulation works as a pedagogical tool for substantive learning or

experiential processing,and suggesting why it may be useful in this way. The use of simulation to teach, reinforce, and assess self-reflection is a relatively new idea, and is perceived as a strong model for encouraging reflective practice (Bandali et al., 2008). By using simulation, the educator is able to create and develop multiple contexts and scenarios relevant to the learner's clinical work environment and can be designed for students at varying stages of their learning. As Parker and Myrick (2011) state, "the use of simulation can empower students, make them autonomous thinkers and create meanings through peer-driven discourse" (p. 79).

Undergraduate healthcare students need to have access to experiences during their education in order to be able to identify their attitudes and potential anxiety as they pertain to dying and death (Hamilton, 2010). There are deficiencies in undergraduate healthcare education when the curricula does not adequately prepare students to care for individuals and their families as they journey through the dying process (Braijtman, Fothergill-Bourbonnais, Casey, Alain, & Fist, 2007). It is recognized in the literature that providing undergraduate learners with the opportunity to increase their experience with situations that involve dying and death can serve to develop more positive attitudes toward providing the care needed at the end of life, which ultimately serves to improve the quality of care received by individuals and their families (Lange, Thom, & Kline, 2008; Braijtman et al., 2007; Murray Frommelt, 2003).

This chapter provided a review of the literature demonstrating the paucity of substantial research in this area, from the interprofessional undergraduate healthcare student perspective. It highlights the need to examine HFS as a strategy to provide meaningful learning experiences in palliative care. Chapter 3 will outline the methodology and methods used in this research to ex-

plore the undergraduate healthcare student experience with interprofessional palliative care education using simulation.

CHAPTER THREE

SIMULATING DYING AND DEATH IN UNDERGRADUATE EDUCATION: RESEARCH METHODOLOGY AND METHODS

This chapter describes the methodology and methods that were used in this constructivist grounded theory study. I detail the research design, participant recruitment and selection, and simulation processes, along with ethical considerations and bias issues.

For research to begin to be considered trustworthy, researchers need a design in which the paradigm and method of inquiry are congruous with the question being pursued (Walker & Myrick, 2006). For this study, the methodology of grounded theory was chosen because the study concentrates on the learner experience with high fidelity simulation (HFS) in interprofessional palliative care education. The new technologies of simulation, coupled with the need to train and increase the number of palliative care professionals in higher education, has necessitated the development of a theory to explain the responses and processes of undergraduate student professional learning. Grounded theory as a methodology is a strong fit for this research study because I am exploring not only a set of effective multidisciplinary connections, but also a potent pedagogical fusion of theory and practice between palliative care, IPE, and new simulation technologies.

The Rationale for Choosing Grounded Theory

Grounded theory is appropriate for this study as I strive to learn more about the processes of change in undergraduate education and the social construction of healthcare as a professional reality (Charmaz, 2000), by examining interprofessional palliative care education utilizing simulation in higher education settings. My decision to use grounded theory was based in the methodology's capacity to account for processes involved in the phenomena under study, and the fact that grounded theory is capable of capturing psychological and social processes that the undergraduate learner may be experiencing in the new learning situation. The study's goal is to devise and generate a theory grounded in the personalized accounts of the unique palliative care simulation experience of interprofessional undergraduate students (Charmaz, 2008). It was my goal as a researcher and educator to shift and move the discussion of interprofessional palliative care education away from a discourse focused on "what" should be taught in palliative care, to "how" the education should be delivered in the learning situation. By exploring and analyzing in depth the experiences of my undergraduate student learner-participants, grounded theory assisted me in providing a framework to analyze data and develop a theory to explain the "how" of interprofessional palliative care education, through the socio-cultural and pedagogical processes that shape the learning experiences of these student participants. Grounded theory is a methodology employed to describe psycho-cultural-social processes through the investigation of patterns of action and interactions (Walker & Myrick, 2006). This is a strong fit for a study in new simulation technologies at the undergraduate level.

Grounded Theory versus Grounded Theory Methods

Grounded Theory Method (GTM) was designed to facilitate and encourage researchers to engage and interact with their data alongside the emerging analysis (Bryant & Charmaz, 2007).

GTM provides a researcher with a "systematic, inductive, and comparative approach for conducting inquiry for the purpose of constructing theory," and it is a popular qualitative research method used by many different disciplines and subject areas (Bryant & Charmaz, 2010, p. 1). Historically, the term "grounded theory" was used to describe this methodology (Charmaz, 2006; Glaser, 2005; Glaser & Strauss, 1967; Urquhart, 2013), but this has led to challenges in interpretation and periodic confusion because the term is sometimes used to describe the result of the research process and at other times, the methods utilized (Bryant & Charmaz, 2010; Urquhart, 2013). Within the research world, the term "grounded theory" is generally used for both meanings or interpretations. However, as Bryant and Charmaz (2010) state, "strictly speaking a Grounded Theory is exactly that: A theory that has resulted from the use of the GTM" (p. 3). In this study, I am aligning myself with those researchers who distinguish between GT and GTM by adopting the term "grounded theory methods" (GTM) to describe the methods used, while I use the term "grounded theory" (GT) when describing the findings and results of the study as a new theory. "GT" will also be used when that is the term of choice used by a particular researcher or theorist.

Symbolic Interactionism

Grounded theory was developed from the theory of symbolic interactionism (Jeon, 2004; Parker & Myrick, 2011; Wuest, 2007) and is rooted in pragmatism and symbolic interactionist sociology (Charmaz, 2003). Blumer (1969), a founder of symbolic interactionism, proposed that an individual's actions toward an object are guided by the socially created meanings that they impart to them. This theoretical perspective is based on the assumption that society, reality, and self are constructed through interactions, and are therefore reliant on language and communica-

tion (Chamberlain-Salaun, Mills, & Usher, 2013; Charmaz, 2008). These meanings are derived by the social interactions, and the meaning of the social interaction is altered via the interpretation of each individual (Blumer, 1969). Interwoven themes featured within symbolic interactionism include the concepts of self, action, and interaction (Chamberlain-Salaun et al., 2013). Symbolic interactionism is based on three critical premises: (a) people act toward things, other people, objects, or situations based on the meanings that these things or people have for them; (b) these meanings develop from social interactions with others; and (c) these meanings are constantly changing through an interpretative process that individuals use to deal with their encounters (Bryman, 1988; Woods, 1992). Symbolic interactionism assumes that individuals do not respond mechanically to stimuli, but rather can and do think about their actions (Charmaz, 2006). As Wuest (2007) writes: "People actively shape the worlds that they live in through the process of symbolic interaction and that life is characterized by variability, complexity, change, and process" (p. 241).

Communication with others plays an essential role in an individual's understanding of the meanings that they attribute to the world around them. This set of meanings is in perpetual flux due to the complexities found in social interactions (Blumer, 1969). Klunklin and Greenwood (2006) argue that this flux is due to social interaction constantly challenging individuals to see how others interpret their actions. This continual psycho-social challenging influences people to alter or shift their responses, knowledge, and meaning schemes. In my study, learning opportunities with high fidelity simulation (HFS) will engage healthcare students in discourses that can challenge their personal meaning schemes (particularly of death and palliative care), thus facili-

tating change in how those undergraduate students interpret and integrate knowledge relevant to healthcare practice and delivery (Parker & Myrick, 2011).

Symbolic interactionism, like GTM, strives to examine a phenomenon or process to gauge greater insight into the "knowing how" dimension of individuals' acts or responses in specific situations (Jeon, 2004). Researchers utilizing GTM and symbolic interactionism strive to develop deeper understandings of a phenomenon from the individual participants' perspectives, as contrasted to determining objective truths or understandings from outside the participants' experiences and responses (Patrick & Myrick, 2011). GTM is designed to focus in on complex social processes and the shared meanings within (Jeon, 2004; Parker & Myrick, 2011), and symbolic interactionism is inherent in GTM research (Milliken & Schreiber, 2001). This is echoed in Denzin's (1972, as cited in Milline & Schreiber, 2001) observations:

> The very act of engaging in social research must be seen as a process of symbolic interaction, that being a scientist reflects a continual attempt to lift one's own idiosyncratic experiences to the level of consensual and shared meaning. (p. 83)

In GTM, the role of the researcher is to engage in a symbolic interaction with the data, the participants, and eventually, the emergent theory. It is through this active engagement that GTM "bridges the philosophical underpinnings of symbolic interactionism and the conduct of the grounded theory endeavor" (Milliken & Schreiber, 2001, p. 181).

When considering research paradigms and methodologies for this study, GT provided an opportunity to use a methodological framework free from preconceived frameworks that are characteristic of other forms of inquiry (Patrick & Myrick, 2011). With a foundation in symbolic interactionism, GT provided a structure and framework to work toward understanding the under-

graduate palliative care students' experience with HFS from the individuals themselves, rather than looking for that understanding from outside of the direct experience voiced by the participants (Jeon, 2004). For this study, the research needed to include both observation and analysis of participants during the simulation labs, the debriefings, and the subsequent interviews, in an effort to understand participants' lived experiences. GT is the methodology that provided a structure for this analysis, and offered the opportunity to develop a substantive theory to describe this experience from the participants' experience. Blumer (1969) recognized that symbolic interactionism perhaps did not take this analysis as far as GT could when he stated that the "research scholar who engages in direct examination should aim at casting his [sic] problems in a theoretical form, at unearthing generic relations, at sharpening the connotative reference of his [sic] concepts and at formulating theoretical compositions" (p. 42). For me, symbolic interactionism lacks the analytical framework to support the development of a theory. Parker and Myrick (2011) call for researchers who are examining processes such as teamwork and group dynamics that occur in simulation to create substantive theory that will impact our understanding of simulation education, and help form a foundation for future studies. GT is the methodology to help this research contribute to that discussion.

Overview of Grounded Theory Methods

The term "grounded theory" (GT) refers to both a "method of inquiry and to the product of inquiry" (Charmaz, 2008, p. 507). GTM is distinguished from other methodologies—such as symbolic interactionism—by its goal of theory development. Theory development in GTM could translate into many types of theories, such as proposing plausible relationships among concepts and sets of concepts, or an overarching explanatory scheme that may be used to provide insight

into a particular phenomenon (Birks & Mills, 2011; Corbin & Strauss, 2008). Parker and Myrick (2011) state that "at the heart [of GTM] is a systematic yet flexible process of procedures to produce inductively derived mid-range theory about a particular experience or social phenomenon" (p. 75). GTM differs from other research methodologies because the foundational premise is that the theory is directly linked to the emergent data, rather than testing a predetermined hypothesis (Strauss & Corbin, 1998). In GTM, a hypothesis will emerge from a constant and careful analysis of the data, both from observation and participant descriptions (Charmaz, 2006). This then grounds the thematic conceptualizations of a pattern of behaviour pertinent to those involved (Glaser, 2005).

The premise of grounded theory methods is that the researcher will be able to develop a theory through detailed exploration and theoretical sensitivity that is supported in the data. The researcher uses insights obtained through direct observation of a phenomenon (e.g., in this study I directly observed how participants used HFS in their learning to develop a new theory) (Parker & Myrick, 2011). This methodology is suitable for a researcher who strives to learn more from participants, to fully understand a process or situation from a different set of perspectives (Richards & Morse, 2007).

Grounded theory originated and developed in the fields of health and education. Grounded theory methods encourage the researcher to perceive data in "fresh ways and explore ideas about that data through early analytic writing" (Charmaz, 2006, p. 2). In this study I did this through my field notes and early memos as I used analytic writing to decide new questions to explore, or specific events to focus on, in the individual interviews following the simulation labs. Grounded theory methods offers both systematic and flexible guidelines for collecting and ana-

lyzing data, which results in a theory that is "grounded" in the data. This "grounding" of the theory by the data is the result of a constant checking and re-checking of the emerging theory with new data.

Grounded theory methods are not a set of rules, but rather a set of general principles to steer researchers toward greater insight into a socially constructed meaning of the reality of participants in the study (Milliken & Schreiber, 2001; Parker & Myrick, 2011). The data in a GTM study is the foundation and groundswell of any theorizing—if it is not present in the data, then there is no analysis that produces theoretical constructs. Grounded theories stem directly from continual engagement with and analysis of the data, and this process provides an opportunity for the researcher to construct or "theorize" new findings as concepts (Charmaz, 2006).

The Constructivist Design

Originally, GT developed in part as a response to the dominance of positivistic quantitative research and a desire to fight against that dominant research paradigm (Charmaz, 2006). However, by the 1990s, GT was ironically recognized for its positivistic assumptions and appealed to some quantitative researchers who adopted GTM into their mixed methods research. As the tradition of GT has evolved (over the last 40+ years), it has been influenced by constructivist and postmodern/poststructural theories and scholarship (Charmaz, 2006). This new development in GT research is evident in how Strauss and Corbin's (1998) translation of GT now takes into account the existence of multiple realities, varied perspectives, and the socially constructed relationship between theory and reality. Grounded theory is thus being redefined and conceptualized apart from more traditional and post-positivist approaches to methodology (McCann & Clark,

2004; Strauss & Corbin, 1998). Another example of GT's new approach is how Charmaz blends GT with the epistemology of constructivism (Walker & Myrick, 2006). Constructivist GT is located directly within the interpretative tradition (Charmaz, 2006), in contrast to the objectivist approach of Glaser, and Strauss and Corbin (Richards & Morse, 2007).

Constructivists concentrate on the "how" and sometimes the "why" of how participants engage in meaning constructions in specific circumstances. In Charmaz's (2006) constructivist design, GT is situated in the tradition of interpretative social research, as opposed to positivism. She is more concerned with the views, beliefs, values, feelings, assumptions, and ideologies of individuals, and views the data, and subsequent analysis that occurs in GT, as social constructions that reflect the process of how those social constructions were produced (Charmaz, 2006). A constructivist approach strives to go deeper than solely exploring how individuals view their situation by recognizing "diverse local worlds and multiple realities and address[ing] how people's actions affect their local and larger social worlds" (Charmaz, 2006, p. 132).

Charmaz (2000) contends that GT does not actually produce a theory of reality, but instead brings forth one interpretation among many. Constructivist GT "not only theorizes the interpretive work that research participants do, but also acknowledges that the resulting theory is an interpretation" (Charmaz, 2006, p. 130). She acknowledges that a grounded theory relies on the view of the researcher and that "it does not and cannot stand outside of it" (p. 130). She also recognizes that although different researchers may develop similar ideas, it is *how* those ideas are interpreted theoretically that makes the difference. Charmaz describes this difference in arguing that creativity and problem-solving alongside interpretation are critical elements of GT (Char-

maz, 2008), thus recognizing the importance of the active role of the researcher in the development of theory.

Constructivist GT extends GT methodology to recognize and develop an appreciation for how the researched experience is integrated into larger systems of experiences and relationships. This approach "sees both data and analysis as created from the shared experience of the researcher and participants and the researcher's relationships with participants" (Charmaz, 2003, p. 313). The constructivist GT researcher recognizes these situations may be hidden in layers. This approach requires the researcher to be vigilant to differences in social systems such as power, communication, and opportunity between people, and to maintain a rigorous view on participant connections between their social context and situation (Bryant, 2003).

Overall, there is some consensus by GT researchers that, regardless of the version employed, GT involves these basic strategies: (a) the identification of a substantive area of interest and research question; (b) gathering data from the field via interviews and/or observation; (c) the simultaneous collection and analysis of data; (d) the use of a stepped process to code data while constantly comparing incidents and concepts as they emerge during the analysis; (e) the development of theoretical sensitivity to what is occurring within the data; (f) continued sampling based on emerging theory; (g) the employment of memos to articulate and track thoughts and ideas by the researcher; and (h) the development of a core variable or story line, a substantive theory explaining the data (Birks & Mills, 2011; Charmaz, 2000; Walker,& Myrick, 2006).

Grounded theory often begins with the question "What is going on here?" followed by "and how is it different?" (Richards & Morse, 2007, p. 60). The research questions in GT reflect an interest in process and change over time (Richards & Morse, 2007). It is an appropriate re-

search methodology when there is little known about a particular phenomenon e.g., simulation technologies in higher education—or the theory that already exists does not appear to adequately address the process that is occurring within that phenomenon (Parker & Myrick, 2011) e.g., palliative care scenarios or case studies experienced in real practice with "patients" through HFS technologies. Often, the research questions posed in GT strive to understand a social process that Charmaz (2000) refers to as a "slice of social life" (p. 522). The questions themselves suggest that the process of change will be examined alongside the social construction of reality (Richards & Morse, 2007).

Exploring the Undergraduate Healthcare Learner's Experience with Simulation Technologies

The amount of inquiry into HFS is growing steadily (Bremmer, Adudell, Bennet, & VanGeest, 2006; Childs & Sepples, 2006; Parker & Myrick, 2011), but very little research has been conducted to examine the social processes or designed pedagogical interactions that provide a foundation for university student engagement in simulation learning experiences (Parker & Myrick, 2011). Unfortunately, the majority of research conducted on simulation thus far has focused primarily on the more positivist or technical aspects of healthcare practice, such as running a code or learning to intubate (Bradley & Postlethwaite, 2003). This in turn "risks devaluing the subjective voices of our [healthcare] students" (Parker & Myrick, 2011, p. 74) as they become field practitioners. The bulk of simulation research has primarily focused on the testing of simulation lab learning through student evaluations that are mostly quantitative ratings, where the majority of students rated simulation positively (Bremner et al., 2006; Parker & Myrick, 2011). As an educational tool, HFS appears well-suited to a constructivist pedagogy, but more research is

needed to generate theory and a greater depth of understanding that could lead to more effective incorporation of simulation into many areas of healthcare curricula (Parker & Myrick, 2011).

The inductive qualities of GT are strongly suited to inquiry into the little-known aspects of healthcare education using HFS that lie outside of positivist measures, to concentrate on the more social aspects of human interaction in healthcare settings (Parker & Myrick, 2011). Clark (2003) views GT as an action-oriented research methodology for healthcare research because of the continual analysis of ongoing action and data incorporation to inform the next set of actions in the research cycle. He also recognizes the role of both human and non-human participants (the mannequin or "patients" in HFS), and the roles that these different participants play in the construction of meanings and knowledge. Clark (2003) emphasizes the need to develop conceptualizations of the entire social system within a GT methodology. Specific to my work in simulation research, "grounded theory is particularly relevant to the social processes and social discourse that occur in the group work during a scenario and the debriefing session after a scenario" (Parker & Myrick, 2011, p. 75).

There are other indications in healthcare research literature for this choice of GT methodology. For example, researchers such as Wuest (2007) write that: "Human behaviour related to health issues, developmental transitions and situational challenges is well suited to grounded theory research" (p. 244). From personal experience of having taught Introduction to Palliative Care and other undergraduate palliative care courses, I am aware that there is a real need to develop theoretical perspectives in undergraduate palliative care education to bridge the theory-practice divide that so often leads to students feeling unprepared to care for individuals who are dying and their families. Healthcare researchers and instructors in higher education need to deep-

en our understanding of the processes of interprofessional palliative care education using HFS. These new theoretical perspectives will be useful to educators in undergraduate healthcare education, to help them understand students' perspectives and needs from their interprofessional palliative care education experiences. It will also be helpful in curriculum development and the application of pedagogy and educational theory in the enhancement of future HFS applications for palliative care undergraduate education.

Role of the Researcher

The role of the Grounded Theory Methods (GTM) researcher is to examine the socially constructed meanings of research participants and to follow more closely their thinking, their understandings of the world around them, and their behaviours which stem from those meanings (Milliken & Schreiber, 2001). The GTM researcher recognizes that the true experts in this process are the participants who have experienced the process. Hence, in order to truly capture the experiences of students engaging in HFS in my study, I need to defer my interpretations to my student-participants' responses to gather data reflecting their reality (Parker & Myrick, 2011). The GTM researcher searches for theory through steadfast analysis of the presented data, with the goal of discovering linkages and concepts that might be used to generate theoretical insight. The concepts and linkages that emerge are in continual interaction with the data as the researcher strives to obtain integration and synthesis (Richards & Morse, 2007). It is the responsibility of the GT researcher to be in a state of "methodological restlessness" on the journey of seeking characteristics, conditions, causes, or responses that will allow the researcher to join together these elements into an integrated theory (Richard & Morse, 2007).

Within the constructivist design of GTM, the role of the researcher is not minimized in the process (Charmaz, 2007; Urquhart, 2013). The researcher is tasked with constant decision-making about categories throughout the study and brings questions to the forefront, such as: what is happening here in the data? (Charmaz, 2000, 2007). The researcher also brings a set of values, experiences, and priorities to the research experience (Urquhart, 2013), which Charmaz (2009) refers to as providing a "variable in the research process itself" (p. 128). It is the reflexive nature of constructivist GT that locates the researcher in the research process directly (Charmaz, 2008b). Returning to this study, Parker and Myrick (2011) emphasize the need for simulation researchers using GT to allow the data to ascertain the social processes through emerging themes that originate solidly within the data, within the student experiences of interprofessional palliative care education using HFS.

Research Design

The design for this study followed standard processes for GT using constant comparison throughout the data analysis process, and by adopting a constructivist perspective toward the research process. This methodological perspective is a strong fit for my stance as a researcher because it allows for the presence of the researcher to be more explicit, translating into a stronger interpretative stance through GTM (Charmaz, 2000). Methods, from a constructivist perspective, provide opportunity for the researcher to begin to see the world from the view of participants by entering into their setting and situation as much as allowable. This provides the researcher with an otherwise inaccessible vantage point (Charmaz, 2006).

Research Site and Participant Recruitment

In qualitative research, sampling tends to be purposeful in the sense that participants are selected for their ability to provide unique information required by the study's research question. This approach to sampling permits the researcher to access data pertaining to a specific, personally constructed, information-rich, and in-depth phenomenon (Patton, 2002). Often in GTM research, sampling combines purposeful and theoretical sampling. Glaser (1978) describes theoretical sampling as the "process of data collection for generating theory whereby the analyst jointly collects, codes, and analyses his [sic] data and decides what data to collect next and where to find them in order to develop his [sic] theory" (p. 36). Theoretical sampling is in keeping with the process-orientation of GTM research and is used when participants are selected based on their potential to contribute to the development of a theory (Birks & Mills, 2011). Hence, in GT, sampling begins at the location of the phenomenon being studied (purposeful), and the emerging theory through theoretical sampling acts as a guide to future data collection (Strauss & Corbin, 1990; Walker & Myrick, 2006). In this research study, the sampling was both purposeful and theoretical, allowing for opportunity to focus and control the scope of this research project (Birks & Mills, 2011;Patton, 2002). This approach to sampling offered opportunity for interprofessional small-group learning to occur, as participants were from different healthcare disciplines.

The sample site for this study is a small-sized university in central Canada that offers a variety of healthcare education programs and faculties, along with an interprofessional palliative care certificate. This university was chosen because it is located in a city with a thriving community of palliative care providers and because it was accessible to the researcher. The university offers comprehensive palliative care education at the undergraduate level and has an academic research centre that provides continuing palliative care education to professional healthcare

providers. Overall, this site has the potential to provide an information-rich sample of participants with a strong interest in the delivery of palliative care.

Participants were recruited via (a) the posting of posters in areas of the university where health students might frequent, (b) email, and (c) assistance from colleagues spreading the word in their undergraduate health classes. I received emails from 18 students expressing interest, and 14 students signed up to come to the first two scheduled simulation labs. Scheduling was done via email and I made the best effort to accommodate all students' schedules with the simulation lab availability. A letter of invitation and the consent form were all emailed to students for review before the first lab meeting. (Please see Appendices A and H).

Participant Overview

Ten student participants completed the first simulation lab over two mornings in March 2013. Nine of the participants were female and one was male. They ranged in age from 20 to 35 years. Three of the participants were in the second year of their university undergraduate degree programs; five were in their third year; and two were in their fourth and final year. Two students identified as being in nursing, one in kinesiology, one in social work, four in gerontology, and two in psychology. None of the students had been employed in a palliative care setting and four identified having participated in a simulation lab before. All participants had experienced the death of a close family member or friend, and two had witnessed a death in a clinical setting as part of their work or student placement. Nine out of the ten participants reported taking courses where there was an IPE focus, and they identified these courses as part of a gerontology certificate program or a palliative care or dementia certificate program.

All 10 students participated in the debrief/focus groups following the first simulation lab. One student elected to not continue past that point in the study. Two attempts were made to contact this participant via email, but the lack of response to emails was interpreted as the participant's unwillingness to continue in the study. Further contact was not attempted and data from that student was not included in this study. The remaining nine participants all participated in the individual interviews following the first simulation lab. Eight participants participated in the second simulation lab in April 2013. One participant was unable to continue due to illness but consented for their data to be included in the subsequent analysis. All remaining eight participants participated in the focus group following the second simulation lab, the individualized interviews following the second lab, and the final follow-up interview two months later, past the second simulation lab. Active involvement in the research project for all participants concluded in July 2013. Detailed introductions to the participants is provided in Chapter 4.

Data Collection

As Glaser (2002) states, "All is data" (p. 16). The credibility and quality of a study begins with the data and the depth and scope of that data can make the difference (Charmaz, 2006). Data collection methods most commonly used in GT are interviews, observations, and field notes (Richards & Morse, 2007; Strauss & Corbin, 1990). Grounded theory, as recognized by Richards and Morse (2007), does not require a specific data source but does require that the data can be grounded, which sets a high standard for the data both in the process of coverage and the depth of detail. The researcher can also collect data using comparative instances of phenomena, as well as their own personal experiences (Richards & Morse, 2007).

Methods used in GT include "simultaneous data collection and analysis, with each informing and focusing the other throughout the research process" (Charmaz, 2008, p. 508). Classic GT accentuates the development of analyses of action and process (Glaser, 1978; Glaser & Strauss, 1967). The GT conceptualization of methods—simultaneously collecting data while analyzing it—assists the researcher to continually pursue the emphasis of action and process as the data collection is shaped, to inform the emerging analysis (Charmaz, 2006). The first GT question asked is, "What is happening here?" (Glaser, 1978).

Data for this study was gathered in a variety of ways. Participants took part in two simulation labs over a period of four months. Each lab was approximately three hours in duration. The simulation labs explored topics both common and essential to palliative care education including communication, grief, and advance care planning. The first lab focused on communication skills and activities were centred around the mannequin and asking students if the patient is dying. The second lab concentrated on advance care planning, which is a core responsibility of all palliative care practitioners. Each simulation lab was offered twice, to allow for a minimum of four students and a maximum of six students to participate at one time. The simulation lab was videotaped but not used as a data source due to poor quality. Data was collected in the debrief sessions conducted directly after each HFS lab experience by audio recorder and then transcribed.

The second method of data collection was gathered directly from participants using in-depth, semi-structured interviews following the labs. Strauss and Corbin (1998) suggest interviewers use open-ended questions that are systematic, yet allow for flexibility, to generate

themes relating to the developing theory. Wimpenny and Gaass (2000) recognize the importance of interviews when they state:

> Interviewing can be viewed as a process which begins in an open, broad manner seeking the overall perspective of the respondent, that is their point of view on the phenomena. The ongoing data analysis leads to the emergence of a tentative theory, the categories of which provide the focus for subsequent interviews. Subsequent interviews are then guided by analytic questions and initial hypothesis about the categories and the relationships between them. (p. 1489)

In this study, semi-structured interviews were adopted to provide a guide for the interviews. As interviewer, I was not passive in this process nor did I solely focus on the questions outlined; rather, I used the questions to begin the path that I would then follow with participants. I anticipated that this semi-structured guide would evolve and change throughout the research process as concepts developed during analysis—as indeed, it did (Birk & Mills, 2011).

The third data source in this study resulted from the debriefing with Kristen Jones-Bonofiglio, from the School of Nursing that occurred following each simulation lab. KJB was operating the simulation equipment throughout the labs and acting as either "Jane" or "Bianca" by providing a voice to the mannequin. Her insight as a healthcare educator and experienced simulation practitioner were invaluable. KJB's role will be expanded on in Chapter 5.

The fourth and final means of data collection was observation and field notes. Researcher-written memos served as a reflection of my thoughts as researcher, and the participants' nonverbal behaviours throughout the study (Birk & Mills, 2011). Glaser (1978) defines memos as the "theorizing write up of ideas about codes and their relationships as they strike the analyst

while coding" (p. 81). Memos were used to record my thinking about categories, their properties, relationships, and emerging theory. In this study, memoing intensified following the second simulation lab, as participants appeared to delve deeper into their experiences and thinking, no longer as overwhelmed by the initial newness of the simulation experience.

In GT, simultaneous data collection and analysis occurs symbiotically to assist with further data collection. Data in this study were collected until there was saturation, or saturation as recognized by Strauss and Corbin as the "matter of degree" (1998, p. 136) of analysis in the data, given that there is always potential for something new to emerge from the next phase of analysis (Dey, 1999). As Strauss and Corbin (1998) suggest, I considered that saturation was reached when more analysis appeared to be becoming "counter-productive," without anything new (e.g., new data, new categories, new analysis strategies) not adequately adding to the model, theory, or framework being developed.

Procedural Overview

First Simulation Lab

Ten students divided into two groups participated in the first simulation lab. The lab was 2.5 hours in duration and offered on two separate days to accommodate the participants' preference for date and time. Six students participated on the first day, and four on the second day. We met in the simulation lab in the university, where the participants were enrolled. Students were given an agenda, the consent form to sign, and a demographic questionnaire to complete. The consent form was reviewed verbally with participants and questions were answered. (See Appendix A for consent form.) The framework and specifics of the simulation labs are outlined in Chapter 4.

First Individual Interviews

Approximately two weeks following the first simulation lab, individual interviews were conducted with nine consenting participants. The interviews were scheduled via email at the participants' convenience. Participants were provided the opportunity to suggest a location of their choice, but all requested that I book a room on campus for their interviews. The interviews ranged in length but on average were 45 minutes long, and they were recorded and later transcribed. (See Appendix B for interview guides.)

Second Simulation Lab

Approximately 90 days after the first simulation lab, a second simulation lab was scheduled via email. Again, students were given some choice as to the time and date of the second simulation lab, which was offered on two different days. This resulted in the group composition being slightly different than the first lab because there were only 8 participants for the second lab, compared to 10 in the first lab. The second simulation lab was also 2.5 hours in duration. Again, this simulation lab will be examined in greater detail in Chapter 4.

Second Individual Interviews

Approximately two weeks following the second simulation lab, individual interviews were conducted with the eight consenting participants. These interviews were scheduled via email at the participants' convenience. Participants were provided the opportunity to suggest a location of their choice, but again, all requested that I book a room on campus for their second individual-

ized interview. These interviews again averaged 45 minutes in length, and were recorded and later transcribed. (Please see Appendix B for the battery of questions used to guide these interviews).

Third and Final Individual Interviews

Approximately eight weeks after the second interview, the third and final interview was conducted. As it was now summer and many of the students were no longer on campus, the majority of these interviews were conducted via telephone, as per the participants' request. Those preferring a face-to-face interview were accommodated. These third interviews averaged approximately 30 minutes in length, and were recorded and later transcribed. Once all of the final interviews had been completed, a draw was conducted with the names of all participants who had completed the study, and the winner was awarded an iPod and a $50 Chapters gift certificate. All participants received a certificate of participation from a university research centre, where I am a research affiliate.

Each of the two simulation lab debriefs (four focus groups in total) and subsequent individual interviews (25 in total) were transcribed verbatim, resulting in over 400 pages of transcription. The transcripts were edited so that all identifying information was removed. The letters of consent, copies of all transcripts, demographic information, and recordings were stored in a locked file cabinet in my home. Each audiotape was listened to multiple times with the following goals in mind: (a) to review each focus group and interview to identify highlights or moments that emerged; (b) to correct any errors made in the transcription; and (c) to increase familiarity with each participant and the tone, shape, and contours of each interview or focus group.

Data Analysis

In GTM, data analysis is a well-defined process beginning with basic description, followed by conceptual ordering and then theorizing (Patton, 2002). It uses two very specific analysis techniques: (a) coding through the use of the constant comparative method, and (b) the asking of questions (Glaser, 1978; Strauss & Corbin, 1998). Data analysis is accomplished through a detailed set of coding processes (Walker & Myrick, 2006). Through coding, the researcher explores information located within the data while searching for similarities and differences to categorize and label the data. Walker and Myrick (2006) describe coding as "an iterative, inductive, yet reductive process that organizes data, from which the researcher can then construct themes, essences, descriptions, and theories" (p. 549). Glaser (1992) writes that, "using the constant comparison method gets the analyst to the desired conceptual power quickly, with ease and joy. Categories emerge upon comparison and properties emerge upon more comparison. And that is all there is to it" (p. 42). It is important to note that with GT, coding is not simply part of the data analysis but more explicitly is what moves the researcher and the data from transcript to theory (Walker & Myrick, 2006).

It is not uncommon for a researcher using GTM to use a software program to expedite their analysis. While I was tempted to go this route, I opted against it because I reasoned that using a computer program reduced, as Bryant and Charmaz (2010) describe, the sense of control and intimacy with the research process. Glaser (2005) also does not support the use of supportive

software because he claims it undermines the researcher's potential for creativity. Ultimately, given that I could hear the participants' voices in my head and see their faces, I felt that I had a deeper understanding of their communication patterns than any software could provide.

Initial Coding

After transcription, I began coding. First, I engaged in "initial coding" (Charmaz, 2006). This is the point at which the data (i.e., audio files) are initially examined without any limitations or application of filters. At this juncture, as much data as possible is accepted, allowing the researcher to look for patterns leading to social processes that may be of eventual interest.

Coding shapes the analytic frame from which the researcher builds the analysis (Charmaz, 2006). It involves opening up the text to expose the thoughts, ideas, and meanings contained therein. I worked to break down the data into parts, and examined each part closely for similarities and differences. Charmaz (2006) identifies two main phases of open coding: (a) the initial phase, involving naming each segment of data; followed by (b) a more focused, selective phase, using more significant or frequent initial codes to sort, synthesize, integrate, and organize the data. I explored the emerging phenomena during the interviews, the review of the audio recordings, and the transcription process, and through reflective readings of the transcripts while I engaged in coding and analysis. This process was initiated by immersing myself in the data through repeated readings of the focus group and interview transcript data, and repeated listening to the audio recordings as codes were generated.

I worked to remain open to all theoretical possibilities during the initial coding stage and created memos to document my thinking. These memos served as records of my thought processes: what I thought was happening as I moved through the coding process, insights I had, and

questions I was considering. Sometimes, the memos served to acknowledge a theoretical posit that was emerging from the data. Initial coding continued until categories began to form. Line-by-line coding was used in this study. *In vivo* coding—coding that strives to capture the language of the participants (Birks & Mills, 2011)—was used when possible to preserve the participants' meanings of their views and actions. Charmaz (2006) considers *in vivo* codes to be symbolic markers of the participants' language (speech) and meanings. The data was eventually coded when core variables were identified (Birks & Mills, 2011). As these core categories manifest, the researcher then moves to the second level of coding: selective or focused coding.

Focused Coding

Selective coding (Glaser, 1978) or "focused coding" (Charmaz, 2006) is more discriminating than the line-by-line coding conducted in the initial phase of open coding. It utilizes the dominant (i.e., most frequently found) codes to move through large amounts of data, with the goal of assessing the relevancy of those codes to the emerging concepts (Charmaz, 2006). This stage also provides the researcher with opportunity to check any preconceptions about the topic being studied. It allows the researcher to work across transcriptions from interviews and memos and compare participants' experiences, actions, and interpretations (Charmaz, 2006). For my work as a researcher, this process allowed me to compare, analyze, and synthesize across the transcripts from the simulation lab debriefings, and to include the three sets of individual interviews.

There are four suggested questions that the GTM researcher should ask of the data; I used these to help me continually focus my analysis and keep my overall questions in the forefront:

1. What is this data a study of?

2. What category does this incident indicate?

3. What is actually happening in the data?

4. From whose point of view? (Birks & Mills, 2011; Charmaz, 2006; Glaser, 1978)

Axial Coding

A third way a researcher will find connections in GT methods is through the use of axial coding, which is a complex process of inductive and deductive thinking (Backman & Kyngas, 1999). Strauss and Corbin (1990) describe axial coding as putting the data back together in new ways through creating connections between a category and its subcategories. It is used to relate categories to subcategories and realign the data obtained in the initial coding to emerging analysis (Strauss & Corbin, 1998). To assist with this, I utilized a visual organizer program called "Mind Node" to allow me to map out categories and sub-categories, and to manipulate the data visually in flowcharts and diagrams to form new relationships and connections. I found diagrams provided me with a "helpful way of generating concepts from what might otherwise be a chaos of data" (Bryant & Charmaz, 2010, p. 24).

Memoing

Glaser (1978) advocates for the researcher to continually take notes and write down whenever she has an idea about categories or theory. The process of memoing allows the researcher to begin to flush out theoretical ideas and the relationships between codes. I began memoing after the first simulation lab, articulating my experiences, observations, and thoughts about the debriefing session and my discussions with KJB, who was behind the scenes operating the computerized mannequin and other equipment required for the simulation logistics. I used memos to capture the process of conceptualizing the data and emerging theory. Memoing increased during coding as I kept both a handwritten notebook and computer file for field notes

and observations, and it continued throughout the development stages of the theory. I think that these memos were critically important because they encouraged me to think outside of the data, and begin to actively make connections and relationships with categories. Memos were written to reflect on and develop categories, to bracket out personal bias, and to prevent a premature closure on conceptualizations of the theory. I created what Glaser (1978) calls a "memo fund," which was invaluable in the development of the theory.

Theoretical Coding

Once the three types of substantive coding—open, focused, and axial—no longer revealed new information, I used theoretical coding to flush out more connections, and I analyzed relationships among the substantive codes or categories that provided the conceptual foundation and central theme for the theory. Theoretical coding, the final stage of coding, weaves substantive codes together into a hypothesis and theory, and occurs at the conceptual level (Walker & Myrick, 2006). Glaser (1978) describes this process of utilizing codes to "conceptualize how the substantive codes may relate to each other as a hypothesis to be integrated into a theory" (p. 72). This is in direct contrast to the previous types of coding, which serve to fracture and cluster the data. Charmaz (2006) describes theoretical coding as integrative, lending form to the previously collected focused codes.

A challenge in GT is deciding when to make the analytic shift from open to selective coding, and then advancing to the stage of theoretical coding (Walker, 2005). Urquhart (2013) suggests this decision is based on the researcher's judgment and the principle of saturation. Saturation is obtained when there are no longer any new categories, or properties of existing categories, produced through coding (Glaser & Strauss, 1967). Instead, the data piles up and repeats what

has already been revealed. In my research, I found that the third interviews were quite repetitive from the earlier two interviews. My interpretation of this repetition, redundancy, or saturation point was that the participants were no longer able to provide me with any new or different information pertaining to their experiences with interprofessional palliative care education using simulation. Morse (1995) states that "researchers cease data collection when they have enough data to build a comprehensive and convincing theory. That is, saturation occurs" (p. 148). When participants began repeating themselves and saying, "I think I said this before," I began to suspect that saturation had been achieved, and began to consider theory development.

Regardless of the feeling of saturation communicated by participants, I still struggled with when and how to move toward more theoretical coding. Again, the use of the "Mind Node" visual representation software was helpful here, as I used the program to assist in the transition to theoretical coding. To aid with the actual process of theoretical coding, I used Glaser's (1978) "6C" paradigm. This paradigm of six Cs studies categories in terms of their (a) contexts, (b) consequences, (c) causes, (d) conditions, (e) covariance, and (f) contingents (Backman & Kyngas, 1999; Glaser, 1978; Strauss & Corbin, 1990). I used this paradigm in my thinking as I developed another set of "Mind Node"diagrams or visual charts to explain what was occurring in the data, and to articulate these connections. Again, the "Mind Node" were very helpful in sorting through the data, organizing codes and categories, and helping me to articulate this in my memoing (see Appendix F for an example of the "Mind Node" diagrams that were utilized in this study). I developed a real appreciation of the time-consuming process of theoretical coding, during which I spent a great deal of time worried and uncertain I would discover connections or realize that the already-made connections did not adequately describe or represent the research phenomenon

(Backman & Kyngas, 1999). This self-doubt led to further checking and rechecking of the concepts, writing more memos, and discussions with my supervisor and colleagues.

Ethical Considerations

As Patton (2002) recognizes, qualitative research often poses some risk to participants because it may be intrusive to their personal lives and experiences, whether resulting from power differentials with the researcher, the vulnerability of the population, the controversial or sensitive nature of the topic, or the types of questions asked. While I did not anticipate that this study would pose an unusual amount of risk to participants, I had certain procedures in place to ensure that the participants were protected from harm and that their right to confidentiality would be maintained. Approval from the Lakehead University Research Ethics Board was obtained. Participation was voluntary and informed consent for participation was obtained. To protect confidentiality, interviews were conducted in mutually agreed-upon private locations. No faculty members or individuals from the sampling site university, who may have had influence over the participants' education, were notified of the participants' involvement in the study. No identifiable information of the participants was released. I collected, managed, and analyzed all the data myself. Code numbers were assigned to transcripts to assist with tracking information but only I, as the researcher, had access to the information linking participants to their data. All data, including computer files, audio recordings, video recordings, memos, emails, written notes, and transcripts were secured in my home office, and upon completion of the study were given to my supervisor, Dr. Korteweg, to be stored in a locked cabinet on the Lakehead University campus.

Palliative care education covers topics, issues, and situations that tend to be emotionally charged. There was opportunity throughout the study for participants to engage in personal growth by taking an honest look at their feelings and beliefs related to those topics and issues. For some students this experience was emotionally challenging, and for some it brought up unresolved grief, either from the past or related to current-life issues. Although this study involved some level of self-disclosure and sharing, it was not therapy. Arrangements were made with the counseling department at Lakehead University Student Health Centre for prompt, timely access if research participants found themselves feeling overwhelmed by the subject material explored in the simulation lab, or by their reactions to the experience. All participants were encouraged to seek appropriate support if they had these responses or intense feelings. To the best of my knowledge, no participants required this support or took advantage of the services at the Health Centre in relation to this study.

Potential Conflicts and Biases

The researcher bias in this study may also be considered a strength. I am a sessional instructor at the university where the participants are students. I primarily teach through the Interprofessional Palliative Care Certificate and have previously acted as the coordinator of this program. It is a condition of participation in this study that participants will have completed an introduction to palliative care course" (Gero101). I have been the instructor for this course for the last 10 years. I have developed the curriculum for this course and am familiar with the national palliative care education competencies. The potential bias that exists in this study is based on my personal experiences as a palliative care educator. While I did not enter this study with a theory to prove or disprove, I began with some strong ideas and commitments to palliative care educa-

tion. I strived to maintain “an open mind,” as Dey (1993) describes, but I did not set out to conduct this research with “an empty head” (p. 63). I remained cognizant of this “potential” bias throughout the study.

Strategies to Ensure Trustworthiness

Trustworthiness in qualitative research is related to credibility and how faithful the description of the phenomenon is to the experience of the participants (Parker & Myrick, 2012). In this study, I consulted two sets of criteria to enhance the rigour and trustworthiness of the research. The first was Glaser's (1978) four essential factors used to evaluate GT, and these factors are particularly useful for thinking about how the constructed theory is representative of the data (Charmaz, 2006). Glaser states that the theory must have (a) fit, (b) relevance, (c) that it must work, and finally (d) it should be modifiable. He describes "fit" as meaning that the categories of the theory are connected to the data. The data must be relevant and it is not permissible to force the data into any of the categories discovered by the researcher (Backman & Kyngas, 1999). Glaser recognizes a theory as working when it can explain the phenomenon, and predict and interpret those actions connected to that phenomenon. And finally, the theory should be modifiable with the presentation of new data. A grounded theory is never totally complete, and should be able to evolve as new data emerges.

Charmaz (2006) also describes four criteria for grounded theory research: (a) credibility, (b) originality, (c) resonance, and (d) usefulness, all of which were used in this study to enhance rigour and trustworthiness. She considers credibility to be measured by whether the research has achieved an "intimate familiarity with a setting or topic" (p. 182) and the data has sufficient depth to merit the researcher's claim. Originality concentrates on the provision of new conceptual rendering of the data, and the social and theoretical significance of the work presented. With the criteria of resonance, Charmaz (2006) challenges the GTM researcher to draw links between

larger institutions and individuals when indicated by the data, and provide deep insight into the worlds or worldviews of participants. And finally, Charmaz's fourth criteria, usefulness, requires that the analysis done in GTM provide interpretations that will be useful in "everyday worlds" (p. 183).

Throughout this study, I worked to ensure that I followed the above-mentioned criteria to maintain the rigour and trustworthiness of this research. For example, in order to maintain credibility and stay true to the participant experience, I used the constant comparative approach to GTM, stayed committed to the principle of emergence, used active memoing, and worked with participants for a six-month period. The duration of time allowed for relationships and trust to develop, and for the development of greater insight and opportunity to understand the student experience. I also actively sought feedback from my supervisor on tentative findings and decisions, and I maintained an audit trail for an outside researcher to potentially follow the methods and decisions made in this study. The audit trail includes coding lists and descriptions, memos, field notes, emails, and a variety of versions of "Mind Node" diagrams with accompanying narratives.

Ultimately, this work of grounded theory methods should result in "an analytic interpretation of the participants' worlds and of the processes constituting how these worlds are constructed" (Charmaz, 2008, p. 508), to develop a set of theoretical concepts from the data that not only provides interpretation, but also demonstrates an understanding of relationship processes. The outcome of this GTM is a model or new theory depicting the basic social processes that outline the student experience using HFS in interprofessional palliative care undergraduate education. This theory will be closely examined in Chapter 6. The simulation framework, an outline and

explanation of the participant experience in the simulation lab, is examined in the following Chapter 4.

CHAPTER FOUR

THE SIMULATION SESSION EXPERIENCE

The purpose of this chapter is to provide a descriptive report of the simulation lab sessions and a baseline introduction to each of the participants (*N=9*) in this study. This research focused on undergraduate student perceptions of learning about interprofessional palliative care education using high fidelity simulation (HFS) and, in order to understand their experiences and perceptions, it is important to learn about the participants, their educational background, and their knowledge and previous experiences with death and dying. This background knowledge assists in contextualizing the participants' experiences in the simulation lab and situating the data analysis discussions. In total, there were nine participants who completed this study out of the initial eleven who showed up and completed the first simulation lab. These nine participants remained in contact with me throughout the six-month period of the study, participating in two simulation labs (each lab was two and a half hours in duration) and three individual interviews (ranging from 30-90 minutes in length). Also during the course of the study, numerous emails were exchanged between the participants and me to schedule interviews and simulation lab times. At times, these email exchanges included messages that provided more reflections on the participants' learning and experiences in the simulation labs.

Participant Recruitment

Participant recruitment for this study was not as straightforward a process as anticipated. I had to make certain I was able to attract a diverse representation of undergraduate participants because I was looking to create interprofessional groups in the simulation lab to further a study of interprofessional interactions in palliative care. Another logistical difficulty for recruitment was the extensive time commitment requested of student-participants, at a time when they would still be engaged in their regular course work, as well as the need for them to commit to remain in contact with me for final interviews over the summer months, when the majority would no longer be attending classes near the university.

Another requirement for participation in the study was that participants needed to have completed the introduction to palliative care course because this course completion would ensure that the participants would bring an introductory knowledge and understanding of palliative care to guide their interactions in the simulation labs. As the researcher, I was somewhat concerned that only those students who had done extremely well in the course would be motivated to participate in the study. As the primary instructor for this course over the past 10 years, I had access to my participants' grades and was pleased to discover that these self-selected participants reflected a good range of academic diversity (70%-93%), as demonstrated in their final grades. The focus of this study was on the participant experiences in the simulation lab learning about palliative care, and was not connected in any way to academic grades in the course or to participant performance in the simulation lab.

The next section of this chapter examines the simulation sessions, providing a narrative of what occurred in the labs and an explanation of the structures and activities of the lab sessions.

It demonstrates the specifics of the research activities, as well as my multiple roles as lab session designer and leader, debrief facilitator, and study researcher.

Simulation Lab Framework

Two simulation labs were created for this research study. Each lab was offered twice, with the goal of providing some flexibility to participants for scheduling, and to keep the group numbers small and intimate to provide more opportunity for each participant to actively experience the simulation scenarios. The framework used to design the lab was similar to frameworks I had used in four previous simulation research pilot projects. I was introduced to this simulation lab framework by KJB, a faculty member at the School of Nursing and fellow PhD student, who has over 10 years of simulation education experience. I had worked with KJB developing palliative care simulation scenarios for undergraduate learners and practicing healthcare providers for two years before beginning this research study. Presently, there is little literature outlining the process and protocol for the development of simulation scenarios and this is something that the field of healthcare simulation is starting to address (Alinier, 2010; Gaba, 2004; Issenberg & Scalese, 2008). I also have more than a decade of teaching palliative care education to both undergraduate learners and practicing healthcare providers, using a variety of modalities including online education platforms (WebCT, Moodle, D2L), lectures and presentations, and interactive workshops. For an agenda for each simulation lab, please see Appendix C.

The next section of this chapter outlines the framework used to design the simulation labs in general; the final section of the chapter provides more specifics on the two simulation labs. The framework of the simulation lab sessions included an ice breaker activity, the education review, "speed-dating," the simulation scenario, and the debrief.

The Ice Breaker

Each simulation lab in this research study began with an ice breaker activity, closely linked to the topic of the simulation scenario. The purpose of this first ice breaker was to introduce participants to one another and encourage them to begin to share, interact, and develop as a group, to ease communication as they encountered more sensitive or new concepts of death and dying.

The Education Review

Next, a half-hour "mini-lecture" was offered to participants to teach and familiarize them with the topics of the lab's scenario. This mini-lecture included only material that had been covered in the Introduction to Palliative Care course. The purpose was to refresh the participants' memories, as a number of them had completed the course almost three years earlier. While I led these "mini-lectures," the style and approach were very informal, with everyone sitting around a table, and the "lecture" becoming more of a discussion with the participants sharing their own knowledge and asking new questions.

Speed-Dating

In my previous simulation lab workshops with KJB, we had found that providing participants with an option to "speed-date" the mannequin before the actual scenario began was beneficial for their ease and willingness to speak with the "patient-mannequin." The participants were provided with a brief overview of the mannequin's character and were encouraged to ask the mannequin anything they wanted to know about her, in two minutes or less.

In the first lab, participants were provided with the following brief biography, or patient background of the mannequin:

> Jane is a 40-year-old woman who was diagnosed with metastatic breast cancer. She was admitted yesterday to the hospice unit where you are doing your student placement.

The students were then encouraged to focus on asking the mannequin-patient as many questions as possible in a short time. This was done for the purpose of getting to know her as a person—as

"Jane"—rather than focusing on any medical tasks or formal patient assessment, or explaining who they are as healthcare providers. This speed-dating also served to attempt to normalize the experience of interacting with a mannequin-patient. The students could touch "Jane" and talk with her as a more "real" human patient than a distant textbook case study; it was more multi-sensory and multi-dimensional. Each participant was provided with an opportunity to "speed-date" the mannequin twice, and to share their new understandings of "Jane" with other participants. It is important to note that we did not refer to the mannequin as a "mannequin" or even as a "patient," but rather used the person's name of "Jane" in order to humanize both the mannequin and the social construct of "patient" in the participants' minds.

The Simulation Scenario

A simulation scenario in healthcare education is a patient case story that aims to bring forth purposeful learning outcomes for participants and observers (Alinier, 2010). Nadolski, Hummel, van den Brink, Slootmaker, Kurvers, and Storm (2008) suggest that scenarios can be "modeled on real life situations that often include a sequence of learning activities that involve complex decision making, problem solving strategies, intelligent reasoning and other complex cognitive skills" (p. 340). These researchers further find that simulation scenarios provide opportunity for learners to engage in complex problem-solving where they are called upon to apply their education and professional knowledge in realistic clinical settings. The complexity of the scenarios allow for ambiguity and conflicting information, and a large degree of professional autonomy that simulates real-life situations (Nadolski et al., 2008).

Participants were provided with a brief history of the patient with whom they would be interacting. They were able to add to the information with what they learned about the simulated

patient from the speed-dating. Participants were encouraged to talk amongst themselves and ask any questions. I provided answers to some of their questions, while for other questions (e.g., those pertaining to hopes and fears around dying and death) I suggested that the participants ask "Jane," in an effort to develop a deeper relationship with her. This limited or selected amount of information at the onset of the simulation experience allows for an inquiry process to begin, where the participants gradually collect more information as they immerse themselves in the scenario (Alinier, 2010). It is important for the facilitator to have established details, learning goals, and direction to know how and when the scenario should end, but this information should not be disclosed to participants, so that there can be an element of surprise or personal discovery (Alinier, 2010). It is also important to simulate a sense of realistic uncertainty, because professional healthcare practitioners/providers do not necessarily know what the outcomes will be from interactions or healthcare decisions with a patient.

KJB was behind the two-way mirror in the simulation lab room, controlling the mannequin with a computer system and acting as the "voice" of Jane. KJB and I met before each scenario and discussed the potential directions for each case study at length. As simulation educators, we may have had expectations that participants would move the scenario in a particular direction, but we also needed to anticipate what other directions or actions the participants might undertake, and what questions they might ask. This in turn required us to develop multiple detailed scenarios (Alinier, 2010).

KJB was an integral part of the scenario designs and session preparations because she has vast experience in simulation healthcare education, and she could provide valuable critical feedback on the proposed palliative care case studies. KJB received a detailed copy of the scenario

(e.g., its script(s), options, patient histories, etc.), along with a list of potential "seeds to plant," that were opportunities for her to direct or facilitate the scenario in particular directions, responding to the reactions and interactions of the participants. Please see Appendices D and E.

With KJB's collaboration and abilities in the control room during the sessions, each simulation lab was tailored to the participants and provided a more immersive, interactive, practical experience. As Borodzicz (2004) suggests, a certain degree of flexibility needs to be incorporated into simulation scenarios to allow the simulation to adapt to the actions or reactions of participants. Simulation case scenarios are dynamic and facilitate experiential or hands-on learning opportunities that emerge spontaneously during the scenarios. These opportunities may originate from risk-taking, mistakes, and interactions between participants, but they certainly contribute to the overall learning experience of professional practice (Ziv, Ben-Davie, & Ziv, 2005).

Each scenario was divided into three different story parts, or "snapshots" of one individual's dying experience. KJB and I had found from past simulation workshops that three-part stories were an effective approach that accomplished three things: (a) they provided a break to participants and an opportunity to "re-group;" (b) they allowed healthcare students to experience the passage of time, if required; and (c) they provided an opportunity for participants to brainstorm, discuss what is happening, and ask any questions during the short breaks in between each story or scenario.

The Debrief

The period of reflection offered in simulation education is called "debriefing." It is usually facilitated by the educator as a guided discussion, exploring the events and reviewing the learning that occurred. This reflective process immediately follows the simulation session and

assists learners in connecting theory with practice. In this first lab, the reflective process allowed participants to reflect on communication theory that they had learned as part of the Introduction to Palliative Care course, and discuss their experience applying that theory in the simulation lab. The reflective process is considered an essential component of simulation and is identified by some as being perhaps the most important feature for learning (Jeffries & Rizzolo, 2006; Morse, 2012).

The analytic purpose of debriefing the simulation experience in this research study was three-fold: (a) to ask participants to reflect on the specifics of the simulation experience (i.e., how they interacted, what occurred step-by-step, how they felt with each action, etc.); (b) to ask them about their initial impressions of the simulation experience; and, (c) to reflect on how these impressions relate to the study's research questions.

This section provided an overview of the framework used to design and implement the simulation labs utilized in this study. Before beginning to examine the unique aspects of each of the two labs, it is important to provide a brief introduction to the participants in the study.

Participant Profiles

In this section of the chapter, I provide an introductory baseline description of each of the study participants, to assist the reader in better understanding the participants' responses and experiences in the simulation lab. In total, there were eight participants who completed the requirements of this study, but I include nine participant profiles. One student needed to drop out due to health reasons part-way through the study, but consented for her data to be included in the analysis; hence, her profile is also included. Each participant has been given a pseudonym, but all other relevant personal and demographic information is accurate.

Hayley

Hayley was the first person to respond to my email when I was looking for study participants. At the time of the research, Hayley was a third-year student in Psychology. She identified a strong interest in healthcare and gerontology but less interest in palliative care, despite the fact she was working toward completing the palliative care certificate. Hayley described herself as being a motivated learner who needed to stay on top of her workload. She liked knowing what was expected of her in her courses, and described herself as a strong communicator, both verbally and in writing. Her experience in palliative care was from her course work, but she had worked as part of a healthcare team in a physician's office for a number of years. She did not have any previous experience with simulation, but seemed interested in trying out something new for the field and liked to take on new challenges. She described her motivation to participate:

> "I like the extra bit for the resume especially and that [simulation opportunity] looked good. I also like you as a professor and I thought – oh, that'll be cool just to do it, as well as interprofessional learning. I've read a lot about it [IPE], but I haven't really, I guess, applied it anywhere because I don't work in a nursing home."

Hayley expressed an interest in participating in the research process to see how it works because she is considering pursuing graduate work. She openly shared her appreciation for online courses because she considers them a good match for her independent learning style. She took initiative in the simulation lab and whenever there appeared to be a lull in the discussion, she would have something to say.

Kate

Kate was a second-year student who returned to school to complete a second degree in nursing. Her return to school was in part inspired by the death of a close friend and her caring for her mother, who was ill. Kate achieved a very high grade in the Introduction to Palliative Care course and had participated in simulation labs previously as part of her nursing training. Her personal experiences and self-assessed discomfort with death had encouraged her to pursue palliative care education. She stated on numerous occasions that she was surprised that palliative care was not a bigger piece of, or did not have a stronger emphasis in, her nursing education. Kate was motivated to state that, "It should be mandatory for nursing students to take a palliative care course." She shared the fact that she was very motivated to achieve high grades by saying that she had to make her second degree "worth it," to make it worth her time, effort, and real-life-practice application. Kate was not only motivated by grades but also stated that she wanted to be the best nurse she could be, and liked to take advantage of additional education opportunities: "I don't want to be in that situation where someone needs me as a nurse and I don't know how to help them in that situation." A competitive athlete, Kate had high expectations of herself which came across clearly in her first interview when she stated:

> "Being in the sim lab and having it just—all my flaws just get pulled right out—which is important for me to see what those are. It should be mandatory before I step into a hospi tal...even if I had someone with me—a teacher or a nurse—I still don't think that's enough."

Abby

Abby was completing her third year in the social work program and expressed a strong interest in palliative care, which was evidenced in both her course work and placement history.

She described herself as "outgoing" and a "go-getter." Abby had almost completed the Interprofessional Palliative Care certificate and was the only student to have a student clinical placement where one of the individuals she was working with had actually died. She was in the midst of this placement experience during part of the research study, and reported that her placement supervisor was supportive of her involvement in the study. Abby admitted to being deeply impacted by the death of the patient she was caring for in her placement, and spoke regularly of this experience throughout our time together. While she felt like she "did right by him" (the individual who died), she also expressed that,

> "I feel really lucky that I was able to do something like this [caring for someone who died] because I learned a lot from it, even about myself, and it really put into perspective like—wow, why didn't I do this [palliative care education] before I actually got thrown into the field, holding someone's hand?"

Abby was very vocal about wishing she had been better prepared by her educational experiences to deal with death and dying. After her first experience in the simulation lab, she told me she was writing a letter to the head of her department to advocate for simulation to be incorporated into palliative care and social work education.

Chloe

Chloe was a nursing student in the process of completing her second year. She had completed the Native Nurses Entry Program and often spoke of education as a "responsibility," and the importance of using her learning to "give back" [to her community and family]. Like Kate, a fellow nursing student, Chloe had participated in a simulation lab before as part of her nursing training. She appeared to be quite passionate about palliative care and shared that her future aspi-

rations included developing palliative care services in her home community, where she lamented that there were currently no services available. Her clinical experience included completing a placement in a long-term care facility where she was exposed to palliative care. She was inspired by the care she had witnessed there. Chloe shared that she hoped to get a summer job at that facility, which she then did achieve. She had also experienced the death of her mother when she was younger. She generously shared openly about this significant life event during the debriefing of the first simulation lab. Chloe accepted the comfort and support from the other participants and shared that she felt her mother's death had played an important role in her career aspirations. She demonstrated a good sense of humour throughout our time together and often made those around her laugh, too.

Olivia

At the time of the study, Olivia was finishing up her undergraduate degree focusing on gerontology. Soft spoken and thoughtful, Olivia had more palliative care education, exposure, and experience than most of the other participants. She had worked as a volunteer with the local hospice volunteer visiting program and had completed 40 hours of training for that position, along with successfully completing all the requirements of the Interprofessional Palliative Care certificate. During both the simulation labs and in our interviews, Olivia expressed a love for her volunteer work and referred to her experiences supporting individuals who were receiving palliative care. Despite a large portion of her education occurring online, Olivia preferred a face-to-face setting. She shared her view that:

> "I think working as a group and being face-to-face is probably the top priority for us and for our education. I think you just feel people. You just work off their—I don't want to

say vibes—but off their education and what they've seen and their emotions and stuff like that. I think it's just easier that way—for me anyway."

Olivia was often the first to compliment other participants and provide supportive feedback.

Jenna

Jenna was in her last year of an undergraduate degree in psychology, which she described as fitting in well with her part-time work at a long-term care facility. She reported really enjoying her work and that she hoped to be promoted in the organization when she finished her degree. It was her employment that inspired her to pursue studying gerontology and then palliative care. Jenna spoke often and fondly about how much her interactions with frail elderly people meant to her. Her part-time position had exposed her to dying and death, although not directly or "hands-on." Jenna said she would be informed when one of the residents on the floor where she was working was dying. She shared about the grief she observed both in the family and other staff. She expressed a desire to know "what to say and to do more." She was working toward completing the palliative care and dementia certificates and thought they would contribute to her career aspirations. Being motivated and thinking about her future goals, Jenna shared that part of her motivation to participate in the research was that she thought the certificate from the Centre for Research on Aging and Health (CERAH) promised at the end would look good on her resume.

Lily

Lily had already completed a general arts degree but had returned to university to complete the certificates in palliative care and dementia because she thought this training would assist her in her future career. She often spoke of the challenging job market and the need to keep her options open and have a diverse educational background. She was very interested in nutrition

for the elderly and hoped to pursue a future career as a dietician. Her experiences with death and dying were minimal. She shared a story about a grandparent who had died when she was much younger, but did not remember much detail about that experience. Lily disclosed to me that she was hearing impaired and was uncertain how that might work in the simulation lab; however, she was willing to try. She was a very keen participant and I suspect most of the other participants were unaware of her hearing challenges. She seemed to be pleasantly surprised that she was able to participate fully in the simulation lab. When I asked her why she agreed to participate in the research study, she replied with a smile, "Why not? I'm up for a challenge." Unfortunately, Lily was ill for the second simulation lab and unable to continue. She was generous to consent to incorporating her contributions to the first simulation lab, demographic information, and first interview transcripts into the data analysis.

Sarah

Sarah was a gerontology and outdoor recreation student in her third year. She was new to gerontology and palliative care, having just recently decided to pursue these disciplines and fields because she wanted "something different" from her undergraduate education. Sarah shared how she had participated in simulation in training for her employment as a lifeguard, but shared that that experience was drastically different from what she experienced in this research study's simulation lab. She had no experience with death and dying, but shared that part of her motivation for learning about palliative care was that her beloved grandmother was quite ill and Sarah wanted to be able to care for her. She shared that she was quite nervous about death because she did not know what to expect and wondered how she might react and feel when she had the experience of witnessing someone who was dying. Sarah was very quiet and reflective and took time

to think her comments through before she spoke. She did not initiate much within the group, but appeared quite at ease when she was interacting with the mannequin.

Kendra

Kendra was a fourth year psychology student who was in the process of completing the certificate in palliative care. She also recently completed the palliative care training with the local hospice volunteer visiting program, and had only just begun to volunteer with this hospice program at the beginning of the study. When asked what motivated her to volunteer at the hospice, Kendra shared that she thought palliative care would be something she would be good at and that it was important to "give back." Kendra appeared to be content with her undergraduate education experience but suggested on numerous occasions that there was "too much reading and not enough doing." She stated: "That's the challenge I guess in learning about palliative care because you have to make the jump from the information to the practice. And that's kind of hard to do." Kendra was hopeful that her volunteer experience would help her achieve this theory-to-practice transition. She shared that even though she did not have any direct experience with death, it was not something that she feared. Instead, she spoke of death as being "the next big adventure," and had many questions about the process of dying.

For the next part of this chapter I will examine in greater detail the two simulation lab experiences.

Simulation Lab #1: "Jane"

I had nine participants confirmed for this time slot, but one participant cancelled the night before and two "no-shows" resulted in a total of six participants. The relief I felt when the first two participants arrived for the first simulation lab session was probably audible. In the second

offering (the repeat) of this first simulation lab, there were four participants. Initially this group of four seemed a bit small, and I was worried that the participants would feel as if they were in a "fish bowl", too small for their comfort; however, the group seemed to adapt quickly to the small number and participated fully. One participant who confirmed the night before, answered some questions, and sounded quite excited did not attend the session, which surprised me. I emailed her to reschedule, but stopped making additional efforts to contact her when I did not receive a response.

It was an unusual feeling to "meet" these students for the research study because I felt that I already knew them through exchanged emails and numerous interactions as their instructor for at least one course. All the participants had been my students, so I was already someone familiar and trusted to them even though they knew me as a university instructor and not a researcher. It is important here to emphasize that the Introduction to Palliative Care course is delivered online; hence, while I may have recognized some of the participants' names, we had never actually met face to face prior to the study. I was also uncertain if any of the participants would know one another. Two of the students recognized each other but no one really knew anyone else. One of the nursing students, Kate, shared that she was actually surprised how nervous she was. She said she had done some palliative training before and generally felt she knew what was expected of her in terms of her nursing tasks, but this time she was not sure what she was going to do.

We did a short introduction and everyone shared a couple of items on their "bucket list" as an ice breaker. The idea of a "bucket list" has become a popular concept in our society and many use it as a way of thinking about and sharing their hopes, dreams, aspirations and activities

they want to accomplish before they die. In both groups, there were numerous comments shared about trips and travel adventures that participants wanted to engage in. I had anticipated this desire for travel, thinking that this would give them a good connection with "Jane," the simulated patient who also shared a desire for travel. In this way, the ice breaker activity served not only to break the ice among participants, but also provided a potential connection between the participants and the simulated patient they would be working with.

Behind the scenes and the two-way mirror was KJB, who provided the voice of "Jane." She observed the ice breaker closely, taking note of what each participant shared, so that she could engage them and find some common ground between them and "Jane." As I had anticipated that there could be a travel connection with this ice breaker, I had put a stack of travel books at Jane's bedside, so participants might be able to pick up on this connection.

The participants initially appeared nervous, which I found appropriate. None of them had ever been to the simulation lab before and while they did not ask me any questions about what was going on, they did not really appear to know what to expect. Interestingly, questions about how the research would unfold were asked at the end of the lab time more than at the beginning.

I next led a discussion about palliative care by pulling pieces from the introduction to palliative Care course that were particularly relevant to the simulation case study I had created. Some participants had to reach "way back" to previous content to engage in the discussion, whereas for other participants, the palliative information was fresher and more recent. Some participants had taken the course almost three years earlier, while others had just taken it in the fall of the current academic year. Issues that I addressed in the discussion included the following: palliative care in Canada (history, principles, and approaches); fears and needs of the dying; and

the importance of communication. These were all aspects that are foundational knowledge in palliative care and would ensure that the participants had some solid content to work from when the lab began. I found that when I really stressed to the participants that I was not in any way evaluating their knowledge or "performance" of activities during the lab session, they seemed to noticeably relax. They also appeared to appreciated knowing that they were evaluating *me* and the approach I was developing for palliative care future education.

Meeting "Jane"

For each HFS session, I began by reading the case study about the simulated patient. For Simulation Lab 1, "Jane" was given a life story to help situate the lab. "Jane's" story was similar to other case studies that were used in the Introduction to Palliative Care course, and focused on the healthcare practioner's communication with the person who is dying, rather than medical interventions. Participants were given the following information, both verbally and as a handout that they could take notes on and consult later:

> *Jane is a 40-year-old woman who was diagnosed with metastatic breast cancer. She was admitted yesterday to the hospice unit where you are doing your student placement. Jane received her diagnosis two years ago and her life has been a real roller coaster since. Breast cancer has run in her family—her mom had it, her sister had it, so getting breast cancer wasn't a real surprise to Jane. However, the rest of her family members were diagnosed; some had surgery, some did chemo and radiation, and they all went into remission. Jane, however, has had both a radical mastectomy and numerous routes of chemo and radiation and her cancer did not go into remission, but rather it has spread to different parts of her body including her bones where it is causing her a great deal of pain.*

Jane has just been admitted to the hospice unit. While she was agreeable to the transfer from The Regional Health Sciences Centre, the transfer was done really fast and she's not exactly sure why she was transferred. Apparently someone tried to tell her what palliative care was all about but she's still a little confused as to what it all means. She's a bit concerned that she's been "ditched" by her oncologist and that this is "end of the road care" that she will be receiving.

Scenario 1: Speed-Dating "Jane"

Next the participants were given an opportunity to "speed-date" the patient. This activity allowed participants to engage briefly, see the mannequin up close, and ask her many questions in a quick period so that they could get to know one another.I modelled this interaction first. As I anticipated, no one wanted be the next person up, but Hayley took the initiative. Overall, the "speed-dating" worked well as students got a chance to ask a variety of questions and get to know Jane, who exhibited fear, sadness, protectiveness of her children, and a sense of humour. The participants appeared to be a bit shy. They did not ask any unusual questions or questions that I did not expect. I did not see them really taking any risks here. They also seemed a bit nervous, so I provided them with the option of going to the bedside to talk with Jane in dyads, if they thought that might help them feel more supported.

Scenario 2: "Am I Dying?"

To set the stage for the second scenario, participants were given the following information:

Jane has now been on hospice for 10 days—much longer than she ever hoped or anticipated. She had a couple of really good days when she felt stronger and her pain was well managed, but something has changed and she's been sleeping more and finds that her

pain is also manifesting differently—hurts on movement, finding it difficult to get around. Her appetite is very minimal, which is really stressing out her family. She is sleeping more and doesn't ask to see her children as often and finds their visits really difficult. It's late afternoon and you are about to head home but poke your head in on Jane. Her room is dark, there's no one around. You think she's asleep but she looks at you and asks, "Am I dying?"

Similar to the first scenario, participants took turns at Jane's bedside talking with her. This scenario evolved from Jane asking the students if she was dying. We had discussed this before the simulation piece of the lab started, and I had framed it in the context of communication and individual fears around dying. Participants had some good ideas of how this could be answered when they were discussing it with me, but with Jane, they seemed to be at a loss for words. It was interesting to see them deflect some of the more difficult questions Jane posed, such as: "What do you think happens when we die?" or "Are you scared to die?" The students would deflect these with more practical questions, like "How are your children handling this?" I saw lots of shocked looks on participants' faces after Jane asked them some "tough" questions that they didn't appear to have answers for. Kate shared: "I was stumped—completely stumped—I don't get stumped." Some students almost pretended they didn't hear the question at all, and instead steered the conversation to the travel books at her bedside! This was quite frustrating for me and it was hard not to jump in at times and take over, or call them to "task."

In between each of the scenarios we discussed what participants were learning about Jane and her situation. Sometimes the participants appeared to want to discuss how they were feeling about their interactions with Jane, as opposed to what they were learning about her. I needed to

redirect them back to the case study and let them know that there would be lots of opportunity during the debrief to talk about this. Participants Chloe, Lily, and Kendra expressed "this is harder than I thought," "I don't really know what to say to her!" "I thought I knew what to do," etc. I briefly validated these comments but wanted to keep on with the scenario, so I put them in my back pocket for the debrief that followed.

Scenario 3: Talking to her Children

For this third scenario, participants were given the following information:

Almost a week has passed since Jane asked you if she was dying. Jane's pain is now better controled, she is sleeping less and finds herself with a bit more energy. She and her family are anxiously anticipating a "trial discharge" home that is happening this afternoon. Plans are in place for a hospital bed for Jane's home, nursing support is in place, all her meds taken care of and Rob [her partner]has managed to figure out his work so he can be home for the first few days while Jane is there. You stop in to see Jane just before she leaves to wish her the best and are surprised when she asks you, "so, what do I tell my kids?"

This scenario was also one that we had discussed in the preamble, before the participants met Jane. It is also a topic explored in the Introduction to Palliative Care course that the students had attended. A number of the students were able to provide Jane with some basic ideas, like be honest, don't use euphemisms, etc. None of them seemed to appreciate how difficult a discussion like this could be. Kendra had a great idea when Jane told her she wanted to live until Christmas but her physician had told her she would only have a couple more months, at best. Kendra's idea was that they could make it Christmas in March/April, and create the "magic" of Christmas—

just not at Christmas time. Jane responded positively to this, and Kendra appeared to be visibly relieved.

One interesting moment that surprised me, but made sense later during the debrief, occurred when Jane asked one of the participants, Chloe, "What are the important moments in your life that your mom should be around for?" (looking for graduation, marriage, birthdays, Christmas, etc.). Chloe completely avoided the question, and moved on to talking about Jane going home. This caught me off guard, and I think "Jane" too, as she tried the same question again with the next student who gave a more anticipated answer. Chloe's avoidance of the question was better understood during the debriefing when she disclosed that her own mother had died when she was a young child.

The scenario ended on a positive note with Jane heading home on a "trial discharge" for a couple of days. At the end of the scenario, I modeled for the students how they could have responded to Jane's questions. I was quite frustrated and surprised by the participants' apparent inability to respond to Jane and also wanted them to see how it could potentially be done. It was funny to hear comments such as "Arghh! I should've said that!" and "I can't believe I forgot that…" in the background. I wanted them to have (hopefully) learned something to take with them from their time and effort in the simulation lab.

The Debrief: Patient "Jane"

The participants and I then debriefed the lab. The overall sense I got from the participants was that they were surprised at how much harder talking about "palliative care stuff" was than they had anticipated. I was worried that perhaps the scenario of Jane did not seem real to them, but that was not the feedback I received. They all seemed quite impressed with how "real" Jane

seemed, and how she could respond and interact with them in the moment. I wondered at the time if maybe they did not really engage with her in the way that I had hoped or anticipated, as the experience was unlike anything they had come across before. But as Hayley suggested, the experience was much different than reading it in a book.

During the debrief, my first question was, "so how was that?" One the participants, Chloe, looked at me and said, "My mom died of cancer when I was nine" (Jane's daughter in this scenario was also nine). Chloe was the student who didn't answer Jane's question about what kind of life events would you want your mother to be present at. Chloe then started crying, and most of the others in the group also started crying or were teary. I was grateful to have the skills to support someone at this moment. Chloe shared a little bit about her own grief story but interestingly, for a young woman in her 20s, she was more concerned about her reaction to this grief and how it might affect her future patients. She and the other group members agreed that this had been a safe environment for her to discover this response. "Imagine if Jane had been real! What would I have done then?" Chloe asked. The group talked about the need for a safe environment in which to practice their skills, to learn about themselves, and to reflect on their practice. Kate shared her response that, "this [simulation session] FINALLY helps me relate theory in practice and this is where I find it [undergraduate healthcare education] hard." The participants also agreed that the small simulation group size had been just right, and they wondered why they did not have these opportunities to use simulation and debrief their learning in their education. It was also good to watch them reach out and offer support to Chloe, who had shared her story. I thought this was good learning, too.

A particularly interesting point in the debriefing came when I asked the question: "Did we do what you expected we were going to do today?" The response was a resounding "no!" Most of the participants had thought that we were mainly going to sit and talk about palliative care. For example, Olivia shared that she thought we would talk about the roles of different professionals.

I debated asking my last question (which I created on the spot). This question was whether the simulation lab experience had been a good use of their time or not. In asking this question, I did not really expect that they would publicly say to me that it was not a good use of their time, but I was interested in their responses nonetheless. I got my answer, from their body language and the surprised looks on their faces. Chloe said, "Really? Do you really need to ask this?"—which was validating to me.

It was great to see that no one rushed out of the lab. Participants stuck around and talked among themselves. A couple of them asked questions about simulation and about what Jane could do. Interesting, no one asked where her voice came from, or who or what was behind the two-way mirror. The participants left saying that they were really interested in coming to a second lab, especially now that they knew what to expect.

After the participants left, I debriefed with my colleague, KJB, who had been operating the simulation equipment behind the scenes and was the voice of "Jane." It was helpful to talk about my frustrations with the students' inabilities to respond to Jane. I was concerned that maybe my scenarios were to blame, but it was reassuring to know that KJB, who has extensive experience in simulation, had reviewed the scenarios beforehand. Her observation was that the students were just "blown away" and surprised by the whole thing—by the environment and by

their lack of knowledge (what they thought they knew, but maybe did not know, about responding to the scenarios provided).

In Between the Simulation Labs

The conclusion of the first simulation labs left me interested in seeing who would show up for the next ones. The first set of interviews occurred approximately three weeks following the first simulation lab, and everyone who committed to being interviewed continued their participation. One participant completed the first simulation lab but did not return my emails requesting an interview. This participant was subsequently removed from the study. Another participant was unable to participate in the second simulation lab as she became ill. We remained in contact afterward, and she consented to me including her information in the study.

Simulation Lab #2: "Bianca"

Eight participants completed the second lab. One of the questions asked in the first interview was: "What would you like to see in the next simulation lab?" A number of them suggested they would like to work with an older person with dementia. This was not surprising, as at least four participants were taking a course on dementia at the time. Other participants, including Kate and Hayley, said "surprise me!" When asked if they might want to know the scenario ahead of time, they all declined. Hayley offered, "It seems more real if I don't know what's going to happen!" As both simulation labs with this scenario were quite similar, I will provide one overview of the two labs.

This second lab began with a "Thorns and Roses" sharing circle, where participants were invited to share (a) what they are most fearful about in regard to working with someone who is dying (a thorn), and (b) what they thought was the most important gift they had to offer someone

who is dying (a rose). It was interesting to note that participants appeared to find it easier to discuss what they were fearful of than to share what they thought they could offer as a gift. Popular fears were "saying the wrong thing" and "not knowing what to say." This was not surprising, as these fears had already been shared by many participants in the debriefs and the first interviews. When prompted to share their "roses," some of the gifts identified were: "I'm a good listener" (Kate and Kendra), "I have a good sense of humour" (Hayley), and "I advocate for those I'm caring for" (Chloe).

The education piece of this lab focused on Wolfelt's work on "companioning the dying" (Yoder, 2005), concentrating on what participants might be able to offer someone who is dying. Beyond skill components, the focus was on offerings such as time, presence, commitment, and listening. Participants were then introduced briefly to "Bianca," a 94-year-old woman who was recently admitted to the long-term care facility where the participants had just started doing a placement. Again, the participants were provided with an opportunity to "speed-date" "Bianca," and their actions demonstrated that they were feeling a bit more at ease, having already experienced the first lab.

Scenario 1: Speed-Dating Bianca

The next activity was speed-dating "Bianca." At this time, participants were provided with the following information:

> *It's one of your very first days of placement at the LTC. Your supervisor just wants you to "get a feel" from the residents who you will be caring for. She heard from some other staff that Bianca is having a tough time transitioning to LTC and thinks you can go in and "cheer her up."*

See Appendix E for an overview of "Bianca's" case. The students appeared to be more at ease this time with talking to the mannequin, as demonstrated by their eagerness to engage with her: Hayley and Kendra even risked joking with her! "Bianca" was created in response to the numerous requests for the opportunity to work with an older person who had dementia and was dying. I felt it was important to try and create a scenario that met the learning requests of participants, as they were being so generous with their time and energy.

Scenario 2: Spring Break

After the speed-dating activity, all the participants left the lab and moved out to the hallway to discuss what they had learned about Bianca. They were given the following information:

> *Before you went away for spring break, Bianca seemed to be settling into her new life in long-term care ok. She was still often sad and missing her home, but had made a number of new friends and while she was not a fan of the food, she loved the music program—especially the days when the university music students came. But when you return from break, she almost seems like an entirely different person. The report from your supervisor is that Bianca is sleeping more, not eating or drinking much, and hasn't been out of bed for almost five days.*

The purpose of having the participants leave the lab was to demonstrate a passing of time and to allow for a change in Bianca's appearance and room, to represent a decline in her clinical state. This was quite different from the first lab, as there was not such a distinct passage of time required for the scenario to seem realistic. The participants reported thinking that leaving the lab briefly was actually quite effective and provided them with an opportunity to reflect and brainstorm about what they might try next with other participants.

During this scenario, the phone rings and it is Erin, Bianca's close friend and former neighbour, who wants an update on Bianca's wellbeing. The phone ringing appeared to take the participants off-guard for a moment, and they required some prompting to answer it. When I suggested that someone should answer it, they realized this was part of the scenario and Chloe jumped up to answer it. I think they were somewhat surprised to learn that it was "Erin" on the line, and were not quite sure how to respond to the questions she was asking. This became a topic of discussion in the debrief. In the second run-through of this lab, when the phone rang, Hayley looked at me, I nodded, and she went up to answer it.

Scenario 3: MRSA (Methicillin-Resistant Staphylococcus Aureus) Outbreak!

Again the participants move into the hallway to discuss what they learned about Bianca. They were provided with the following information:

> *You missed placement for a few days because there was a MRSA (Methicillin-resistant Staphylococcus aureus) outbreak and you weren't allowed into the long-term care facility. When the outbreak was over and you returned to placement, you were really surprised to hear from your supervisor that "things had really changed" for Bianca and that she "wasn't doing well." You heard from one of the Personal Support Workers who works closely with Bianca that she thought Bianca was going to "pass soon."*

The participants were quite comfortable with the euphemisms expressed above and seemed to think that this was adequate information to guide them in the next scenario. They returned to the lab to find Bianca unresponsive, lying in bed, with her breathing and pulse rates changed to suggest that she is dying. While the participants were at bedside with Bianca, the phone rang and it was Erin again, who lives out of town but is catching a flight later this after-

noon to come see Bianca, and wants to know if she will "make it" to say good-bye before Bianca dies.

Participants reported that they found this particular phone call very difficult and were really unsure of what to say to Erin. One participant admitted to knowing she was lying to Erin when she reassured her (falsely) that Bianca was doing okay and would be there when she arrived. Some of the participants confessed to feeling uneasy and uncertain as to their role with Bianca actively dying right in front of them. I provided encouragement and offered suggestions as to how they might support Bianca initially, but then the participants took over. They observed one another and figured out different ways to provide support, such as through prayer, by reading to her, and reminiscing.

Bianca died during this scenario after all participants had a chance to be bedside with her. The death was designed to be very peaceful, because I knew that the majority of participants had no prior experience with death. Hayley shared, "I knew it was coming but I was still surprised when it happened." Chloe asked, "Is death always like that? I want mine to be that way."

Imagery Activity

Before engaging in the debrief, I led the participants in a short imagery activity involving a bright red backpack which held all the knowledge and gifts they could bring to their future work in palliative care. This linked the "Thorns and Roses" ice breaker—where the participants shared what gifts they had to offer a person who was dying, and what they were most fearful of in regard to supporting an individual who was dying—to the scenario with Bianca, and provided them with some opportunity to reflect before the debrief began. As some of the participants were

teary and emotionally moved or taken back by their first simulated experience with death, this also allowed them time to sit, reflect, and compose themselves.

Debriefing Resident "Bianca"

Following the imagery activity, participants moved their chairs into a circle and were provided with the opportunity to discuss their experiences in the lab and ask questions. These debriefs were audio recorded. The initial part of these debriefs were participant-driven, and participants were very interested in learning more about the dying process: what happens at the time of death physiologically, what is involved in their role as specific healthcare providers, who calls the family, what happens to the body after death, and so forth. We spent some time reviewing this, as I felt this was important information for the participants to know.

Summary

The purpose of this chapter was to provide a descriptive report of the simulation lab sessions and an introduction to each participant in the study. This chapter began with an overview of the simulation lab design framework that was implemented in this study. Next, an introductory baseline description of each of participant was provided, to assist the reader in better situating the participants' responses and experiences. Lastly, I offered a descriptive report of the two simulation lab scenarios in order to provide a more complete description of the research events in this study. The next chapter describes the data collected, and provides a detailed examination of the data analysis that led to the development of the study's grounded theory.

CHAPTER FIVE

DATA ANALYSIS AND THE DEVELOPMENT OF THE THREE Hs THEORY: HANDS, HEAD, AND HEART

Constructivist grounded theory methods enable researchers to understand "the core social or social psychological processes" related to a phenomenon (Morse, Stern, Corbin, Bowers, & Clarke, 2009, p. 14). The purpose of this grounded theory study was to examine the core experiences of undergraduate students as they explored the pedagogical uses of simulation technologies and how they may enhance and support interprofessional palliative care education at a small university in Ontario. This chapter reports the findings of this research and is organized into two main sections. First, using the grounded theory methods (GTM), I outline the theoretical rationale for each research action I took, and present the steps in the data analysis process. Second, I explore the core category and subcategories that emerged in the GTM analysis.

As a constructivist GTM researcher, I allowed the simultaneous data collection and analysis processes to unfold until I assessed saturation to be achieved. A constant comparison process was employed to guide coding, categorizing, and theoretical sampling. It was through attention to this process that the core category and substantive theory emerged. GTM produces a theory that is "grounded" and representative of the complexities and connections found in the experiences of the participants. The outcome of a GTM study is an emergent theory "from the data that accounts for the data" (Charmaz, 2008, p. 157).

Theoretical Sensitivity in Constructivist GTM

Theoretical sensitivity evolves for a GTM researcher. As Glaser and Strauss (1967) write, it involves the researcher's "personal and temperamental bent" (p. 46) and the ability to possess theoretical insights into the area being researched (Glaser, 1978). In an effort to increase my own theoretical sensitivity, I consulted with my supervisor, Dr. Lisa Korteweg, and colleague KJB. As colleagues invested in the study, both Korteweg and KJB assisted me in constructively centering myself and opening up to hear new ideas expressed by the undergraduate participants. They also acted as sounding boards as I made decisions throughout the research process, moving toward the development of the substantive theory.

Charmaz (2009) articulates that the goal of the CGT researcher is to strive to "enter the participants' liminal world of meaning and make their implicit assumptions explicit" (p. 131). She notes that: "Grounded theory in its constructivist version is a profoundly interactive method" (Charmaz, 2009, p. 137). This conceptual principle was particularly relevant in the way I proceeded in this study because I interacted with participants during the simulation labs, the group debriefings, in individual interviews, and via email and telephone calls. I also had a previous relationship with participants as the instructor of GERO 101, Introduction to Palliative Care, a course that they had all completed as part of their undergraduate education. This too contributed to an ongoing relationship with the participants.

The study was imbued with reflexive and interactive methods of data collection through each process stage: for clarification and interpretation during interviews, while developing the second simulation lab based on direct requests and feedback from the participants, and by adapting interview questions as new concepts emerged from the data. The findings of this research

reflect the emerging “co-construction of reality” (Charmaz, 2009, p. 137) and interactions between myself as the researcher and the undergraduate participants.

CGTM Data Collection

In CGTM, data collection and analysis are not linear processes but rather occur simultaneously and include collecting, coding, comparing, memoing, sorting, and writing (Charmaz, 2009). Data for this study was gathered in a variety of ways. Participants took part in two HFS labs over a period of four months, and each simulation lab was videotaped. Data was also collected in the debriefing sessions conducted directly after each simulation lab experience. And after each simulation lab, I also debriefed the experience with my colleague, KJB, who operated the simulation equipment and was the actor-voice of the mannequin during the labs. I took extensive notes during these debriefs with KJB. Being a seasoned HFS educator, her observations and commentary assisted in my own deliberative reflection process and field note-taking. KJB worked as a simulation education coordinator at the for two years before becoming a faculty member and has over eight years of simulation experience. Together we have collaborated on a number of different research projects and workshops using simulation in education for healthcare providers.

The second largest method of data collection was in-depth semi-structured interviews with the students following each lab session. These interviews were audio recorded so that I would not need to take notes during the interviews, as note-taking would impede the interactions and flow of dialogue with the participants. I did, however, write field notes following each interview. These field notes included notes on the participants' body expressions and mannerisms, repetitive phrases used, and other observations I made during, and/or after, the individual inter-

views. Within 24 hours of each interview, I replayed the audio tape, reflected on my field notes, and developed memos to help me to trace my thinking process as the theory began to emerge. These notes were also entered as data, following the CGTM approach.

The taped interviews were transcribed and transcriptions were examined closely to ensure typographical transcription accuracy. I did not officially seek verification or member-checking from participants as to the accuracy of the transcripts or emerging analysis; however, sometimes in subsequent interviews, I would ask for details or further explanation on a response or concept that had been shared in an earlier interview or simulation lab debrief. The simultaneous analysis and data collection of CGTM allowed for this revisiting of previous interviews to occur efficiently and with ease.

Data Analysis

The CGTM coding process of this research utilized five distinct but overlapping stages as the data analysis process moved through the data management, initial coding, and into the theoretical generation stages (see Figure 1 below). Within the CGTM approach, these stages translated into the processes inherent in initial coding, focused coding, axial coding, and finally theoretical coding. Throughout the data management phases of the research, the hallmark processes of CGTM analysis were simultaneous and evolving.

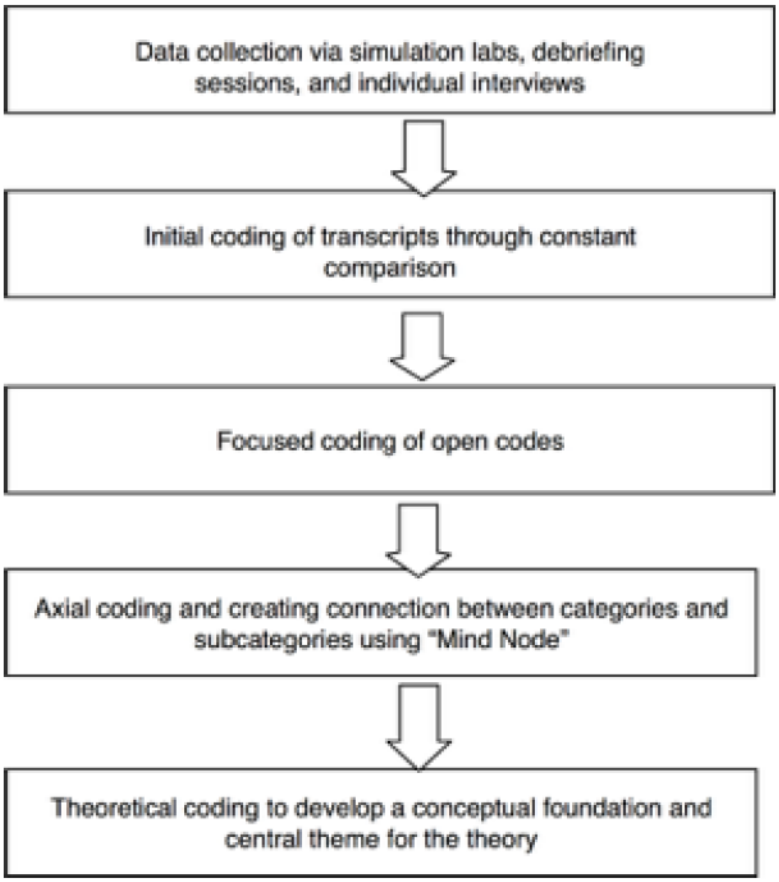


Figure 1. Example of coding process diagram

Figure 1 provides an overview of the coding process used to examine the forms of knowledge and processes of learning generated in the interprofessional palliative care simulation learning environment. This figure provides an outline of the "chain of evidence" that link the findings to the data and is one of the strengths of CGTM (Urquhart, 2013, p. 159).

Initial Coding. Data analysis began when the first simulation lab was completed. The chain of substantive theory development began with the initial coding of the first simulation lab, and continued until categories began to form well past the final group of interviews. Initial coding is based on the concept that Glaser (2005) calls "open coding," during which the researcher is re-

quired to remain "entirely open" to the data. *In vivo* coding was used as often as possible to preserve the participants' meanings of their views and actions.

First, I looked for patterns and events that surfaced from the data. Then I engaged in line-by-line coding to label and assign codes to identify incidents, actions, and events found in the transcribed data. My approach to tackle the data sets was to code the interview first and then consult and code the field notes I had taken. During this process of coding, I constantly compared codes, examined codes within categories, and compared incidents to incidents. "Incident" is the term given to describe recurring actions, experiences, or images that are then analyzed for underlying concepts to be coded (Birks & Mills, 2011). An example of an incident in this study was "Being Stumped," which reflected a time during the simulation lab when participants did not know what to do next. As I was manually performing this initial coding, I felt I developed an intimate connection with the data and could often hear the participants' voices and see their facial and body expressions as I worked through the primary source data. The participants' own words often served as the inspiration for particular codes.

Alongside the coding, I wrote memos articulating my analytical ideas about the emerging codes that served as a guide for further examination. In addition, I kept an informal research journal that collected my reflections about the research process and ideas that did not fit into the analytical memos. These journal reflections also helped to guide my development of the second simulation lab and subsequent interviews. The data was eventually coded when core variables were identified (Birks & Mills, 2011). As these core categories became evident, I moved to the second level of coding, the stage of selective or focused coding. Table 1 (below) offers an example of the initial coding that was done following the first simulation lab. In the first column of the

table, the "nugget" is a direct quotation taken from the transcription, while the second column provides the initial code that I assigned to that particular "nugget" of undergraduate student voice. There were over 200 initial codes identified during this analysis phase.

Table 1

Example of Initial Coding

"Nugget" from Simulation Debrief Transcript	Initial Open Code
... and then it changed as you got to know that person (mannequin) and a relationship formed. She asked me questions. She was personable.....	Forming relationships
... and in the back of your mind, you're doing role-play scenarios. And it's like, okay, how do I ask this? How do I go about doing this?	Imagining self in action
Sometimes we get to look at case studies, but it's not as personal. You're not there. Like you can't ask them questions and have them respond if you're reading a case study....	Looking versus doing
So just sitting here—I kind of see our little semi-circle as like an interprofessional meeting almost. We have previous knowledge from our courses but I think we are also learning off each other too.	Learning from one another
I was going to say the hands-on approach really puts all the theory into my brain.	Theory into practice

Focused Coding. In the interim stage of data analysis, focused coding (Charmaz, 2006)—also known as selective coding (Glaser, 1978) —involves a process of scaling up the codes into categories that relate to the proposed research problem (Urquhart, 2013). This level of data analysis was accomplished by grouping and regrouping concepts via constant comparison while considering theoretical sensitivity. The constant comparison was utilized to examine each data set with the proceeding data set. For example, the data set that emerged from the first simulation lab was compared with the data set from the first individual interviews. This allowed me to see if and how the participants' perspectives of the experience were altered with time. During this stage of data analysis, I began to see some key concepts emerging from the data and found I was doing a lot of grouping of initial codes. I decided to continue with the interviews and maintained the process of constant comparison of codes, developing categories, and memos that I wrote detailing the process.

CGTM encourages the use of data display to graphically represent the emerging theory (Charmaz, 2006). In this study, I found that using "Mind Node," an Apple application that allowed me to develop maps and visually create subcategories, was very helpful for this data processing. In this stage, CGTM methods suggest limiting the coding to the emergent categories. Given that I was not at the theoretical analysis stage yet, categories tended to encompass large ideas, such as "Thoughts about Simulation," "Thoughts about Self," etc. Subcategories were then developed from those larger idea "nodes." For example, under "Thoughts about Simulation," four subcategories emerged from the data: (a) Revealed Emotions, (b) Realism, (b) Debrief, and

d) Safe Place (to explore these issues). Each of these subcategories were then further enhanced by *in vivo* codes that assisted in articulating the meaning of the subcategories. Figure 3 is an example of a "Mind Node" graphic that I created during the focused coding stage, following the first set of interviews. Here I used all the data collected up until this point to begin to develop categories and subcategories.

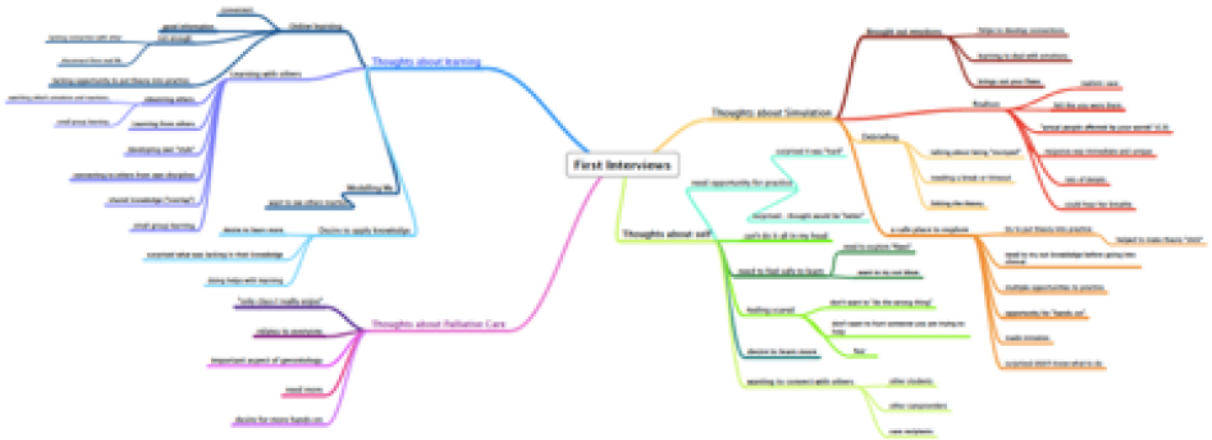


Figure 2. Mind Node example 1

Axial Coding. During the third phase of data analysis, I utilized axial coding as a way to re-assemble the data into new composite formations by creating connections between a category and its subcategories. Axial coding is used to relate categories to subcategories and realign the data obtained in the initial coding to the emerging analysis (Strauss & Corbin, 1998). To achieve this realignment, I utilized "Mind Node" because it allowed me to map out categories and subcategories, and manipulate the data to form new relationships and connections. Overall, I found graphic organizers such as diagrams very effective in providing me with the means to literally see connections, streamline data into organized chains. As the dissertation research question was

designed to explore three large and intersecting concepts—simulation, palliative care, and IPE—it was helpful to use these three pivotal terms as guides for the focused coding process. Through the axial coding, the three concepts offered the opportunity to discover multiple dimensions in the data (Urquhart, 2013) as they pertained to my central research question: What is the experience and impacts of the interprofessional palliative care simulation from the undergraduate healthcare learner's perspective?

Figure 3 is the "Mind Node" developed following the second round of interviews conducted with participants who completed the second simulation lab.

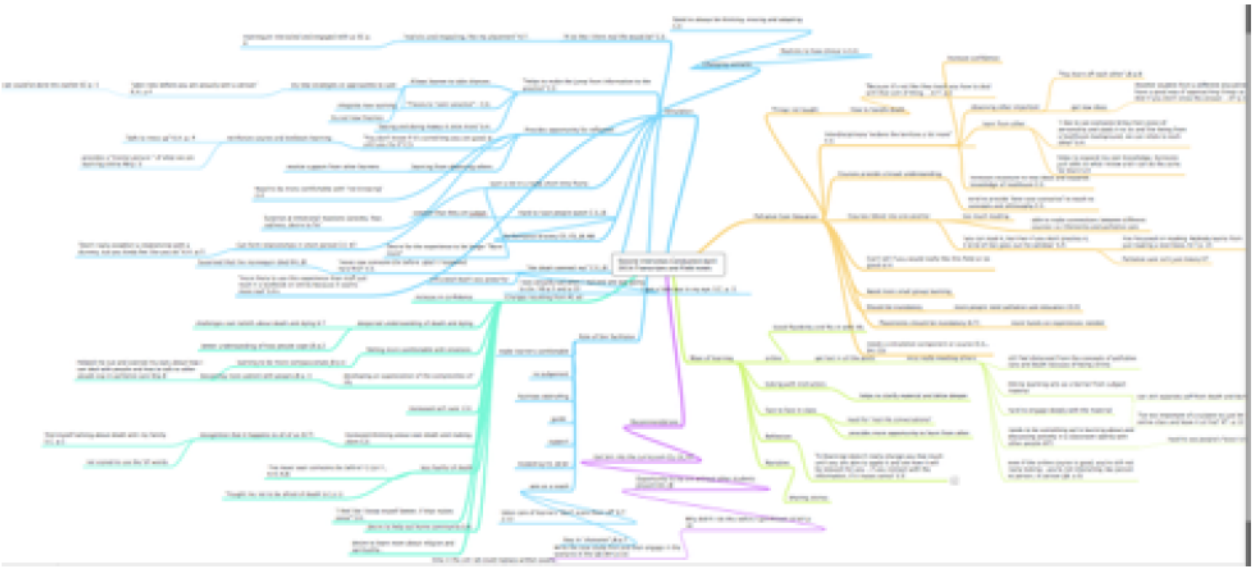


Figure 3. Mind Node 2 (Axial coding)

Figure 3 is an example of how I used Mind Node to explore the different relationships between concepts, codes, and categories that were emerging from the data. The Mind Node 2 graphic examined all the data from the simulation labs and the first two interviews. While the categories remain somewhat similar to those used in the focused coding stage (see Figure 2), the

subcategories tended to be more complex and involve different ideas. For example, in the category identified as "Simulation," there are now seven subcategories: (a) Changing Scenario, (b) Like Real Life, (c) Information into Practice, (d) Opportunity for Reflection, (e) Performance Anxiety, (f) The Death, and (g) Role of Simulation Facilitator. These subcategories were further flushed out using a mix of *in vivo* codes and focused codes. I felt it was important to continue to use the *in vivo* codes to maintain the integrity of the undergraduate student participants' voices, because those voices are the core of this research.

Theoretical Coding. Once the three types of substantive coding—open, focused, and axial—no longer revealed new information, I turned to theoretical coding to flush out connections and analyze relationships among the substantive codes or categories that provided the conceptual foundation and central theme for the theory. It was here, through the grouping of the focused and axial coding, that the theoretical codes began to emerge and link the focused and axial coding. Theoretical coding, the final stage of coding, weaves substantive codes together into a hypothesis, and theory begins to emerge at a more conceptual level (Walker & Myrick, 2006). Glaser (1978) describes this process of utilizing codes to "conceptualize how the substantive codes may relate to each other as a hypothesis to be integrated into a theory" (p. 72). This is in direct contrast to the previous types of coding, which served to fracture and cluster the data. Charmaz (2006) describes theoretical coding as integrative, lending form to the previously collected focused codes.

During this phase of theoretical coding, I continued to pay close attention to the voices of the undergraduate healthcare students because they are the core focus of the study. Figure 4 (Mind Node 3, below) became my visual vehicle or tool to weave together the substantive codes alongside the student voices, while working toward the emergent theory. In this visual graphic,

there is a new category, “Changes in Practice,” that I experimented with in order to encompass (new) data that emerged from the participants’ comments as they explored their own learning experiences and reflective thought processes throughout the study’s sessions.

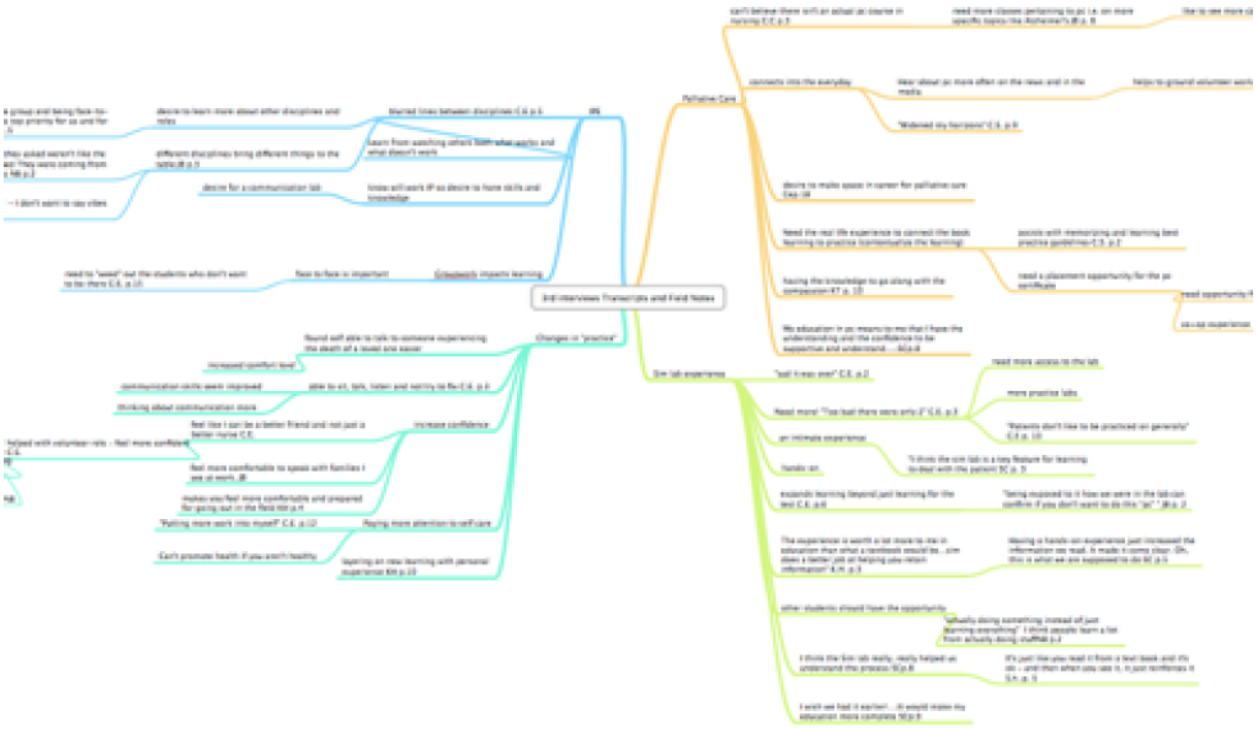


Figure 4. Mind Node 3 (theoretical coding for theory generation). (See Appendix F for a larger-view version of this figure)

Theoretical saturation was determined at the conclusion of the third set of the undergraduate students’ individual interviews. I determined that saturation was occurring when the participants were questioning and repeating themselves with statements such as, “I think I said this already.”

The ordering of the theoretical categories and determination of subcategories followed saturation. In an attempt to assure the relatedness and fit of the theoretical conceptualizing, I consulted closely with my supervisor to review the final results and the development of the theory. "Learning with Hands, Head, and Heart: Empowering Learners Safely" emerged as the core category, with three main categories and then ten subcategories.

The Core Category

"Learning with Hands, Head, and Heart: Empowering Learners Safely"

"Learning with Hands, Head, and Heart: Empowering Learners Safely" was the core category that emerged from this study. This category describes the core social-learning process of interprofessional healthcare undergraduate students converging together to learn palliative care scenarios (or case studies) through HFS technologies. There are three main categories that represent the different educational experiences that the participants engaged in: (a) the Simulation Experience, (b) "Dying to Know": Palliative Care Education, and (c) Learning Together as Interprofessional Education.

The core category, "Learning with Hands, Head, and Heart: Empowering Learners Safely" describes the pivotal concepts that were captured most frequently in the data (Glaser, 2001; Urquhart, 2013). A core category should have deep explanatory power and be related to multiple other categories presented in the data (Glaser, 1978). As Glaser (2001) describes: "The core category encompasses and summarizes the overall process and groups all the other categories together" (p. 203).

This category of the 3Hs—hands, head, and heart—emerged as the core category because throughout the study, every undergraduate student-participant shared in some way the perception

that they felt they were learning differently and more holistically in the interprofessional palliative care simulation lab experience than they had previously in other healthcare and palliative care courses. The core category captured the essence of the student participants' learning experience when they converged together to engage in interprofessional palliative care case studies, using simulation as a social cognition process.

The centrality of this core category is evidenced by participants' comments. Sarah noted that: "This felt like it was real life, real dying, and I had to show what I had learned." Here she demonstrated how she was impacted by how real the simulation scenario felt to her, and that it resonated to the point where she felt she needed to rise to the occasion and provide care for the mannequin. Chloe explained that, "It gave me space to think...think about what I was doing, why I did it and how I felt about it." She further explained: "It's like a light bulb kind of went off. I was like, okay, I'm learning about this and now I'm seeing it, I'm doing it, I'm feeling it. It made it stick a lot more."

Relating to what they were learning appeared to be a priority to the participants in this study, as Chloe articulated (above). She, along with the other participants, were looking for a way to connect what they were learning online and in class to the bedside people who they would be responsible to care for one day. Lily commented:

> "This whole thing has been really *hands-on and eye-opening*. I'm very like a practical learner and I found it really, really—what's the word? I want to say structured in a way, to be able to sit there and be with a patient and talking to them and it's simulated, *so I don't have the pressure* of being with someone who's actually dying and saying the wrong thing. *Yet it still felt real.* And I felt things as I was learning. I found it really helped me to

open my eyes up to *what I think I know in my head but don't really when it comes down to it."* [emphasis added]

This quote from Lily emphasizes the 3Hs in this core category. She described the experience as hands-on (hands), that she was learning (head), and that it felt real (heart). For her, the connection of the 3Hs was an important piece of her learning.

Jenna noted that:

> "Being in the real-life situation of someone dying in front of you is different than just reading about it, right? Like you might think you can deal with it, but then if you're actually in front of somebody who's dying you might not be able to. And you might not know how you will feel about it. I'm learning lots about reading about it (palliative care) but actually being there is different. I think it would be better."

In this quote, Jenna is recognizing different types of learning and how this impacts both her competence and confidence levels. Like other participants in this study, she shared that while she could learn about palliative care by reading material in an online course, she felt she had missed out on an important piece of learning.

Kate shared that:

> "It's a safe place for you to explore how you're actually going to be around clients. Being in the sim lab and having it just—all my flaws just get pulled right out, and feeling the way I did, which is important for me to see what those are. It should be mandatory before I step into a hospital."

Here, Kate shared that not only did she learn about palliative care in the simulation lab, but she also had an opportunity to learn about herself and improve her practice as a future healthcare

provider. As she felt that this was such a deep learning opportunity, she thought it should become a mandatory piece of interprofessional palliative care education.

Abby shared the following:

> "And being in that sim lab, it was like you are part of someone's story, someone's journey through palliative care. It just gives you that—it gives you a bit of an experience with that sort of thing, a chance to try out what you are learning, to use your hands even though it's simulated and not real. It gives you the sense of being there for someone."

She continued in another interview to share:

> "I realize it's a lot harder than I thought it would be...I think its just really helped in a positive way to change how I interact with palliative care in general...it reinforced the things we are learning in our textbooks."

Here Abby speaks to the desire that many participants in this study shared: to have more "hands-on" opportunities to experience what they were learning in their textbooks, and opportunities to integrate theory into practice. Abby, in the above quote, also takes the "hands-on" learning idea to a deeper level as she perceives her interactions with the mannequin in the simulation lab as providing her with a sense of knowing what it is like to provide care for an individual.

Kendra explained:

> "What I want from education is actually not just to have more information, because I don't feel that makes much of a difference like how much you know. It doesn't have any relevance. *It* [education] *doesn't really change you that much until you are able to apply it and see how it will be relevant for you* [in practice]—if you can connect with the information." [emphasis added]

Like Abby, Kendra was also looking for integration of learning into her practice as a future healthcare provider. She was looking for her education to have relevance for her, and thought that if she was provided with an opportunity to connect with the information with her hands, head, and heart, that this might happen.

Olivia shared: "It was changing. It was a changing scenario that was—that was good because it was a lot like real life because you never—you can't come in with preconceived ideas. You really can't." In this quote, she shared a thought that was common to a number of participants in this study: the idea that the learning needed could not be stagnant, and needed to be moving and changing because that would be what she encountered and would need to know how to respond to in her future workplace.

Hayley explained that:

> "It [the sim lab] has a comfort level as well as being a safe place where you can use trial and error; and you can learn from other people in the lab or from the instructor or professor or whoever is doing it and reflect and think about how it made you feel."

In this quote Hayley described how the safe environment of the simulation lab allowed her to learn with her heart, alongside learning from others who were also participating in the lab.

The core category, "Learning with Hands, Head, and Heart: Empowering Learners Safely," emerged in this study as a set of social-cognition processes that together emphasized and culminated into the essence of the student-participants' experience when they converged together to actively learn and debrief about interprofessional palliative care using simulation. This core category is supported by three main categories—simulation technologies, palliative care, and IPE——and related subcategories, that will be explored next.

Three Main Categories and Ten Subcategories

The three main categories are representative of the three fields of undergraduate health-care education that the student-participants engaged in for this research: (a) Simulation Technologies, (b) Palliative Care Education, and (c) Interprofessional Education. These fields became categories because they were the foundations of the study and they were the prevalent concrete focal points of the undergraduate students' experience.

Simulation Technologies

The experience with simulation technologies for case studies or scenarios in clinical palliative care was the most striking learning difference for the majority of the participants in the study. The striking repetition of simulation as a pivotal experience in the student data may be partly due to the novelty of these technologies. Four subcategories were identified in the data that described the participants' experience and interpretation of their experience with simulation as a pedagogical strategy for learning palliative care. These subcategories are: (a) Fidelity, (b) Relationship building, (c) A safe place to learn, and (d) The role of the simulation facilitator. These are mapped out in the following figure.

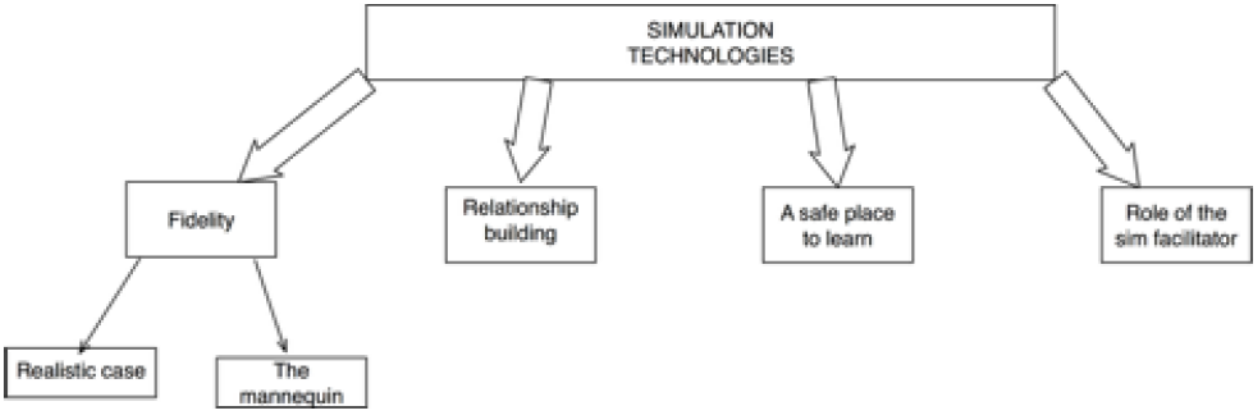


Figure 5. Main category 1: Simulation experience and its four subcategories

Fidelity. The first subcategory identified is "Fidelity." Within this subcategory, there are two additional keywords identified: "Realistic case" and "The mannequin." Fidelity was used by the students to describe the capabilities of the mannequin, its abilities, and its actions: how the mannequin breathes, talks, responds, and feels to touch, what interventions you can perform on it as a person-patient, etc. For palliative care education, fidelity needs to include the virtual environment and the orchestrated scenario. There needs to be something that the learner can see, hear, or learn about that they can grab onto that makes them think, "This resonates with me," or "I've seen this before," or "This looks like where I work." Realistic sensations, sounds, effects, and interactions in the palliative case scenarios were very important to the students. This was evidenced by statements such as, "It looked like she was breathing and then how you had someone talking for her as well, that was really cool" (Sarah). And when asked what, if anything, seemed real or impactful about the simulation, Chloe responded:

> Patient emotion and feedback from her [the mannequin]—that was real. I think the whole setting—it looks like a hospital. You kind of think you're actually there. It's not just like a textbook, you know. And the fact that she's breathing... and you can hear and see it!

To me as an educator and researcher, not only was Chloe communicating her excitement about how real or impactful the simulation lab was for her, she was also expressing her strong desire to get out into clinical practice and have an opportunity to begin to apply what she was learning. She appeared to be able to imagine herself as a future healthcare provider in the simulation lab in a way that reading a textbook could not provide. This was also echoed by Abby in the following quote, when she spoke of a need to experience what she was learning in the online class, and recognized that as a healthcare provider she will play a role in the life stories of the people in her care.

> … being in that sim lab, it was like you are part of someone's story, someone's journey through palliative care. It just gives you that—it gives you a bit of an experience with that sort of thing, even though it's simulated and not real. It gives you the sense of being there for someone.

Realistic case. The first theme in the subcategory of "Fidelity" is "Realistic case." There was strong agreement during the debriefing/focus group sessions following the simulation experiences that participants thought the case scenarios around which the simulation experiences were built seemed "real." They shared that they thought they were similar to case studies they might have encountered in their course work (although, this may have been due to the fact that I was the instructor for their palliative care course). Despite not having had any actual palliative care experience, a number of participants commented that the simulation was so realistic that

"you felt like you were there" (Jenna) and that the experience was, "A lot like I think real life would be" (Kendra). Other aspects of fidelity mentioned by the participants included the fictional details written into the scenario case as well as the multimodal environment created for the scenario. Participants revealed that they paid attention to details, such as the mannequin's clothing and appearance, and the numerous objects that were placed in her hospice/hospital room such as books, pictures, photos, flowers, or plants, to cue them into learning more about the mannequin as a full person (e.g., with family and a life outside of the palliative clinical setting). Olivia spoke to this realism when she shared the following response:

> I think with the simulation lab, the lab that we have here was perfect. It was a hospital bed. It had pictures of her kids, books, things that were important to her. It had everything that a hospital room [would have], where I'd expect I might meet Jane. I think the sim lab was set up to feel real.

The mannequin. The second theme in the subcategory "Fidelity" is "The mannequin." While there was agreement that the mannequin looked like a mannequin and not a human being, hearing her breathe and her immediate and unique responses in conversation made her "believable." This was important to the students because in their future work with patients and their families there will be, as Kate stated, "actual people affected by your words." Kendra found that for her, the realistic experience was attached to the idea that "the mannequin interacted and engaged with us." Abby, who had had a placement which had included the death of someone in her care, found her interactions with the mannequin "realistic and impacting, like my placement." And Kendra summarized her thinking about the realism of the mannequin by sharing: "By the end, I thought she (the mannequin) was a real patient."

Relationship building. The second sub-category under Simulation Technologies is "Relationship building." One piece of the simulation that is challenging to make realistic is the timeframe (Jeffries & Batin, 2012), particularly in a palliative care scenario when you are attempting to show the dying process over a shortened period of time. From the perspective of the participants in this study, however, when the above-mentioned pieces were in place (fidelity, the mannequin, opportunity for relationship building), the actual duration of time did not seem to matter much. Participants Hayley, Kate, Jenna, and Lily appeared to agree that they could "learn a lot in a really short time frame;" furthermore, Kate and Abby shared that they could also "form relationships (with the mannequin/character) in a short period of time." This feeling or perception of forming relationships with the mannequin was hard to reckon or understand for some participants, like Hayley who shared "… I don't really establish a relationship with a dummy, but you kinda feel like you do." Kate offered after the first simulation lab that "Jane was really interesting. I wanted to learn more about her." And following the second simulation lab she shared: "I was also surprised at how much I liked Bianca. I really liked her. I liked the character buildup. Like I actually started to form a relationship with this person that's not actually real...." Kendra echoed this sentiment in saying that: "I felt like I could have been talking to my grandma, she [Bianca] felt like I knew her." Each simulation lab ended with the group agreeing that while they found that they had learned a lot in a short timeframe, they would have liked the experience to be longer - they "want[ed] more."

A safe place to learn. The third theme under the subcategory of Simulation Technologies is "A Safe Place to Learn." This theme is well-supported in the literature and is a driving force for promoting the use of simulation in healthcare education. The participants in this research

were not only thinking that learning via simulation was safe for "real" recipients of care, but also that the simulation lab provided them with a safe space in which to practice their learning and integrate their knowledge.

Olivia described that within the context of her course work, she found herself "practicing in her mind" what a clinical experience might be like. She further expanded, "I think I'm really missing out on a "hands-on" piece in my education and I really wish I'd had this before this sim lab. I'm graduating soon and really needed this." She appeared to find that her brief time in the simulation lab provided her a much-needed opportunity to practice what she was learning. Hayley agreed with this sentiment, sharing that her time in the simulation lab allowed her to "take risks before you are actually with a person." These risks included trying out new theories or skills that she had read about in her texts or heard about in class. The opportunity to "test drive" new knowledge and skills before working with real people seemed to really resonate with participants. Hayley also commented that it was great to have an opportunity to feel "safe to mess up. It was okay to learn and screw up. I wasn't really hurting someone." The participants appeared to be very sensitive to the vulnerability of individuals who are dying and their families, and spoke of how they wanted to be sure that their actions were not harmful. This was evident in a statement from Chloe:

> I never want my actions to hurt a patient. But what if I'm not ready? I need to work and practice my skills and be safe. I want to know that my practicing...my inexperience....my not knowing...won't hurt someone. I feel safer learning in sim.

As future care providers, it came across very clearly from participants such as Chloe that they want to feel prepared and secure in their knowledge and skills before they are challenged

with clinical practice out in the field setting, such as in a hospital. This was also echoed by Abby and Kate in the following statements, as they shared a desire to help and a fear of their inexperience causing someone they are supposed to be caring for to be hurt. Abby shared:

> In placement, I'm sometimes worried I'm going to do the wrong thing and hurt someone! But the sim lab was a safe environment because you can test drive everything you need to without worrying what the actual reaction is going to be. You aren't going to hurt a real person!

Kate explained:

> It's learning the theory piece and then you have the safe environment in sim; and then you are put into the situation where you have actual people that can be affected by your words. So this [sim] seems like it would be the logical intermediate between the two. I can't imagine having to go from theory right into a hospital.

Olivia, who was in the process of completing her degree, described the need for the safe environment she found in the simulation lab and her desire for more. She shared that she was surprised by how one simulation lab experience could influence her learning, and this strengthened her resolve for more of this type of education:

> We're dealing with vulnerable people and it's important that we're learning in a safe environment how to handle those situations before we're exposed to truly vulnerable people. So I just think of how much that one three-hour period affected me and what I thought I knew. I could imagine getting to do that at least once a week for four years!

Lily agreed that the safe simulation experience served to prepare her for her future clinical work:

> The lab is where I really try to explore everything, like I will go through every step- practice it, so that when I get to that person's room or I'm dealing with that situation, I'm prepared for it. Hopefully that's the place you learn. If you need a reminder, that's the place to be reminded.

Role of simulation facilitator. I was surprised that my role as a facilitator during the simulation labs appeared in the data as an integral factor in the undergraduate students' learning. I did not anticipate this as playing such a large role in their learning and had originally considered it to be adjunct to the simulation experience. While I anticipated that my role as facilitator might be similar to what the participants described it, as a guide or coach, I did not expect it to resonate so strongly for them. Kate offered: "We needed you there. You made sure that things went okay. You were supportive." In simulation, a facilitator is often present to make the learners feel as comfortable and safe as possible, and to pay attention to the flow of the scenario. Abby offered that the simulation facilitator "needs to take care of the learners and …[doesn't] scare them off. Let them make mistakes and learn from them." Participants appeared to appreciate that there did not appear to be any judgment on my part during the simulation, and shared that the provision of support in their learning was more important than any sort of evaluation. Sarah shared: "It was good that we weren't being marked. I felt safer. I tried different things than I might have if we were marked." That being said, however, the issue of marks and evaluation did come up in the interviews (by Kate, Kendra, and Hayley). These participants offered that simulation could play a role in evaluation because it should be integrated into course work or as a stand-alone course in palliative care.

In the second offering of the first simulation lab, I felt compelled to demonstrate to the participants how I might interact with the mannequin. I did this role-modeling because I wanted to normalize the interactions with the mannequin, and I wanted the experience to be more participatory by all of us, rather than only the participants doing the palliative care-giving while I watched as a "detached expert." It was important to model interprofessional healthcare by engaging with the patient as much as the students. I also wanted to demonstrate that the time commitment of the students to the study was immediately worthwhile by observing me, as a healthcare practitioner, in action alongside the students. Kate commented:

> One of my favourite parts was watching you with Bianca. It was so good to see what you would do after we had all tried. It made me think that there's lots I have to learn but that I'm doing some things okay, too.

This modeling was well-received and mentioned as an important part of the simulation experience. Kendra shared, "When I watched you with Jane it gave me some ideas what to do next time. I'm excited for the second lab already!" Modeling came up frequently in the first set of interviews, so I made sure that I incorporated it in both of the second simulation labs. Participants found it important for the facilitator to maintain the fidelity of the experience, or as Jenna described it: "stay in character." Sarah echoed this, saying "You [the facilitator] talked to the dummy like she was a person so we didn't feel stupid doing it."

Abby also reported that my simulation facilitator role contributed to her feelings of a safe learning environment in the simulation lab:

That felt safe because, first of all, in the back of your mind you know that it is a simulation. Second, you know that your prof or the person running the sim is right there so if you find something to be triggering, there's immediate support.

“Dying to Know”: Palliative Care Education

Palliative care education was the second main category that emerged from the data. This was also representative of the second field of education foundational to the study. I made it a requirement of the study that student-participants needed to have completed the half-credit course GERO 101 Introduction to Palliative Care, which I regularly teach. This requirement was in place to ensure that participants would bring at least a rudimentary understanding and knowledge of palliative care to the experience. Three students had taken the course at least two years prior to their involvement in the study, and the majority of the remaining participants had taken at least one other course within the palliative care certificate program (e.g., Psychosocial Palliative Care and/or Living with Grief and Loss), alongside a variety of other gerontology courses. Participants reported having had favourable experiences thus far in their palliative care education before entering the simulation experience. Also, participants reported that they felt they could relate to the topic of palliative care as they appreciated that dying is an experience that they, and those they love, will inevitably encounter. Being able to make this connection between academic learning and “real life” is something that I have heard repeatedly as important and resonating strongly with undergraduate learners. This was evident in this study as students offered comments such as: “Palliative care is an important aspect of gerontology” (Chloe) and it “relates to everyone” (Jenna). Olivia even shared that her palliative course was “the only class I really enjoy[ed],” explaining that she felt the material was authentic and had direct relevance to her life.

Along with the common response of relating to the topics of death and dying, participants across the group communicated a strong desire for more palliative care education. While a cou-

ple of students (Chloe and Kendra) requested more specialized or technical information (e.g., a desire to learn more about pediatric palliative care or specific counselling techniques used in palliative care) or more information about religion and spirituality in palliative care (Jenna and Abby), participants unanimously requested more opportunity for what they termed "hands-on" learning in palliative care. For these participants, this learning could occur using simulation or as a placement. Olivia recognized that it was hard to take her learning in palliative care to the "next level" without being able to practice her skills in a real-life setting. As discussed in the simulation section, participants appeared to think that simulation was a good "intermediary" learning stage between course learning and interactions with real people, and that the opportunity to "test drive" their knowledge and learning was important.

Three subcategories were identified within the "Dying to Know: Palliative Care Education" category. These subcategories focused on the perceptions of the participants and how their education in palliative care impacted them. The subcategories are: (a) Deepened understanding of dying and death, (b) Decrease in fear of dying, and (c) Increased comfort level around dying and death. The figure below depicts these subcategories.

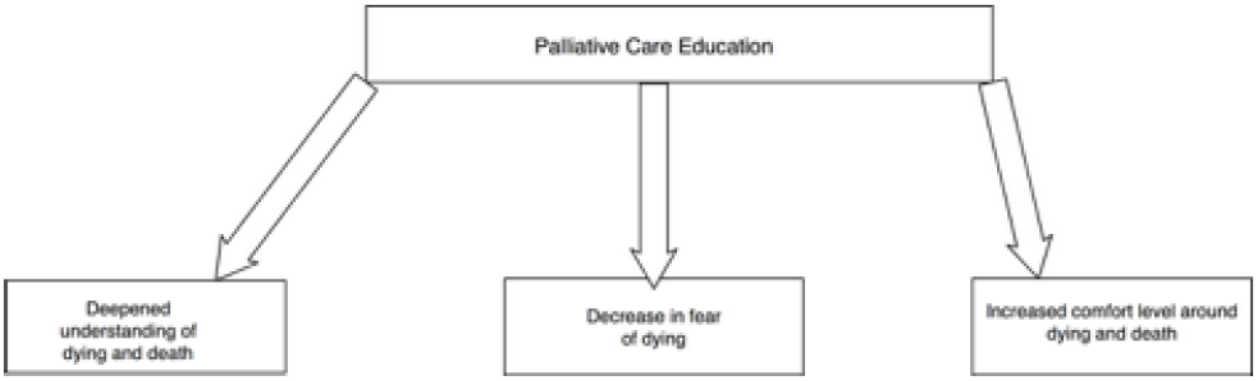


Figure 6: Dying to know: Palliative care education

Deepened understanding of dying and death. Participants reported that their education in palliative care has, as Abby suggested, helped them to "develop an appreciation of the complexities of life by helping [them] to recognize that it [dying and death] happens to all of us." She further shared that her education "challenges my own beliefs about death and dying."

Some students were able to make connections with their academic learning in palliative care to the "everyday." Kate shared that she was hearing palliative care more often on the news and in the media, and that this alongside her course work "increased my thinking about my own death and making plans." The idea of making plans for their own dying was echoed by other participants; for example Olivia shared that she was now finding herself talking about death with her family.

Participants found that their experiences in the simulation lab helped them to develop an appreciation of the skills, knowledge, and confidence required to provide a palliative approach to caring for an individual who is dying. Jenna shared:

> The experience with the sim lab kind of opened my eyes to see what anyone working with someone dying experiences. Being in the real-life situation of someone dying in front of you is different than reading about it, right? Like you might think you can deal with it, but then if you're actually in front of somebody who's dying you might not be able to...you need a chance to figure that out!

Sarah appeared to share a similar outlook. She commented that not only was she surprised to find it is hard to talk to a person who is dying, but she developed an appreciation that it seemed to be worth the effort:

> It's really hard to talk to a person who is dying. Much harder than I thought. I didn't get that before. I'm surprised I found it so hard. I need more practice. Talking about dying is tough but so worthwhile.

Lily agreed with these sentiments and added that she thought it was easier to talk to a mannequin than it would be to talk to an individual who was dying. She shared the following:

> Because it was scary enough to be sitting there with a mannequin and try to say like—how do you feel about death and dying?....Because if I were to go in there and there was just someone sitting there and we were supposed to talk to them because they're a patient, I think that would be really hard. I don't know if I'd be able to do it...

Decreased fear of dying. Participants also reported that their education in palliative care contributed to them to having a decreased fear of working with people who are dying. As the majority of the participants did not have any previous experience with dying and death, this initial fear was not grounded in any previous experiences. None of the participants had ever seen someone die before. As Hayley shared: "I don't see death. I'm not around it. People who are dying are somewhere else." But as Olivia articulated, her experiences of palliative care education "taught me not to be afraid of death." Abby shared:

> I'm not scared to use the "D" words. I can say "dying" and "dead." My dad doesn't like it when I do but I say them anyway! I'm comfortable with it and think they are important words to use.

Statements like these demonstrate a decreased level of fear of the language used to convey meanings of death and dying. And while there was a reported decrease in the fear of dying,

this seemed to have been replaced by a positive respect for the work of palliative care. As Abby said:

> So, it (the simulated death) just hit really hard. It was like—wow, like this is what I'm going to be dealing with in the field. It prepares you for what you are up against...you know it's not real, but it feels real to you.

Jenna identified how the experience with simulation enhanced her death education: "I've gained more knowledge of what to expect with death and I don't think I'm so scared anymore. Knowing what to expect has helped."

Increased comfort level around dying and death. Perhaps this could be closely linked to a perceived decrease in fear of dying, as one might be able to make a case that if there is a decreased fear of dying, people might report an increased level of comfort around dying and death. (It is interesting to note, however, that in my experiences with seasoned palliative care providers and in my master's work, I've learned that some people who are comfortable about dying and death and have had much exposure to it continue to be very fearful of their own dying and death.) The participants in this study reported feeling more confident in their ability to support someone who is dying. This was evident in a quote from Olivia: "My education in palliative care means to me that I have the understanding and the confidence to be supportive and understand." Jenna echoed this, stating that: "It has given me a better understanding of how people cope." Participants shared that they felt they had improved interactions with others and that their palliative care education had contributed to them developing a greater comfort level with emotions, in others and in themselves. Olivia also shared, "It helped me out and opened my eyes about how I can deal with people and how to talk to other people, especially in palliative care." Abby stated that

while she had always considered herself to be a compassionate individual, "I now also have the knowledge to go along with the compassion." Kate offered that learning about caring and self-care in palliative care courses had encouraged her to take better care of herself as a future professional caregiver, and that she has found herself with a "desire to make space in my career for palliative care." She further shared that her experiences in the simulation lab and with palliative care education were impacting her personally:

> It helps we with my own death, I know that comes up sometimes, just because—it's not crazy. We're all going to die. Everybody dies. I recently had a friend and her very close friend passed away recently. So, being able to talk to her even felt better to me. She was having a lot of struggles; and I listened to her. I was much better with her thing because of the sim lab than I would have been otherwise—even taking the classes. I thought about the sim lab while talking with her.

Kendra offered that her education had "widened [her] horizons" and was also very useful in helping her be a better palliative care volunteer. Jenna described herself as "becoming more patient with people" and Chloe shared: "Learning about palliative care makes me feel like I know myself better, if that makes sense." Chloe also expressed a strong desire to help out her community at home and bring what she had learned in her palliative care education courses back to her home community, with the goal of improving the delivery of palliative care there.

Interprofessional Education

The third type of education that the participants were exposed to in this study was interprofessional education. Palliative care education at the research site's university is delivered as interprofessional and, as a result, this is the delivery context in which the participants were used

to having their palliative care education courses. While participants appreciated the opportunity to work closely with students from other disciplines, this did not appear to be a novel experience. Three themes emerged from the data: (a) Learning from others, (b) Learning with others, and (c) Learning about others.

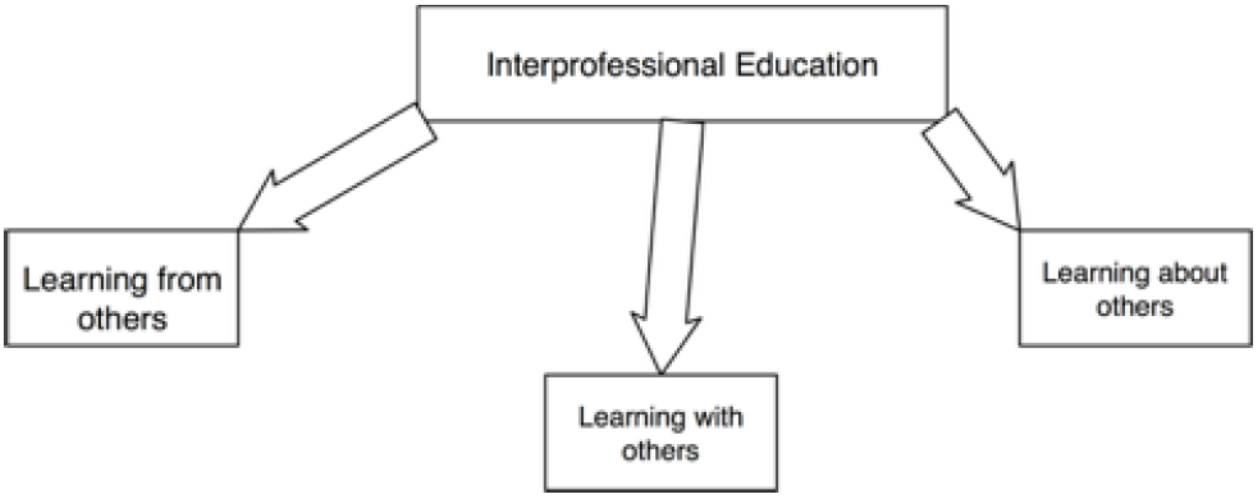


Figure 7. Interprofessional education

Learning from others. Some key ideas came from the data that fit with IPE philosophy. All participants seemed to all agree that they learned from one another in this experience. They spoke of learning from observing others in action and from hearing their thoughts about what was happening. They also recognized that they were able to share ideas. As Olivia described, "You just work off their—I don't want to say vibes—but I think that's kinda what it was." Chloe spoke about learning from others' emotional reactions to situations as well. She shared: "When I saw someone else cry, I knew it was okay too."

Kate shared that she was able to "learn from watching others, both what works and what doesn't work" and she, Olivia, and Hayley recognized that this would assist them in developing their "style" as a future healthcare professional. Hayley stated: "I don't know what my professional style will be yet but it helps watching other people. Sometimes I learn what I don't want to be like."

While participants recognized that an important part of their learning came from observing others, they also spoke of this as being a challenge for them, knowing they were being watched. Kendra and Jenna shared that it was hard knowing they were being watched, and they worried what others might think about what they were doing or saying. There was a concern about being judged by others. Kate, Kendra, Jenna, and Sarah all described a feeling of what I might label as "performance anxiety." Kate offered: "It's hard to do your stuff with other students watching. I don't know why, but it is. It shouldn't be." Kendra shared:

> The first time I went up I felt like everyone was staring at me. At first I was more worried about them watching than what I had to do. Then Jane started talking to me and I focused on her and that helped.

This anxiety and concern about what others might think of them appeared to decrease in the second simulation lab and subsequent interviews.

The participants all seemed to recognize that group work was an integral part of their healthcare education, despite most of them expressing a strong dislike for it, resulting from negative course experiences. Kate expressed her group work frustration in the following way: "We need to "weed" out the students who don't want to be there [in healthcare programs]. They make learning harder for the rest of us."

There was a strong recognition from all participants that their group work experiences have an impact on their learning, either negatively or positively. Hayley commented: "If all my group experiences could have been like this [the simulation lab] then I'd be okay." There was also group consensus that having face-to-face opportunities for group work is particularly important. Kendra supported this idea when she stated, "I think working as a group and being face-to-face is probably the top priority for us and for our education."

Learning with others. Participants also spoke of the need to build relationships in their education experiences and that IPE could facilitate this need, formally and structurally. Abby shared:

> I kinda feel like I know this group [the participants in the study] better than I really do. We've shared something big—this kind of learning together is important. We were all nervous, scared even, and now we've been through it together.

The need for relationship-building or group bonding for comfort and familiarity was evident not only in the students' comments but also in their actions outside of the actual simulation sessions. The majority of students were unfamiliar with one another before the study, but I heard them making plans for coffee meetings and offering car rides to the next simulation lab. There appeared to have been some bonding and a team feeling that may have developed from this shared experience. Kate articulated this when she declared: "I wish all group learning was like this! We aren't all perfect by any means but we want to be here….and learn!" Kate, Chloe, and Hayley all recognized that they will most likely work in interprofessional situations in their careers, so they had a clear desire to hone their skills and knowledge in this professional competen-

cy. Abby shared: “I’m going to work as part of a healthcare team— regardless where I end up. It makes sense that I learn how to be a part of a team now.”

Learning about others. Participants expressed a desire to learn more about other disciplines and roles and appeared to recognize that, as Jenna articulated, “different disciplines bring different things to the table.” This multidisciplinary set of perspectives or habits of care by different healthcare professions was also recognized by Sarah, who shared, “The questions they asked weren’t like the questions I asked. They were coming from different angles.” And while the differences were recognized by some, Kate also noted that there were “blurred lines between disciplines” and that there was some “overlap” present. I received the impression that there was keen interest in this group to learn more about the different healthcare disciplines, and that they would be interested in pursuing this interprofessional inquiry beyond this particular study.

Summary

This chapter reported the findings of the simulation lab sessions and how those findings were obtained. First, a theoretical description of each action using the grounded theory method was examined, and then the steps that were followed to conduct the analysis were explained. Second, the core category of the new theory, “Learning with Hands, Head, and Heart: Empowering Learners Safely,”was introduced alongside the three main categories and ten subcategories that emerged from this study. This analysis was then detailed with the participants’ responses, in order to lay the foundation for explaining the substantive theory that emerged from this research. Chapter 6 will examine more closely the full “3H” theory.

CHAPTER SIX

THE NEW THEORY: LEARNING WITH HANDS, HEAD, AND HEART

The goal of grounded theory research is to identify an explanatory core category that becomes a substantive theory (Glaser, 1978). As theoretical coding in this research study progressed, one core category kept emerging and repeating as the core category from the data: "Learning with Hands, Head, and Heart: Empowering Learners Safely." This chapter describes the development of the new substantive 3H theory in response to the central questions guiding this research: *What forms of knowledge and processes of learning are generated in an interprofessional palliative care simulation learning environment? And what is the nature of the interprofessional palliative care simulation experience from the learner's perspective?* These questions are explored in this study as a process of interprofessional undergraduate learner participation in two palliative care simulation labs. In the final phase of any constructivist grounded theory study, the researcher is tasked with integrating the emerging theory with literature in the field. As Charmaz (2006) states, "When you theorize, you reach down to fundamentals, up to abstractions, and probe into experience" (p. 135). In this study, the new substantive grounded theory was constructed inductively and deductively and as such is "an interpretive portrayal of the studied world rather than an exact picture of it" (Charmaz, 2006, p. 6).

The purpose of this chapter is to situate the study's substantive 3H theory, "Learning with Hands, Head, and Heart," within the context of relevant literature, and supported by the data

from the study. This newly developed theory is a substantive theory because it aims to address a studied phenomenon: the undergraduate interprofessional palliative care learning experience using high fidelity simulation (HFS) (Birks & Mills, 2011) and does not endeavor to offer explanations outside the existing area of inquiry (Ng & Hase, 2008). The substantive 3H theory pertains only to the phenomena studied and does not claim to generalize beyond that (Urquhart, 2013). Birk and Mills (2011) identify three criteria necessary for the integration of a grounded theory and utilized in this study: 1) an identified core category, "Learning with the Hands, Head, and Heart" 2) theoretical saturation of the major categories as outlined in chapter 5 of this dissertation and 3) an accumulated bank of analytical memos such as those used in the data analysis of this research (p.115).

This chapter presents an overview of the 3H theory explains how the core category, subcategories, and key structures integrated together to ground it. The chapter proceeds by outlining the sections that correspond to the components of the 3H model found in Figure 8 (below). The chapter begins with an overview of the entire model/theory and is followed by a discussion of the core component of the theory—the learner—and three forms of education intersecting in this study: simulation, palliative care education, and IPE. Next, the key structures of the 3H theory (hands, head, and heart), and the key ideas and subcategories that emerged from the data, are examined. Following, the examination of the theory, the discussion focusses on larger implications, analyses, and significances, extending findings from the more micro levels of the study's data. This section proceeds with an individual level of analysis discussing implications for today's "millennial" undergraduate student, followed by an organizational-level analysis of higher edu-

cation, and concluding with a societal level of analysis, examining Canada and Canadian culture coming to terms with dying and death.

In constructive grounded theory methods, analysis ends when an abstract theory emerges that can account for the scope and depth of the assembled data, answer the research questions, and describe substantially the social process. In the final stage of analysis, I conducted a complete review of the entire data set, listening to the interviews and debrief /focus groups again, and reviewing field notes and memos while keeping the categories at the forefront of my thinking. While listening to the interviews and debrief/focus groups, I asked myself repeatedly: Is the participant talking about this category? Does this theory account for what this participant is sharing with me? Is this data related to the study questions? Does this interpretation fit within the proposed theory?

Next, I worked to depict the new theory in a diagram format or visual representation that would account for the milieu in which the research was conducted. This diagramming process forced me to stay grounded in the data as I continually asked questions, analyzed, and looked to some of the established literature on interprofessional palliative care education, simulation, and higher education. This rigourous process was evident when early drafts of diagrams of the new theory are compared with later drafts. Upon comparison, I could detect the emerging categories as they surfaced and merged with other categories to represent the participants' voices, depicting their experiences in the simulation lab.

Overview of the New Substantive Theory: Learning with Hands, Head, and Heart

The substantive new theory, "Learning with Hands, Head, and Heart," offers a snapshot of the experiences of interprofessional undergraduate learners as they converge to participate in

voluntary palliative care simulation labs. This theory, when viewed as a whole, attempts to capture the student experience as it pertains to their learning processes, their perceptions of learning, the impacts on learning, and the meanings associated with learning that resulted from their participation in the study. “Learning with Hands, Head, and Heart” emerged as the central category, capturing the essence of the participants’ experiences when they converged as an interprofessional group to learn together about palliative care through simulation technologies. It articulates the need for a more experiential pedagogical approach to interprofessional palliative care education. The model, while seemingly quite simplistic, is meaningful as it emerged from the data as an expression of the student voice in this study representing their desire and need to learn more experientially about the process, impacts, and improvement of care for individuals who are dying and their families. Figure 8 provides a visual representation of the 3H theory that will be used to guide the discussion in this chapter.

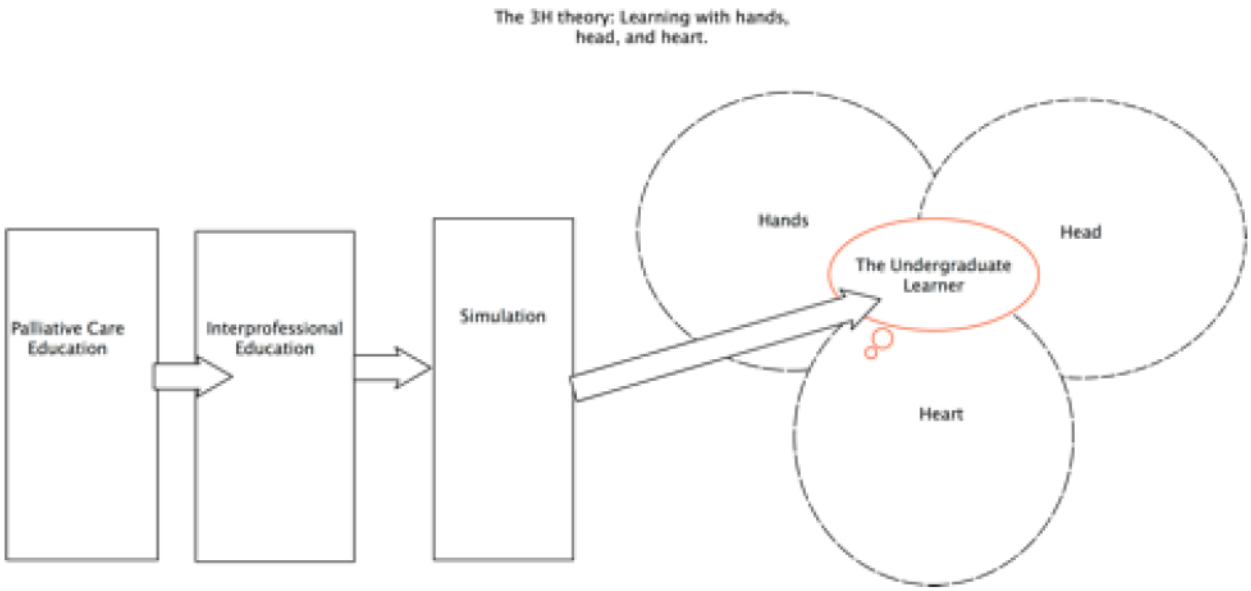


Figure 8. The 3H theory: Learning with hands, head, and heart.

Description of the Model

In this model, the three fields of undergraduate healthcare education are considered the foundational building blocks for the learner as they develop and extend their knowledge as a professional practitioner capable of caring for individuals who are dying and their families. Palliative care is the first block as this primary field is what grounds the new healthcare provider in the theory and principles of a palliative philosophy of care. The next building block discipline is interprofessional education, a field instrumental for the delivery of a palliative approach to care. The final building block is the field of simulation education which allows the undergraduate learner to begin to integrate and apply their learning of palliative care and death of patients in a safe and realistic environment. Arrows point towards the undergraduate learner and point upwards to represent the growth and development in their professional learning. The 3Hs of the model—Hands, Head, and Heart— are part of the undergraduate healthcare learner within the venn diagram. They are parts of the student that are nurtured, challenged and developed as they move through their education as future palliative care providers. The 3Hs represent three critical spheres of professional-practitioner-praxis learning: the 'head' represents learning the field and its disciplinary theories; the 'hands' represent applications of the disciplinary theories into the practice of interprofessional palliative care using simulation, and the 'heart' is learning how to be present, caring, in relation, and attentive to the special existential needs of the dying and their families. The 3Hs are connected both to each other and to the learner to signify that it is very difficult to learn a palliative approach to care without these elements and spheres of knowing all

working together. This is similar to Kolb's adult experiential learning theory that provides a a cyclical model of learning: Do (concrete experience), Observe (reflective observation), Think (abstract conceptualization), and Plan (active experimentation) (Kolb, 1984).

When viewed as a whole, the 3H theory attempts to capture the impact of these simulation interactions on each student's learning: the processes, perceptions, impacts, and meanings that each student attributed to their interprofessional palliative care simulation education experience. The 3H theory is useful when planning and developing interprofessional palliative care education for undergraduate students. It offers an explanation of the need for strong foundational knowledge of interprofessional palliative care linked with an opportunity for practical application of this learning in the safe environment of the simulation lab, before the student engages with human patients. This theory offers important considerations for educators who are working to prepare and move students from the preparatory training stage into the workforce as effective professional healthcare providers. The 3H theory emerged from the voices of the student participants who recognized that they need more from their academic preparation in interprofessional palliative care than the current dominant learning model that concentrates on the "Head" or focuses on the intellectual or mental capacities of healthcare. As a result of experiencing the dying and death scenarios in the simulation lab, the participants recognized that they lack major skills and complex knowledge in the emotional and experiential domains of palliative care. The participants acknowledge that these should be important requirements of their palliative care education. They recognize that they need this knowledge and experience before they can compassionately and competently assume responsibility as professional caregivers of Canadians who are dying and their families. The 3H theory provides a strong argument for a balanced

effective set of educational experiences that incorporate the 3Hs of hands, head and heart to ensure the development of compassionate, knowledgable and competent palliative care providers.

The 3Hs model is reflective also of transformative sustainability learning (Sipos, Battisti and Grimm, 2006) who utilize the organizing principles of the head, hands and the heart to facilitate education that results in profound changes in the knowledge, skills and attitudes of learners pertaining to issues of ecological, social and economic justice. Sipos, Battisti and Grimm (2006) support the advancement of the head, hands and heart as an "organizing principle for cognitive, psychomotor and affective learning" (p.69). While the 3Hs substantive theory has not been formally recognized within interdisciplinary palliative care education it has been recognized as foundational for excellent palliative care practice (Cooper, 2006). Cooper (2006) links the head to excellent clinical practice, the hands to organizational process and the heart to patient focus. As the 3H's are recognized as being integral to the delivery of palliative care it makes sense that the 3Hs substantive theory is important to interdisciplinary palliative care education.

The Three Forms of Education: Simulation, Palliative Care, and Interprofessional

Grounding in the new theory diagram (Figure 8) are the three fields of healthcare education that the participants were exposed to in this research: simulation, palliative care education, and IPE. These disciplines of healthcare education are layered like bricks in the diagram representing foundations of knowledge required for the undergraduate student to possess as they develop as a palliative care provider. The participants in this study needed to have some knowledge of palliative care and IPE before they could participate in the simulation lab. This knowledge was required to prepare them to engage with the mannequin and have some understanding how

to work and interact with students from other health care disciplines. Simulation is the third level because of simulation technologies' unique ability to simulate a real professional or clinical situation, and to give participants professional role-play opportunities in decision-making and patient communication. It allowed the students to take their learning and knowledge from the other two bricks and begin to testdrive it in a safe, simulated environment. The study's findings all closely relate to the undergraduate learners' perceptions and experiences with the different types of healthcare education that were examined in detail in Chapter 5. When viewed as a whole, the 3H theory attempts to capture the impact of these interactions on each student's learning: the processes, perceptions, impacts, and meanings that each student attributed to their experience. The 3H theory will be useful when planning and developing interprofessional education for undergraduate students. It offers an explanation of the need for strong foundational knowledge of interprofessional palliative care with an opportunity for practical application of this learning in a safe environment such as simulation before the student engages with human patients. As educators consider the student moving out into the workforce as a professional healthcare provider, this theory, developed from the voices of the student participants in this study, advocates for learning that incorporates the 3Hs; hands, head and heart in the development of a compassionate, knowledgeable and competent future provider of a palliative approach to care.

The Key Structures of the 3H Theory: Hands, Head, and Heart

The key structures of the new theory are the "hands, head, and heart." Each "H" was critical in contributing to the overall learning experience of undergraduate interprofessional palliative care students. These key structures are important to the stories that the participants related

about how they would like to learn in their undergraduate programs, and will be examined in relation to each research question. In this model, the key structures are integrated into the arrowhead alongside the student as they are key components of the students as human beings. In this study, the participants clearly expressed that they wanted their learning experiences to not only impact their heads, but their hearts and hands, so they would be better prepared to care for individuals who are dying and their families.

Reflecting the palliative approach to the delivery of healthcare that concentrates on the whole individual—the physical body, psycho-social processes, and spiritual needs (Wee & Hughes, 2007)—the key structures of the 3H theory also adhere to the undergraduate learner as a whole person. Most often, students decide to enter into healthcare education programs because they see themselves as caring individuals and want to become caregiver professionals. Our education and healthcare systems need to nurture these caring attitudes because those receiving the care from these future healthcare providers will be expecting to be cared for in a compassionate manner (Branch, Kern, Haidet, Weissmann, Gracey, & Mitchell, 2001; Kortes-Miller, 2013). Branch et al. (2001) note that healthcare educators need to be reminded that the ways that students are treated in their educational milieu, in their undergraduate healthcare programs, often result in the behaviours or practices that students employ in the treatment of patients in their professional care. Mount and Kearney (2003) describe the w/holistic approach that needs to be role-modeled to students in undergraduate healthcare programs: "...to be a caregiver-healer involves the capacity to be particularly present to the patient and to one's own inner processes" (p. 657). This preferred stance was echoed by participants in this study when they shared that they needed to learn much more on how to become whole caregivers, attentive to their own and their patients'

psychosocial and spiritual needs, rather than focusing solely on the "what" of palliative care. Out of this deep, shared stance on the role of healthcare professionals emerged the 3H theory: hands, head, and heart.

Hands. The "Hands" structure of the 3H theory symbolizes the activity that is involved in providing palliative care with one's hands and body. It involves taking the intellectual knowledge (the head) and applying it (the hands) through practice. Some of the participants described this principle as putting theory into practice, also known as "praxis" (Freire, 2003). In this study, praxis involves Freire's (2003) cycle of experience, reflection, and action, or what undergraduate healthcare students are learning from lectures in the classroom, in textbooks, and online, and bringing this accumulated knowledge (praxis) to the bedside of an individual who is dying (simulated or real). Freire described praxis as "the action and reflection of men and women upon their world in order to transform it" (p. 79). The desired transformation in this study is ultimately better care for individuals who are dying and their families through the development of well-educated, caring, and compassionate healthcare providers. Throughout the study, there was a strong desire expressed by participants for more praxis, to deepen their understanding of and ability to provide palliative care. Praxis is a component of lifelong learning and can play an important role in undergraduate healthcare students' developing conceptions of their role in providing interprofessional palliative care.

Head. The "Head" structure in the 3H theory symbolizes the body of knowledge that is palliative care. It involves developing a mental understanding of the philosophies and principles of this particular and specialized care, alongside the specific disciplinary competencies, models, and theories required to care for individuals who are dying and their families. It is an important

component for developing competency and The "Head" represents the intellectual knowledge needed to provide a competent palliative approach to care.

Heart. The "Heart" structure in the 3H theory represents the whole personhood that is brought into the caring relationship between the healthcare professional and patient. It is the recognition that there is a "real" person behind the healthcare professional persona, be they a nurse, social worker, physician, or other healthcare provider. This key structure takes into account that the dying patient is a full person, with a circle of loved ones and a wide range of emotions, in the same way that a healthcare professional is. The heart focus is beneficial for the undergraduate palliative care student to learn because they need to engage with their heart in healthcare practice, particularly in palliative or end-of-life care. This preparation can assist the students to rehearse heart-based realities that the patients are contending with: existential feelings, state of personal death acceptance, and preparation for end-of-life. If the students do not rehearse these fundamental issues in death care then they will be impeded in becoming the caring and competent healthcare providers that patients and families need and want them to be.

The delivery of any healthcare is rooted in interpersonal relations (Duffy, Gordon, Whelan, Cole-Kelly, & Frankel, 2004; Wee & Hughes, 2007); however, it must be stated that in the delivery of palliative and end-of-life care, the interpersonal relations often go even deeper between patient and healthcare provider. Self-awareness, another heart-related skill, is a critical piece for interprofessional learning for effective healthcare communication and collaboration (Duffy et al., 2004; Illingworth & Chelvanayagum, 2008; Leinonen & Jarvela, 2006). And professional reflection (see Dewey, 1933; Fenwick, 2003; Schön, 1987), another contemplative heart-related mode of professional thinking, is viewed as the path to much-needed self-awareness

(Wee & Hughes, 2007) in healthcare practice. The heart played a substantial role during the debriefing periods of the simulation lab sessions and interviews because the participants were striving to engage deeply with the simulated patient's feelings, state of death acceptance, and preparation for end of life as well as connect their learning to what was occurring in the lab. The heart structure of the 3H theory represents all of the lab interactions and data collected on each of the participants, connecting their learning with their personal experiences, fears, and hopes of death and palliative care practice.

Together, these three key structures of the 3H theory combine to recommend a holistic learning experience that recognizes the intellect (head), the practical (hands), and the emotions (heart) of the caregiver role that these future palliative care professionals wanted in their undergraduate education.

The Undergraduate Student

In the middle of the venn diagram is the undergraduate student. The student is an undergraduate in a healthcare program who has completed the Gerontology 101 Introduction to Palliative Care course but has not yet had the opportunity to apply their knowledge or personalize their understandings of palliative care outside of the classroom. The majority of the student-participants agreed to participate in this study without even knowing what simulation was, despite the communicated explanation in the information letter, email of invitation, and numerous offers to answer any questions. When I questioned participants (repeatedly) on why they had decided to join this study and participate in the simulation sessions, responses included the following: "I wanted to participate in a research study" (Jenna); "I was curious" (Lily); and, "It was you asking" (Kate and Hayley). All of the participants wanted to interact with the simulation's mannequin-patient and try the role-plays in the designed scenarios, and almost all were motivated enough to return a second time for the second set of simulation sessions. The motivation to participate appeared to be located in the undergraduate students' strong desire to learn more about palliative care and expand their education, knowledge, and application experience in this healthcare area. As I was familiar to all the participants, having previously taught their Introduction to Palliative Care course (GERO101), I believe there was a relationship or significant level of trust that supported the students' motivation to participate.

Educators in undergraduate education wrestle with very difficult questions: what really works in higher education, for whom, how, when, and with what outcomes (Tashiro, Hung, &

Martin, 2011)? As digital media technologies become increasingly prevalent in daily life, educators are faced with needing to examine whether the emerging "digital" generation of undergraduate learners have different needs in their approaches to learning, and whether our current methods for delivery of education are well-designed for these new learners (Dobson & Boyce, 2011; Prensky, 2001).

Developing an understanding and appreciation of the mindset and learning preferences of the millennial generation is a critical component for any education planning, course development, and curriculum delivery, because to be successful in higher education means that instructors have to address a generation that craves stimulation and prefers experiential learning. This research recognizes that the millennial university learner, especially the "digital native" (sic), needs greater experiential participation in their professional school studies. Simulation promises effective rehearsals and translations of classroom theory into simulated, *in situ* professional practices. As an exercise in experiential learning, this is arguably one of the most significant areas for current research and practice in adult education (Michelson, 1996a) and undergraduate education.

In higher education, there is an assumption that high-quality learning is not only about the marks that a student achieves but also about the "nature of the knowledge, skills and conceptual understanding that students have acquired during their degree course" (Entwistle, 2010, p. 19). The approaches that undergraduate students take with their academic work have been described as either "deep or surface learning" (Kerr, 2011, p. 4). The experiential nature of HFS simulation is a deep approach because it encompasses critical thought, interpretation of a scenario, integration of new knowledge and skills, and the transferring of knowledge to a new situation.

High fidelity simulation requires an approach to education that is student-centred and involves active learning and problem-based learning, which have been shown to result in positive learning outcomes (Kerr, 2011; Weimer, 2010).

As stated in Chapter 1, this research is meant to contribute to an understanding of the comprehensive delivery of interprofessional palliative care education, to help improve the conditions of professional care for the dying and their families in Canada. It is my strong belief that undergraduate students should become leaders in their own educational processes, and that education in palliative care is critically important for undergraduate healthcare students, not only in their future career development but also in their everyday personal lives. My focus on the undergraduate healthcare student as the best point of intervention to improve palliative care, and on participants' views and ideas on what is meaningful healthcare learning in *death* care, has guided this study and situated the student voice at the top of the new theory.

Answering the Research Questions

The following section examines the 3H theory through the four key constructs—1) learning processes, 2) perceptions of learning, 3) impact on learning, and 4) meanings associated with learning—that all pertained to answering the research questions guiding this study: *What forms of knowledge and processes of learning are generated in an interprofessional palliative care simulation learning environment? And what is the nature of the interprofessional palliative care simulation experience from the learner's perspective?*

Meaning Associated with Learning

The following figure depicts the first subcategory of the 3H theory; The 3H Learning Process. It identifies the three categories that emerged from the data.

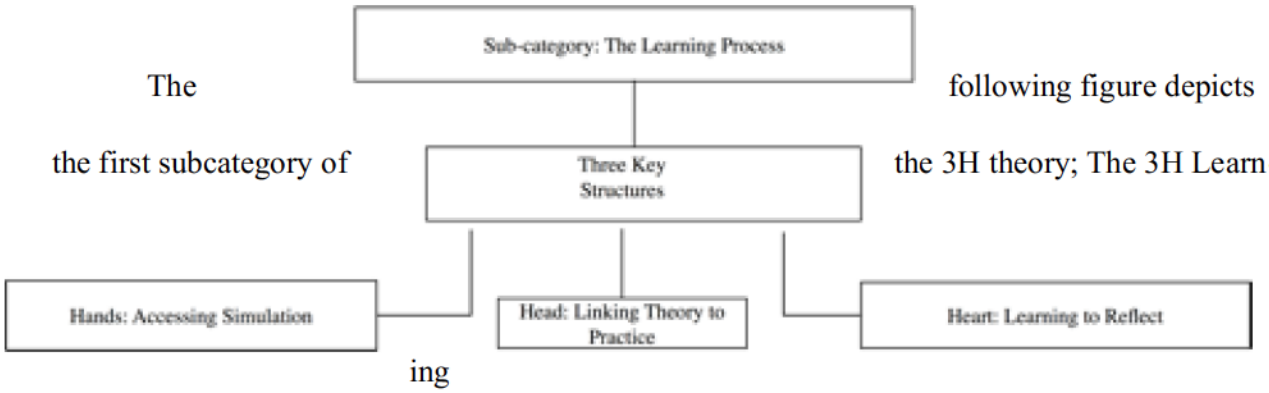


Figure 9. The 3H learning processes: Head, heart and hands

Hands: Accessing Simulation in Interprofessional Undergraduate Palliative Care Education

Simulation is increasingly adopted in healthcare education and training due to shortages of clinical space and placement opportunities for students, and as needs grow for more interprofessional health care education opportunities (Kardong-Edgre, Willhaus, Bennett, & Hayden, 2012). The value of simulation as a teaching method is becoming increasingly noted in the healthcare education literature (Gillan, Jeong, & van der Riet, 2013; Morse, 2012; Parker & Myrick, 2011; Sperlazza, & Cangelosi, 2009). Firstly, simulations are adaptable for multiple learning strategies (Issenberg, McGaghie, Petrusa, Gordon, & Scalese, 2005). For example, Fountain and Alfred (2009) found in their study that students with a strong preference for solitary

learning and students with a strong preference for social learning were both satisfied with simulation experiences. The social learners compared, listened, networked, and interacted with others, while the solitary learners observed the actions of others, reflected, and worked at their own pace (Fountain & Alfred, 2009). I intentionally designed multiple learning strategies within the simulation lab experiences: problem-based learning, modeling, observation, collaboration and reflection, in order to meet a variety of learning preferences that I anticipated among the participants.

There was resounding agreement from all participants that their experience with simulation had been a positive one, and that they wanted more time with simulation labs of clinical scenarios. This positive response was repeated consistently throughout the debriefing focus groups and individual interviews; for this reason the subcategory of "Hands (Accessing Simulation In Interprofessional Undergraduate Palliative Care Education)" was developed.

This subcategory is supported by Abdo and Ravert's (2006) research, which found that 95% of student participants perceived the simulation experience to be valuable, and it echoes the findings of a nursing study by Feingold, Calaluce, and Callen (2004), which examined student satisfaction with simulation learning. In my research study, Kate shared that she was "sad it was over" and that she felt it was "too bad there were only two" [simulation labs]. Olivia offered that she thinks "the sim lab is a key feature for learning to deal with the patient," and that she wished "we had it earlier!… It would make my education more complete." Abby asked, "Why didn't I do this before I got thrown in?" (in to her clinical placement in long-term care). Both Abby and Olivia's comments support the findings of Abdo and Ravert (2006), who found that students felt that elements experienced in the simulation would be transferable to a clinical setting. Kate shared in her last interview that she was so excited by the HFS process that she felt called to ac-

tion: “It sucks that it is over [the study and simulation labs]. I just feel like I need to advocate for it more—for the palliative care to be integrated into healthcare education with sim.”

The participants not only unanimously agreed that it is important for undergraduate health courses to provide simulation as a part of their professional learning, but also offered recommendations for how HFS might be used to facilitate their undergraduate preparation. Hayley and Jenna thought it would be beneficial to have an opportunity to try simulation without other students present, to reduce the potential for performance anxiety and to focus entirely on their individual skill development. Hayley also offered that similar to assignments in her other palliative care courses, it might be a worthwhile learning experience for students to write the case study first, before engaging in the lab’s scenario. And three participants wondered if there could be a role for simulation labs to replace written exams in palliative care education, reiterating their strongly expressed belief that palliative care education requires more action and deliberative practice, rather than regurgitating information from passive content learning.

Olivia’s concluding statement from her final interview demonstrates the student perception of the impact that simulation labs can have on undergraduate learning, and her desire for more access: “It’s something [HFS simulation] that I’ll remember from this year as a highlight. And I could’ve used more!”

Despite the literature providing strong support for the integration of simulation into educational curricula, few undergraduate healthcare programs outside of nursing actually provide integrated simulation learning opportunities for undergraduate students. And fewer still have attempted to explore how the use of simulation might be utilized to effectively meet programs’ learning objectives (Gaba, 2004; Ziv, Ben-David, & Ziv, 2003).

Head: Linking Theory to Practice

Education in palliative care needs to have a strong integration of theory and it's clinical application as required curriculum in caring for individuals who are dying. It also requires occasions for clinical practice to develop skills, alongside having opportunities for learners to share their experiences in collaboration with those facilitating the training and learning (Hopkins & Field, 1997; Murray Frommelt, 2003; Wee & Hughes, 2007). While this could be considered a "Hands" role, part of the learning process for the students was to link the theory to practice cognitively, in there "head". There was clear agreement from all participants in this study that simulation was a useful pedagogical strategy to "help to make theory stick" (as Jenna poetically described it) and that the simulation scenario was successful in reaffirming course and textbook learning from previous courses, such as the GERO 101 Introduction to Palliative Care. Sarah offered that the simulation lab "links the mental picture of what we are learning online to a real [life] scenario." Her observation was similar to one Hayley shared, that "the experience is worth a lot more to me in education than what a textbook would be…sim does a better job at helping you retain information." This complimentary connection of theory (textbook information) and practice (simulation lab application) also appealed to Olivia, who shared: "Having a hands-on experience just increased the information we read. It made it come clear. Oh, this is what we are supposed to do." Kate added that using simulation would assist her in expanding her learning "beyond just learning for the test," allowing her to work with more confidence in a setting that utilizes a palliative approach. Kendra suggested that she was looking for less information in her education, and more opportunity for applying her learning when she stated:

> What I want from education is actually not just to have more information, because I don't feel that makes much of a difference like how much you know. It doesn't have any relevance. It doesn't really change you that much until you are able to apply it and see how it will be relevant for you—if you can connect with the information.

The above participant quotes demonstrate a critical disconnect between what undergraduate students are learning online, in lectures, and in textbooks, and how they want to attain deep learning directly in a clinical setting or for successful transfer and integration into one. As Morgan, Cleave-Hogg, DeSousa, and Lam-McCulloch (2006) recognize, bridging theoretical knowledge and its practical applications has been a serious challenge historically for most professions and professionals, including undergraduate healthcare students. This challenge for professional learning is not a new one caused by increased integration of online learning in higher education (Weller, 2004). In this study, it was clear that HFS offered participants an opportunity to practice their theoretical knowledge without risk of injury or malpractice to real-life patients, and minimal risk (e.g., of taking a chance and failing) to the learner. The participants in this study regularly expressed a need to gain more experience applying their theoretical knowledge to palliative care situations, while their responses to the simulation labs demonstrated that they found the HFS sessions very effective for this practical application learning, a missed or absent component in their higher education courses.

Many participants commented that simulation was an important stage in their professional learning between information-driven course work and practical clinical learning. Across the board, participants described a need to be able to try out new knowledge in simulated applications and practice new skills in role-play scenarios before moving into "real" clinical practice.

Kendra described HFS as a model of learning that "…helps to make the jump from information to the practice," and Kate echoed this comment in stating that her simulation lab experience provided "theory to 'semi-practice.'" These comments demonstrate that the participants recognized that simulation is not a replacement for clinical experience with live patients, but rather is an intermediary step to experiment with and test new skills while learning new competencies before caring for real humans. The participants' experiences echo Morgan et al. (2006), who argue that "the old adage of 'see one, do one, teach one' is no longer a viable educational method in the current medical climate" (p. e13). Olivia shared that she thinks there may have been a role for simulation earlier on in her higher education program:

> I wish we had these [simulation labs] at the beginning, like of my degree. Theory based is completely different than practicums. You can read and read and read, but until you get to that situation in real life, it's completely different from what you are reading.

The participants in this study, undergraduate millennial learners, are looking for innovations in healthcare education that will give them license and time to link theory to practice and fine-tune their application of skills and knowledge. They believe that HFS offers them this needed pedagogical opportunity.

Heart: Learning to Reflect

Learning to reflect is a core competency in health-caring, yet it is not an intuitive or simple set of skills. Rose (2013) describes reflection as entailing "a depth of understanding quite contrary to the superficial grasp of a situation or idea to which we are limited by snap decisions and split-second thinking" (p. 17).

Unfortunately, the depth of understanding required for effective professional reflection has little opportunity to occur in the busyness that is our healthcare system (Coles, 2002; Morgan et al., 2006; Wee & Hughes, 2007). And the issue of time for reflection is a characteristic that Prensky (2001) addresses when considering the "digital native" (millennial) students:

> In our twitch-speed world, there is less and less time and opportunity for reflection, and this development concerns many people. One of the most interesting challenges and opportunities in teaching Digital Natives is to figure out and invent ways to include reflection and critical thinking in the learning. (p. 5)

The opportunity for reflection is an important piece of simulation and experiential learning processes and generally occurs as a form of debriefing following the simulation. This debriefing "provides an outlet for critical reflection and builds linguistic perspectives on meaning and knowledge that are relevant to the learners" (Parker & Myrick, 2011, p. 78). Video and audio recordings can be made of the simulation experience and are a vital part of the recommended debriefing session in which much of the student learning occurs (Decker, Sportsman, Puetz, & Billings, 2008). Debriefing of the simulation experience occurs immediately after the scenario and is recognized as an essential element of the learning process to promote reflection and critical thinking in the simulation learners (Parker & Myrick, 2011). Within this research study, there was a lot of opportunity to reflect on learning and practice, both within the simulation debriefing and in the subsequent three individual interviews that each participant engaged in.

Participants regularly commented that participation in the simulation lab provided them with the opportunity to reflect on their skills and learning experiences, and that this reflection was not a common occurrence or general practice in their healthcare courses. I found this lack of

previous experience with reflection or "reflective practice" (Schön, 1983, 1987) noticeable during the individual interviews, when participants were often stumped or paused for a substantial period of time before responding. The stage of reflection designed into simulation education is called debriefing and is facilitated by the educator to guide the reflective discussion, reviewing the events and learning of the HFS session. This reflective practice immediately follows the simulation experience and assists learners in connecting what occurred during the simulation with what they are learning in their courses, and what they anticipate seeing in their clinical work (Fanning & Gaba, 2007). For example, Morse (2012) examined the debriefing component of simulation and found that students value the opportunity to engage in critical self-reflection and receive feedback. It is a process during which educators and learners review or re-examine a simulation event and in doing so, foster the development of clinical and professional judgement (Coles, 2002). Participants in this study found the opportunity for reflection afforded to them by the simulation sessions to be a productive and novel experience. They engaged in what Coles (2002) describes as "reflective judgment" (p. 6), as they discussed what occurred during the simulation and their thinking of their actions. The debriefing was a new and fruitful opportunity to receive support from other learners who acted as interprofessional team members, and to work on individual competencies in linking practice with theory, as well as articulating those connections.

The opportunity to reflect appeared to be almost cathartic for some students. Kate spoke about feeling "stumped" and needing to know that she was not the only student with this feeling. As she observed other students being stumped or stuck for words in the reflection, she felt validated that the work of palliative care was clearly complex and even difficult in its implications.

Kendra, Olivia, Hayley, and Abby all shared that they wanted to be more comfortable with (in Kendra's words), "not knowing everything," and they clarified that the opportunity to reflect helped support them in reconciling an unachievable and futile desire for perfection. The literature suggests that healthcare professionals who engage in reflective practice learn to self-correct and absorb new experiences alongside prior ones, resulting in greater professional competence (Smith-Stoner, 2009). Abby also spoke to the idea of absorbing new experiences when she stated:

> I feel really lucky that I was able to do something like this because I learned a lot from it, even about myself, and it really put into perspective like—wow, why didn't I do this before I actually got thrown into the field holding someone's hand? I will use this experience and what I've learned here with my next client who is dying.

Abby's comment is representative of one of the benefits of the debriefing process that offers learners opportunities to both "think-in-action" (whereby a practitioner thinks about what they are doing while they are doing it), and "think-on-action" (which occurs after the action has been accomplished) (Schön, 1983). Sarah, Kendra, and Chloe shared that the simulation lab experience was quite complex for them as participants because they were challenged by working together, working with the mannequin, and thinking about what might happen next. They also shared that the simulation lab could get "heavy" (Jenna), so opportunities for think-on action reflection gave them a chance for a break or time-out.

One of the first questions often asked of learners in a debriefing is "how do you feel?" This allows learners to identify their emotions or heart of their learning, and provide some release of feelings. This allows them to move forward to a discussion that can delve into more crit-

ical levels of palliative care, such as communication theory, or pain and symptom management discussions. The debriefing phase also offers the educator-facilitator some insight into the students' palliative care thinking and clinical reasoning. Learners are encouraged to reflect on their learning experience, to provide explanations for their patient interactions or decisions, and to synthesize new information with the goal of improving future clinical practice. The simulation educator guides the students in reviewing their participation and identifying strengths, gaps in knowledge, and key learning points (Durham & Alden, 2008). This is similar to Kolb's (1984) work where he identified listening, watching, doing, and then reflecting as the components of a continuous experiential cycle of learning. This time spent debriefing is also a critical opportunity to correct any misconceptions or misinformation, to prevent any negative transfer of wrong information or malpractice decisions into the clinical, "real life" setting of human patients (Morse, 2012). During this debriefing, it is essential that the educator maintain a safe environment for students to share, receive feedback, and reflect on their learning. A safe sharing environment for the debriefing was successfully achieved in this study as evidenced by participants' statements. For example, Lily noted: "I wasn't scared to say what I thought. Everyone was supportive and we were all learning and trying our best."

Perceptions of Learning: Hands, Head and Heart

The following figure depicts the second subcategory of the 3H theory: Perceptions of Learning.

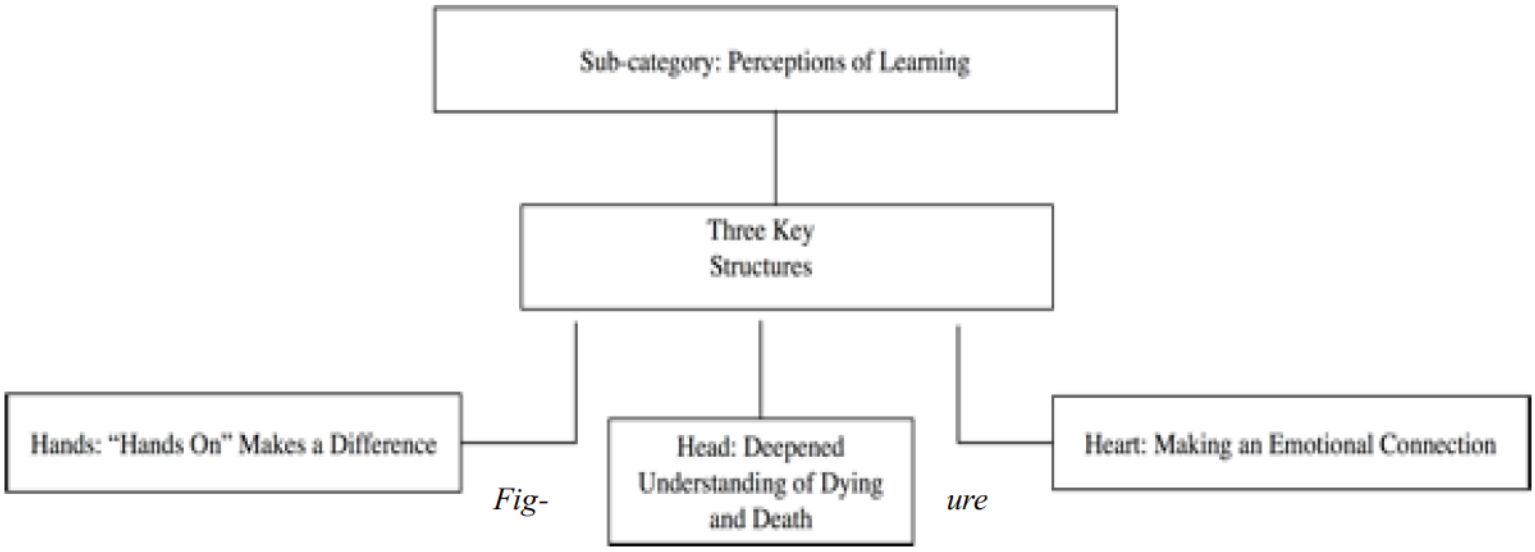


Figure 10. Perceptions of learning

Hands: "Hands on" Makes a Difference

Palliative care education should not be limited to didactic content (Gillan et al., 2014; Grant, Elk, Ferrell, Morrison, & von Gunten, 2009; Sheehan & Malloy, 2010; Wee & Hughes, 2007). The traditional form of lecturing to students does not provide opportunity for learners to examine their personal reactions and own experiences as they pertain to dying and death (Gillan et al., 2014). Preparing learners to care for individuals who are dying and their families should also include opportunities to examine individual values, beliefs, personal experiences, and culture (Sheehan & Malloy, 2010). It is necessary for comprehensive interprofessional palliative care education to integrate not only knowledge and skills integral to providing care at the end of life, but this education should also provide pedagogical strategies to best enhance compassion, empathy, and the "existential aspect or 'art' of palliative care" (Sheehan & Malloy, 2010, p. 1196). The application of palliative care education is required to improve clinical practice and to

develop champions who will serve to advocate for needed institutional changes, to improve the care for individuals who are dying and their families (Grant et al., 2009).

High fidelity simulation is perceived as an innovative pedagogical approach (Berragan, 2011; Gillan et al., 2013) in a safe, clinically realistic environment (Gillan et al., 2013; Twigg & Lynn, 2012). A review of the literature conducted by Gillan et al. in 2013, exploring the established literature on end-of-life care simulation in undergraduate nursing education, found that regardless of the sample size or study design, undergraduate learners who engaged in palliative care education using HFS reported an increased knowledge and confidence resulting from these experiences. These viewpoints were echoed clearly by participants in this study. As Kate shared: "Being put in the situation [the simulation lab] and being stumped was helpful because I wouldn't have known that I would react like that unless I was put in the situation and had to react."

Facilitating teamwork, developing critical thinking, understanding classroom material, increasing nursing skills, and improving communication are identified learning outcomes associated with simulations. McGaghie, Issenberg, Petrusa, and Scalese (2010) reviewed 32 research studies and found that repetitive practice with simulations was associated with improved learning outcomes. This applied to all levels of learners (McGaghie et al., 2010). Beginner learners "operate on abstract principles, formal models, and theories to get into the situation in a way that they can learn safely and efficiently," while experiential learners "pose and test questions in real situations that deviate from expectations based upon theory and principles" (McGaghie et al., 2010, p. 52). The type of simulation can be adjusted to meet the level of nursing students (Gaba, 2006;

Issenberg et al., 2008), who can achieve learning outcomes despite the constraint of their experience level during simulations (Bambini, Washburn, & Perkins, 2009).

Recently there has been an emergence of palliative care education using an experiential learning approach. This experiential learning includes hospice visits, intensive death and dying education programs, problem-based learning, and the use of audio-visual aids such as film, art, and music (Gillan et al., 2014). In this study, the interprofessional undergraduate participants expressed that they highly valued the opportunity to learn in the simulation lab. They appeared to be really interested in greater opportunities for "hands-on" learning and praxis. Sarah described this value in saying: "… actually doing something instead of just reading everything. I think people learn a lot from actually doing stuff." This was supported by Olivia, who stated, "I think the sim lab really, really helped us understand the process."

Head: Deepened Understandings of Dying and Death

Death holds a significant place in our social and cultural worlds, despite it not being a direct or first-hand experience for many of us. Informal education about death occurs regularly throughout our daily lives in the context of "teachable moments, the unplanned life events from which important lessons can be drawn" (Kastenbaum, 2007, p. 483). For much of the early 20th century, honest and open discussions about death were considered to be in "poor taste" (Hayasaki, 2014, p. xix), particularly in the classroom. By the early 1960s, however, some scholars were arguing that "death education was as important as sex education, if not more important—not everyone has sex" (Hayasaki, 2014, p. xix).

Our understandings of dying and death are influenced by our family, peer group, religion, and culture (Hadad, 2009). The attitudes we hold about dying and death and the knowledge we

possess about this life event are reflected in the language we use, the mass media to which we are exposed, and in the music, literature, and visual arts surrounding us (DeSpelder & Strickland, 2009). Many will find themselves unprepared to cope with death's intrusion on our lives because all too often we choose to ignore death until our "number is up" (Kastenbaum, 1981, p. 7). But through an examination of death, individuals may develop a greater appreciation, understanding, and reverence for life (Eddy & Alles, 1983).

Participants in this research study reported that their education in palliative care, an important form of death education, helped them to "develop an appreciation of the complexities of life by helping [us] recognize that it [dying and death] happens to all of us" (Abby). Abby went on further to share that her education "challenges my own beliefs about death and dying." Some of the participants, despite the simulation labs being situated in the context of palliative care, were still surprised and taken aback that the mannequin in the second scenario actually died. This was evident in the following quote from Jenna: "I didn't think she was going to die. I never thought that it would involve an actual death." This sense of surprise and disconnect between academic learning and normative life events speaks to the need for greater exposure to dying and death for our future healthcare providers, as part of their learning.

Reflecting the findings in Smith-Stoner's (2009) research on undergraduate nursing students, this study also found that participants' responses "consistently demonstrate[d] the value of including simulation focused specifically on death" (p. 119). Smith-Stoner suggests that initially, undergraduate learners react to the simulation by being overwhelmed by the situation. This reaction is similar to the responses observed by Allchin (2006) of nursing students trying to provide care for individuals who were dying in the context of a clinical placement. In this study, I

found that participants were grateful for the opportunity to engage in an interprofessional palliative care education simulation experience. They reported being overwhelmed and unsure of what to do initially, and then feeling grateful to have worked through those initial feelings within the safe environment of the simulation lab. The participants completed the simulation labs wanting more, and voicing that they wished they had been able to access simulation throughout their undergraduate healthcare education.

Heart: Making an Emotional Connection

In healthcare education, the theory of knowledge and skills acquisition is often prioritized. Much less attention is dedicated to the emotional content of learning experiences, often to the point that this important component of education is ignored (Berragan, 2011). In a clinical healthcare setting, the needs of the patient take priority over the needs of the student. In the simulation lab of this study, however, the undergraduate interprofessional learners' needs were deliberately placed at the centre of attention, providing opportunities for the participants to demonstrate caring not only to the mannequin, but also to their peers and themselves. One of the important roles of healthcare education is to ensure that the educational system that teaches healthcare skills is offered in an environment that facilitates each student's ability to care and act in a humanistic manner (Berragan, 2011; Kortes-Miller, 2013). Often, students enter healthcare education because they see themselves as caring individuals and want to be "caregivers." Our education and healthcare systems need to nurture these caring attitudes, rather than quash them (Kortes-Miller, 2013). Although the need for a supportive learning environment for future healthcare providers is recognized, minimal attention appears to be given to the emotional climate within which the learning occurs (Berragan, 2011).

Participants in this research study appeared to be somewhat taken aback that they had an emotional reaction and connection during the simulation experience. This emotional connection was twofold: (a) an emotional connection to the simulated experience and the mannequin, and (b) an emotional connection to themselves as learners, future healthcare providers, caregivers, and individuals.

As stated earlier in the discussion on fidelity and realism, participants were surprised how they connected with the mannequin and that they actually experienced sadness, compassion, and empathy toward both of the mannequin characters and their life situations. This connection in the simulation lab was, as Olivia described, "helpful in learning to deal with emotions." Olivia further described this connection:

> I didn't think I would be attached to her as much as I was. I mean she's a mannequin. But I think because she interacted with us, she engaged with us, she asked us questions, we asked her questions. She wanted to know about us and we wanted to know about her. And that relationship began and it didn't take long.

This comment from Olivia was echoed by many of the participants. They connected to the personality and character created with the mannequin and she seemed believable to them. They found themselves liking her and caring for and about her. This emotional connection surprised participants. Sarah noted: "I was surprised that I felt sad when she died." Hayley also expressed surprise at her reaction:

> I have to admit when Bianca was dying and she died, I got a tear in my eye—like it wasn't knowing that she was a mannequin and this is just a sim lab, I went through the

> emotions of actually witnessing somebody alive going through the last stages of death and then having to die.....

Kate, Olivia, Sarah, Abby, and Chloe shared that they experienced a gamut of emotions during the simulation labs, including anxiety, fear, sadness, and a "desire to fix" (as Kate shared). The participants appeared to think that these were emotions that they would also experience in a clinical setting. Again, they reiterated that time in the simulation lab, with an emphasis on reflection and debriefing, supported them in "learning to deal with emotions" (Jenna). Kate stated that the simulation lab "brings out your fears and emotions and this is where that should happen." Abby recognized that she applied this new learning to herself:

> You have to know how you're going to deal with that sort of thing [death] too and I think that this is really good. It's [simulation] a really good leeway into learning about that because as much as you learn from the textbooks and the sim lab and things like that, you really learn a lot about yourself and what you're capable of and how you feel about death and dying and things like that...I found that a lot of the stuff that I've learned in these courses and taken away from the sim lab, I've applied to my own life.

These comments confirm that these participants found the simulation lab environment to be a safe learning space where they could take emotional risks and engage deeply in new experiences. Jenna, Kate, and Abby all agreed that this was a more appropriate place for them to be doing this kind of learning than at the bedside of an individual who is dying. Undergraduate interprofessional healthcare students need adequate preparation to learn about themselves and how they might react to dying and death. They also need to learn what they might need to cope with dying in death, in order to provide appropriate compassionate support for individuals who are

dying and their families (Hamilton, 2010). High fidelity simulation is one educational strategy that can provide opportunities for undergraduate learners to begin to explore and learn about their emotional connections and relationships at deeper level. As Hayley noted, "You don't find this stuff [the emotional reactions] on any multiple choice exam!"

Impact on Learning

The following figure depicts the third subcategory of the 3H theory: Impact on Learning.

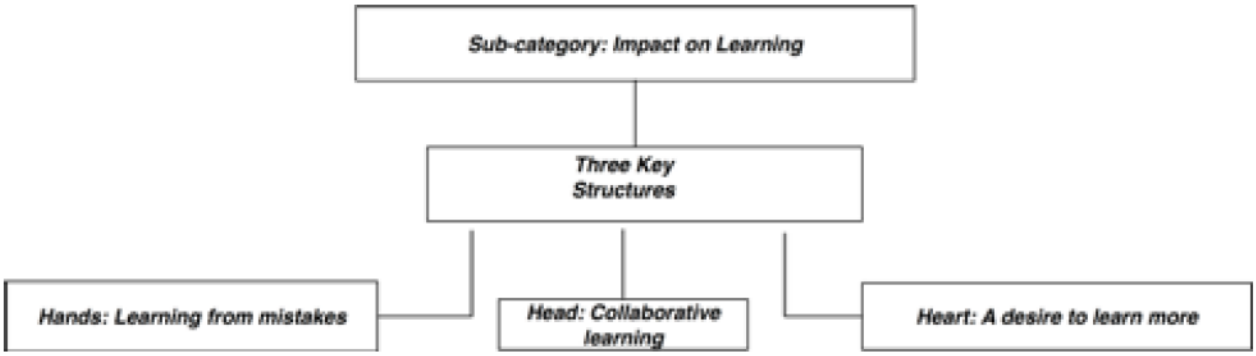


Figure 11. Impact on learning

Hands: Learning from Mistakes

Alongside working with their peers, participants also expressed that the opportunity to learn from mistakes, both their own and those of the other participants, was a key benefit of simulation learning. The students appeared to feel safer in the simulation lab than a clinical setting because the mannequin they were working with was not a real human being, who would risk being harmed by their mistakes or lack of knowledge. The participants suggested that the opportunity to make mistakes in a safe environment, and then examine those mistakes in the debriefing,

had resulted in a confidence that they would avoid those same mistakes in future, real-life clinical situations. This is evident in the following quote from Lily:

> It was like a placement-type thing, but not with real patients...that's what made me feel comfortable, like the fact that it wasn't a real patient there, but we were interacting as if it were. So, I didn't feel like I was going to say something and completely ruin like any work that was done or hurt them or make them uncomfortable or whatnot..."

Paskins and Peile's (2010) study reported similar responses from medical student participants who described the simulation environment as being safe, because they were unable to harm any real patients. Critical judgment, an important skill for future healthcare providers, can be promoted and developed more openly and effectively in safe environments (Kaddoura, 2010).

It is also important to note, however, that simulation may not always be safe for the undergraduate learner, because strong feelings and reactions in the participant may be triggered by the simulation experience (Oberleitner, Broussard, & Bourque, 2011). This occurred in this study when one of the participants, Chloe, connected her personal life experience with the death of her mother during the simulation scenario. Chloe had a strong reaction to the mannequin "Jane" who, very coincidentally, was the same age as her mother when her mother died, and who had a daughter who was Chloe's age at the time of death. Chloe recognized that coincidences of triggering events such as this could also occur in her future work as a healthcare provider. She shared that she felt supported from the group in her learning when she shared her grief story about her mother:

> I felt like it prepared me for the next time that I would have to encounter something like that. And now I sort of know what to do in case that does happen, I can just be honest with them and share my experience. I know I'll be okay because this happened today, here first. And maybe someone else can learn from my experience.

This statement demonstrates that Chloe used the safety of the simulation learning environment to learn more about her own losses due to death, her reactions to them, and how those losses might influence her future work as a professional healthcare provider.

Head: Collaborative Learning

Traditionally students in healthcare fields have been educated in silos, within the confines of discipline-specific curricula that allows for little opportunity to communicate or work with other disciplines. Yet upon graduation, these same students are expected to perform as part of a healthcare team and deliver care in close concurrence with other professionals (Masters, O'-Toole, & Jodon, 2012; Winterbottom & Seoane, 2012). Although teamwork plays a critical role in the delivery of healthcare, healthcare education as a whole has been slow to adopt or to incorporate interprofessional curricula (Baldwin, 1996; Reeves, Lewin, Espin, & Zwarenstein, 2010; Zwarenstein, Goldman, & Reeves, 2009). Education in silos perpetuates misperceptions about roles, scope of practice, and scope of knowledge among different healthcare providers, and this can result in a disruption of care (Baldwin, 1996). Educators of future healthcare providers have a responsibility to prepare workforce-ready graduates who can effectively practice as members of an interprofessional team. IPE provides opportunity to develop interpersonal skills and knowledge by encouraging favourable collaborative attitudes and behaviours among healthcare providers.

Uniprofessional education remains the dominant model for healthcare education in Canada (Reeves, Perrier, Goldman, Freeth, & Zwarenstein, 2013); however, there is a shift in the focus of healthcare education curricula from isolated "silo" learning to education that provides more opportunity for interactive learning between and among students from other health disciplines (Robertson & Bandali, 2008). This new shift requires the development and implementation of innovative strategies within healthcare education curricula that advance the skills and competencies incumbent for interprofessional collaborative practice (Masters et al., 2012). Despite the field of palliative care priding itself on the interprofessional nature and approach to the delivery of care, very little research has been conducted about IPE in palliative care (MacLeod & Egan, 2007).

In this study, the participants frequently referred to the learning that took place when they were working together. For these participants, working together meant that they could communicate during the simulation labs, brainstorm, problem-solve and observe one another in action with the mannequin. This suggests that the participants in this study had a positive experience with the collaborative learning opportunities that the HFS palliative care education experience offered. IPE is facilitated when small groups of learners from different healthcare disciplines "bring knowing, being and doing together in experiential activities" (Baker, Pulling, McGrawm Dagnone, Hopkins-Rosseel, & Medves, 2008, p. 373). Experiential activities such as simulation can assist in developing learner competencies and incorporate understanding of knowledge, problem-solving, clinical judgment, and interpersonal skills (Baker et al., 2008). As Abby described:

> It [working with students from different disciplines] was really beneficial because everyone has their little—how can I say that—like their little personality. I like to see everyone bring their piece of personality and apply it to palliative care and like being from a healthcare background, we can relate to each other.

As Abby suggests there was a sense of shared understanding, as participants saw themselves as healthcare students with a shared interest in palliative care, regardless of their professional discipline.

Other research has found that the opportunity for undergraduate learners to work together as a team has a positive influence on the student learning experience with HFS. Learning through HFS can serve to enhance and develop teamwork skills (Kaddoura, 2010; Kuehster & Hall, 2010). More research could be conducted to more closely examine the idea of "collaborative learning" as appropriate for undergraduate healthcare students in training, as opposed to the current focus on the development of "teamwork skills" as a focus for seasoned healthcare providers.

Heart: A Desire to Learn More

Students graduating from undergraduate healthcare education programs need to be "prepared with a foundation of palliative approach knowledge and capabilities" (Ramjan, Costa, Hickman, Kearns, & Phillips, 2010, p. 86), because they will inevitably encounter palliative care or death of patients in their future practice. Presently, our educational system is not meeting this need, resulting in graduates feeling unprepared and anxious about caring for patients who are dying and the patients' families (Gillan et al., 2014; Johnson, Chang, & O'Brien, 2009; Mallory, 2003).

Part of the motivation for participants' agreement to participate in this study was their sincere interest in palliative care and their desire to learn more in the clinical setting of palliative care. From my observations, students are quite aware that gerontology (in general) and palliative care (more specifically) are coming to the forefront of Canadians' health attention, as evidenced by increased media attention on these topics over the last few years and our growing aged population. The study participants seemed drawn to palliative care because they are caring, compassionate individuals who have had a smattering of exposure to palliative care via employment, volunteer work, or experiences with friends or family. A common theme in this study is that students want more palliative care education! As Abby shared:

> I know it would be better to have more hands-on experience, like with the sim lab, because it's great to read a textbook and read a module that tells you like—oh, don't be afraid to use the work "death" or "dying" with your client. But you get into the sim lab and you are talking to a mannequin and you suddenly can't find the words to say to them... And nothing in our current education system prepares you for that, I don't think.

In the above quote, Abby recognized that she needs more from her education in palliative care than just reading a textbook on online modules. She recognized a difference between reading about something and connecting it to actual interactions with individuals who are dying and their families. Abby identified this as lacking from her education experience. Smith-Stoner (2006), in her work with nursing students using simulation in end-of-life care education, also found that students were consistently requesting more content and learning experiences focusing on end-of-life care after experiencing caring for someone who is dying.

Throughout the process, participants asked why simulation was not included in their education, specifically their palliative care learning. Participants wanted to change this. They seemed to think that even though the integration of simulation into palliative care education at this juncture might be too late to make much of an impact on their own individual learning experiences, as a number of them were near graduation (including Olivia, Jenna, Hayley, and Abby), it would be worthwhile for future interprofessional undergraduate healthcare learners.

Meaning Derived from Learning

The following figure depicts the fourth subcategory of the 3H theory: Meaning Derived from Learning.

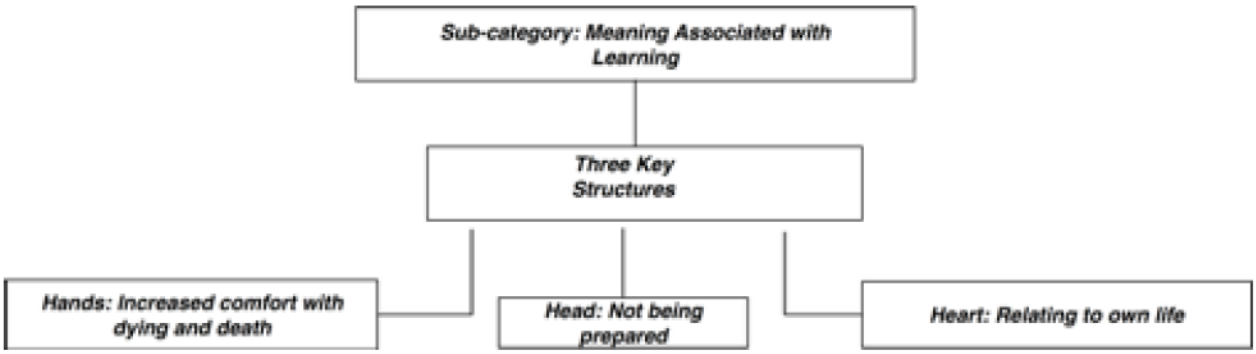


Figure 12. Meaning associated with learning

Hands: Increased Comfort Level with Dying and Death

Competent palliative care practice is the integration of many factors that can only be achieved through interprofessional collaboration and teamwork (Muir, 2008). A priority is to develop the confidence levels of healthcare providers so they are able to anticipate palliative care

needs, respond appropriately and effectively, have awareness of their own needs and limitations, and know where to ask for help and support (Gamondi, Larkin, & Payne, 2013). It is important that the education be relevant and realistic, and easily translated into the work environment of the healthcare provider.

I found that participants in this study felt that they could relate to the topic of palliative care because they appreciate that dying is an inevitable experience that they and those they love will encounter. Being able to make this connection between academic learning and "real life" is something that was repeated often and obviously resonated strongly with the participants. The student-participants offered strong comments such as, "palliative care is an important aspect of gerontology" (Chloe), and that it "relates to everyone" (Jenna). One participant, Olivia, even shared that the palliative course was "the only class I really enjoy," because it offered material that she could relate to and that had authentic relevance to her life.

Head: Not Being Prepared

Education in palliative care and training in the palliative approach are fast becoming identified as critical strategies required to deal with the rising challenges of palliative care access and delivery in Canada (Bruera & Hui, 2012; Fitzsimmons, Mullan, Wilson, & Conway, 2007; Wilson, Birch, & Sheps, 2008). With the recent spike in public awareness of the need for quality, compassionate care at end of life, palliative care is increasingly being placed as a priority in healthcare education (Billings, Engelberg, Curtis, Block, & Sullivan, 2010). Most academic courses on the topic of death generally serve several purposes, as identified by Hadad (2009):

> ... they exist to educate those who have not confronted the possibility of death in themselves or others; they serve to allow those who have been touched by death and

> bereavement to understand and deal with their emotions and the practical changes in their lives more effectively; and they act as guides for both laypeople and professionals in their interactions with those who are dying or who face bereavement. (p. 15)

Research findings also show, however, that undergraduate healthcare students are not being appropriately prepared to care for people at the end of their lives (Gillan et al., 2013; Johnson et al., 2009; Mallory, 2003). Students are reporting feeling anxious about dealing with death and dying (Mallory, 2003), and unprepared to provide this type of care (Johnson et al., 2009). This lack of education and inadequate preparation of future healthcare professionals is reflected in the quality of palliative care delivered to individuals and their families (Gillan et al., 2014; Mallory, 2003).

The goal of palliative care education is to foster knowledge and skill development among students and healthcare professionals to improve the care of individuals who are dying. The ultimate goal of palliative care education is to ensure that individuals who are dying and their families receive excellent end-of-life care because those who are caring for them know what to do, how to do it well, and can exercise critical judgement when delivering that care (Wee & Hughes, 2007). However, numerous reports have highlighted an inadequate level of knowledge and education in palliative care of healthcare providers (Ferrell, Virani, Grant, Phome, Malloy, Bednash, & Grimm, 2005; McCaffery, Ferrell, & Paserco, 2000; Paice, Ferrell, Coyle, Coyne, & Callaway, 2008). In these reports, education in palliative care is identified as lacking and strong recommendations are made to improve the scope and breadth of education and training designed to promote palliative care (Paice, 2007). As Gillan et al. (2014) describe, death education and palliative care education still do not have a firm and established presence within undergraduate

healthcare curricula, and opportunities for clinical experiences are inadequate. They recommend that "urgent attention be given to embedding theoretical content in sufficient depth combined with teaching strategies to promote critical reflection in end of life care" (p. 332). The literature reflects that both the amount of time dedicated to the content and the methods of education delivery are important (Gillan et al., 2014).

So, while none of the participants in this study specifically articulated that they were feeling unprepared to support and care for individuals who are dying (along with the patients' families), it was quite obvious that there were gaps in their knowledge and confidence levels, even in the fairly basic and introductory simulation labs. A common thread among participants was that their online palliative care learning experiences were "not enough," as described by Sarah and Kendra. Abby and Hayley spoke of missing a connection with other learners due to the lack of face-to-face opportunities, given the nature of online courses. They expressed a clear collective desire for more collaborative learning. Jenna, Kate, and Olivia shared that they felt the nature of online learning created a disconnect from real life and that this was a drawback from learning about the implementation and daily practices of palliative care. Finally, the majority of participants lamented the lack of opportunity to put theory into practice, and identified the online learning experience as being more of a hindrance than a help in this concretization of learning.

Heart: Relating to Own Life

Death and dying are fundamental aspects of the human experience and education on these topics should be an essential part of academic course curriculum at all levels (International Work Group on Death, Dying and Bereavement, 2000). The recognition that death education is important was stressed by the participants in this study, who expressed a need for more education

about dying and death across the undergraduate curriculum. The overarching goals of death education prioritize both "the acquisition of knowledge and development of self-understanding and clarification of values, meanings, and attitudes toward death" (Wass, 2004, p. 292). It is important that death educators "do not pretend that death education can take place on a purely intellectual or academic plane" (Attig, 1981, p. 169). A primary focus of death education is to support in a meaningful way those individuals who are dealing immediately with the inevitability of their own death and the death of others. The simulation lab experience in this study allowed for meaningful support during the debriefings, as participants began to process what their learning in palliative care meant to them and the role it would play in their lives, both professional and personal.

Education directly influences attitudes and values and can assist in defining, strengthening, or modifying them. It also attempts to recognize the diversity of emotions experienced within the learning process and to manage them more effectively (Wass, 2006). Education will not prevent death as a normative life event but will work to prevent some of the negative side effects of not understanding dying and death. Some of these negative side effects may include anxiety, depression, fear, complicated grieving, loss of meaning, and the physical reactions associated with these effects. In educating about death, the goal is to inform students of all ages about dying, death, and related experiences, to reduce a sense of unfamiliarity or fear of the unknown (DeSpelder & Strickland, 2009; Eddy & Alles, 1983; Morgan, 1995; Wass, 2004).

Some of the student participants in this study were able to make connections with their academic learning in palliative care and apply death understandings to the "everyday." Kate shared that she was hearing about palliative care more often on the news and in the media and

that this frequency of message, alongside her course work, "increased my thinking about my own death and making plans." This idea of making plans for their own dying was repeated in other participants' thinking. Olivia shared that she was now finding herself talking about death with her family. Recognizing that dying and death happens to everyone, and directly considering our own and our loved ones' need for care at the end of life, is important work for future healthcare providers applying a palliative approach to healthcare. Kate also reported a greater comfort level in discussing issues surrounding dying, death, and grief. She was able to link her course learning and experience in the simulation lab to her everyday life:

> I recently had a friend and her very close friend passed away recently. So, being able to talk to her even because she was having a lot of struggles; and I listened to her. I was much better with her thing because of the sim lab than I would have been otherwise—even taking the classes. I thought about the sim lab while talking with her.

The Significance of Situating Death in Education: Hands, Head and Heart

Thus far**, t**his chapter presented an overview of the theory that emerged from the research study and outlined how the core theory ("Learning with Hands, Head, and Heart") and four sub-categories (the Learning Process, Perceptions of Learning, Impact on Learning, and Meaning Associated with Learning) all interacted with the 3H key structures of hands, head, and heart to form and develop this substantive theory. This newly developed 3H theory addressed a studied phenomenon, the undergraduate interprofessional palliative care learning experience, in a specific situation using HFS. Next, I will continue to examine the implications of this new 3H theory in light of the three relevant, multi-disciplinary literatures of research: technologies in higher ed-

ucation, palliative care education, and interprofessional healthcare development. I also offer suggestions and recommendations for each field.

The Undergraduate Student

There are a number of terms coined to describe today's undergraduate learner. Some of these terms are used interchangeably, including popular descriptors such as "Millennials" (Howe & Strauss, 2003), the "Net Generation" (Tapscott, 2009), "Digital Native/Digital Immigrants" (Prensky, 2001), and the "New Millennium Student" (Jones & Shao, 2011). Each term has been coined in an attempt to offer insight and understandings into the new communication modes and, by extension, learning needs of university learners. Dede (2005) claims that technology has had a strong impact on the minds and learning habits of this new generation. The participants in my study, some of whom entered university in 2010, have been part of an internet world with social networking, digital technologies, and open access sites such as YouTube since they were young teenagers. It is not uncommon for these learners to actively engage with a variety of applications, technologies, or devices simultaneously (Jones & Shao, 2011): a new modality termed "multi-tasking" and a new method of participation in their university classes.

The "Net-Geners"

Windham (2005) offers a description of a "Net Gener" (p. 53): a student who is motivated by the notion of achievement, under a great deal of economic stress, and driven by compassion and a sense of hope or social optimism. Achievement is a strong motivator in "Net Geners" because they feel economic duress and worry that their degree will not be enough to support them financially as the economy vacillates, the job market plummets, and experts regularly report and pontificate on the lack of monetary value of a university degree (Windham, 2005). This genera-

tional economic vulnerability described by Windham (2005) was vocalized by many participants in this study. For example, when describing her motivation to participate in the research, Jenna stated, "I want the certificate. I need something to make me stand out when I apply for a job." Kendra and Olivia spoke of how they were volunteering in their spare time to add value to their degree and experience to their resumes. Most of the participants (8 out of 10) agreed that if there were a co-op or internship option in a palliative care course or specialization, they would be even more motivated to register and work for this designation.

Windham (2005) observes that "Net Geners" experience stress while engaging in university studies. Some of this stress is related to the need to achieve high grades and experiences that will make their resumes stand out in a crowd, while other stress can be attributed to the high cost of university tuition and the competition required to enter into preferred professional programs. A variety of stressors were communicated to me during the simulation sessions and interviews. Kate described her stress as "...not wanting to make mistakes. I want to learn it all before working with patients." Sarah and Jenna spoke of working hard to balance their school work with part-time jobs that they had chosen carefully to lead into professional positions after graduation. Lily shared that she wanted to apply for another healthcare program after graduation, but was quite stressed from the debt load she had incurred during her undergraduate studies and was desperate to work for a year before incurring any more debt. "Net Geners" tend to be multi-taskers in their undergraduate studies in order to achieve high grades and gain as much experience as possible for a competitive edge over their peers.

Alongside characteristics of achievement and stress, Windham (2005) identifies that "Net Geners" are also "driven by compassion" (p. 54). These undergraduate learners are well-versed

in the need for community service and often see "giving back" as a responsibility of their global citizenship. As Windham states: "It has become increasingly 'cool' to give back" (p. 54). This "giving back" was observable in the study participants as many of them held volunteer positions or were actively helping to care for their aging family members (e.g., Sarah). As Kuhl (2002) wrote in his book, *What Dying People Want*, compassion and "giving back" are integral components and qualities to an effective palliative approach to care. As Kate shared, "I care about people. I want to give good care."

Hope or optimism is another important quality of effective palliative care (DeSpelder & Strickland, 2009; Kuhl, 2002); hence, it is an important quality to develop and inculcate in interprofessional palliative care students. Howe and Strauss (2003) describe "Net Geners" as being an overly optimistic generation because they have watched technology open up their worlds and they perceive anything related to the internet as tools to facilitate positive social change. As Windham (2005) argues, "Net Geners" view technology as making them smarter and more adaptable than previous generations, and feel enabled to use technologies to solve problems at micro/local and macro/global levels. This study's participants were very positive about simulation and adapted easily to the simulation lab environment. As outlined in Chapters 5 and 6, the participants eagerly reported that the mannequin and simulation setting "felt real" and that their learning during the sessions would be transferable to real-life clinical situations. Kate shared this positive impression:

"The lab is where I really try to explore everything, like I will go through every step-practice it, so that when I get to that person's room or I'm dealing with that situation, I'm prepared for it. Hopefully that's the place you learn. And it feels real so it lets you do that."

Prioritizing Student-Centred Education

There is a growing interest in student-centred learning in higher education, and students are responding favourably to this approach. As an educational approach, student-centred learning focuses on and prioritizes the student, and what they want or need, rather than focusing on those involved in the educational process such as teachers, administrators, or politicians (Brown Wright, 2011; Weimer, 2002). After 10 years of teaching undergraduate courses in palliative care, it has been my experience that many undergraduate students make the logical connection that there will be a point in their lives when they will be on the receiving end of palliative care and they too will die. Palliative care educators need to recognize that undergraduate learners are not passive recipients of transmitted knowledge but rather desire to be "hands-on" and "reflecting" learners who develop their own understandings and conceptions of dying and death. They can visualize a palliative care approach for themselves, their loved ones, and those people who will one day be their patients. These learners need to be provided with a foundation to begin this life-long learning process.

The participants in this research had not really considered how they wanted to learn in their undergraduate healthcare programs, but when prompted, they identified that they needed more opportunity to practice their learning in applied situations (hands), to integrate theories with practical approaches to care (head), and to consider what dying and death means to them at a personal level, and develop a corresponding level of comfort and acceptance of death and dying (heart). These participants represent a snapshot of other interprofessional undergraduate healthcare students who want to be active learners, directing their learning toward a professional

identity as competent, compassionate healthcare providers. Olivia articulated this vision of education when she stated:

> What I want from education is actually not just to have more information, because I don't feel that makes much of a difference like how much you know. It doesn't have any relevance. It doesn't really change you that much until you are able to apply it and see how it will be relevant for you—if you can connect with the information.

The pedagogical use of high fidelity simulation (HFS) offers an accessible and viable platform for this active, hands/head/heart (3H) learning that will engage "Net Geners" and address their particular needs. The simulation experience and its attached debriefing "provides an outlet for critical reflection and builds linguistic perspectives on meaning and knowledge that are relevant to the learners" (Parker & Myrick, 2011, p. 78). As Abby shared about her experience in participating in the interprofessional palliative care simulation lab:

> It was such a good experience. I guess some people don't get that experience. Some people just go through their entire undergrad without ever having to come face to face with what they're learning in their textbooks. They don't take the time.... or aren't shown how to figure out what all the stuff they are reading about really means. And then they get out into the real world and that's not the time to look at what you're doing and say—wow, this really isn't right for me, this isn't something I can handle, this isn't something I want to do.

Experiential education is very promising as a pedagogical approach to join together the three diverse but interconnected key structures in this study: interprofessional learning, palliative care training, and simulation technologies. This discovery of meaning through an experiential

integration of knowledge into practice, be it in a simulation lab or during clinical practice opportunities, is what the future providers of palliative care, today's millennial undergraduate learners, deserve as they prepare to care for us with their hands, heads, and hearts.

The Organizational Level: Higher Education

The higher education landscape is changing. Higher education has a role in responding to the learning needs of undergraduate students who have been raised and immersed in a culture infused with digital technologies, where there is emphasis on the role of the student as a consumer (Dearnley, McClelland, & Irving, 2013). More research is required to provide empirical evidence on what undergraduate learners have access to, their levels of competence to use the technologies available to them, and their digital learning preferences (Jones & Shao, 2011). The use of new technologies and tools in higher education needs to be fully supported by university learning infrastructure and educational design. It is not enough for universities to own simulation technologies, they need to support educators in developing their skills to use these technologies and incorporate them into the curriculum (Jeffries & Battin, 2012). A survey conducted by Kardon-Edgren, Willhaus, Bennett, and Hayden (2012) on simulation use in the United States reported that faculty were being trained to use simulation technologies by the vendors selling the equipment; usually these vendors were not pedagogical experts but rather salespeople. So while the buildings, space, and simulation technologies—the infastructure to facilitate simulation learning experiences—might be in place, other requirements, such as budgetary support for faculty training and equipment maintenance, were not (Kardon-Edgren et al., 2012).

Canadian universities need to recognize their role in adapting learning infrastructures to meet the current learning needs of students and to anticipate future technology developments (Jones & Shao, 2011). This is no easy task. Educators in undergraduate education wrestle with very difficult questions: what really works in education, for whom, how, when, and with what learning outcomes (Tashiro et al., 2011) and, for what costs. As digital media technologies become increasingly prevalent in daily life, educators need to examine whether the emerging generation of undergraduate learners have different needs in their approaches to learning, and if our current methods of delivery of education are now ill-designed or do not fit these new learners (Jones & Shao, 2011; Prensky, 2001, Tashiro et al., 2011). The participants in this research were very keen to engage with the simulation technology in this study. They quickly identified that HFS simulation labs would be useful in meeting some of their previously unmet learning needs. The usefulness of simulation was reinforced by Hayley, who offered in her third interview:

> I still think it's [simulation] great. I still think it was really helpful when we were going through it; and if you had—if there was a class that you were trying to implement it in to use it for, then I think that it would get the goal and the learning and the education across.

It is clear that Hayley believed simulation would be a good tool to assist her in connecting what she was learning in the classroom to a clinical setting, or putting theory into practice.

Collaborative Learning

Across Canada, educators and healthcare practitioners are working toward improving collaborative teaching methods so future healthcare providers will "embrace collaboration as one of the best ways to improve quality of care" (Bainbridge, 2012, p. 10). Canada is prioritizing interprofessional learning opportunities for undergraduate healthcare students (Riesen, Morley,

Clendinneng, Ogilvie, & Murray, 2012). If undergraduate students learn to work together during their healthcare programs, they will be better prepared to collaborate with others in their professional practice. Studies have demonstrated that this emphasis on interprofessional learning in higher education will ultimately result in better client/patient outcomes, and improved job satisfaction for the healthcare professionals (D'Amour & Oandasan, 2004; Reeves, Zwarenstein, Goldman, Barr, Freeth, Hammick, & Koppel, 2008; Riesen et al., 2012).

From a palliative care education perspective, it is important that learners, regardless of the profession they belong to, have some understanding of the values, beliefs, and philosophy of palliative care, and the work that professionals do to provide this care at the end of life. In addition, it would be helpful in their practice to have knowledge of the roles of others working in the field, to understand the need for effective communication in a team setting and to develop the skills required to function within an interprofessional palliative care team (MacLeod & Egan, 2007). Working collaboratively as part of an interprofessional team was something that the participants in this study appeared to value, but they also recognized that more was needed to be done to support this type of learning. As Kate shared: "When I get a job, it'll probably be as part of a healthcare team so I need to know something about what other professions do, what they can offer my patients and how to work as a team."

Participants appeared to recognize that in the simulation lab, collaborative learning included not only figuring out what to do next in a given scenario by brainstorming with students from other healthcare disciplines, but also involved learning about other professions, learning about the subtleties of their practices, and integrating theory by observing and discussing in the debriefings. Kendra spoke to this idea of collaborative learning when she stated:

> Watching other people from other areas and disciplines have a dialogue with "Jane" was great. I watched how different people approached that situation. So it was nice to take their information from what they are learning in their disciplines and apply it to how I'm going to be with that person and with what I'm learning.

Students can learn from, with, and about one another in HFS, but educators need to foster this interprofessional approach and make it a priority to maximize the impact of collaborative learning in HFS labs. Educators of future healthcare providers have a responsibility to prepare workforce-ready graduates who possess the skills to work collaboratively. HFS simulation labs allow students to practice their interprofessional abilities and skills *in situ*, in the settings where palliative care teamwork happens with patients.

Changing the Focus of Interprofessional Palliative Care Education

The current trend in Canadian population demographics clearly shows a rapidly aging population and a rising incidence of life-limiting and chronic diseases (World Wide Palliative Care Alliance, 2014). This population reality demands a greater number of healthcare providers to be prepared to provide a palliative approach to their care (Brajtman, Fothergill-Bourbonnais, Fiset, & Alain, 2009). Because death, dying, and bereavement are fundamental aspects of the human experience, education about these topics should be an essential part of academic course curricula at all levels (Corr, Nabe, & Corr, 2006). With the recent increase in awareness of the need for quality, compassionate care at end of life, palliative care is gaining more recognition as a clear priority in healthcare education (Billings, Engelberg, Curtis, Block, & Sullivan, 2010). Research findings demonstrate, however, that undergraduate healthcare students are not appropriately prepared to care for people at the end of their lives (Gillan, Jeong, & van der Riet, 2013;

Johnson Chang & O'Brien, 2009;Mallory, 2003). Students report feeling anxious about dealing with death and dying (Mallory, 2003) and unprepared to provide this type of care (Johnson et al., 2009). This lack of education and inadequate preparation of future healthcare providers is reflected in the quality of palliative care delivered to individuals and their families (Gillan, van der Riet, & Jeong, 2014; Mallory, 2003).

In 2001, Health Canada moved to prioritize improving the interprofessional palliative care education of healthcare providers. This sparked a number of educational initiatives, particularly in the form of continuing education for professional healthcare providers. Interprofessional palliative care education at the undergraduate level continues to be a struggle, however. Some of its challenges include the knowledge of available educators, their attitudes toward care for the dying, overcrowded curricula, time limitations, increasing enrollment, pressure on clinical facilities, and a shortage of instructional resources (Brajtman, Fothergill-Bourbonnais, Fiset, & Alain, 2009). These challenges are not all unique to interprofessional palliative care education in higher education, but organizational support from the universities and recognition that this kind of education is important is integral for students to develop into compassionate, competent care providers of individuals who are dying and their families. As Abby shared in her first individual interview:

> This death stuff is important! It's really therapeutic to be able to have conversations about death and dying with the client that you're working with, no matter what field you're in, because you want to be on that same level of understanding with your client if you're going to be helping them. And you are going to see death in your work no matter what, so you need to learn about this!"

Education is a force for change. It is the medium by which information is communicated and understanding enhanced. Education directly influences attitudes and values and can assist in defining, strengthening, or modifying them. It also attempts to recognize the diversity of emotions experienced within the learning process, and to manage those emotions (Wass, 2006). The academic setting of a university is often the first venue in which future healthcare providers begin to attain the knowledge and skills required to care for patients. Healthcare educators are challenged to discover a balance between providing opportunities to increase knowledge and develop clinical skills, and concentrating on student attitudes and personal understandings of their learning experience (Wass, 2004). Undergraduate healthcare educators need to prepare learners for the privilege of caring for individuals at the end of their lives. Palliative and end-of-life healthcare situations may challenge the new and developing healthcare provider in unique ways due to the nature of suffering and the existential questions that can arise from the provision of this type of care (Ladd, Grimley, Hickman, & Touhy, 2013).

The overarching goals of death education prioritize both "the acquisition of knowledge and development of self-understanding and clarification of values, meanings, and attitudes toward death" (Wass, 2004, p. 292). Palliative care education concentrates on knowledge building and traditionally, the focus has been on what knowledge future palliative care practitioners need to possess to be competent clinicians. This is driven by the culture of healthcare education in higher education, expectations of different professional healthcare disciplines, and demands of the healthcare system and its future recipients of care. It is time to return to the roots of death education, recognizing that interprofessional palliative care is a form of death education in action. It is important that death educators "do not pretend that death education can take place on a pure-

ly intellectual or academic plane" (Attig, 1981, p. 169). When educating about dying and the care of those who are dying, it is imperative that we bring back the personal experience and exploration of values and beliefs.

Abby, a participant in this study, shared that she was predominantly learning about death on an "academic plane" until she participated in the simulation lab. At that point, she identified that her education was not as comprehensive as she thought: "Until I did the sim, I thought that I was completely comfortable with everything surrounding talking about death and dying; and it turns out I had some things I really needed to work on." Abby was not alone in her experience of surprise that she was missing pieces in her knowledge and skills pertaining to palliative care. Participants appeared to recognize that there was a difference between reading and discussing palliative care in an academic manner, and putting that knowledge into action in the simulation lab.

The philosophical foundation of death education is evident in the humanistic perspective by founding leaders of death education Feifel (1959) and Knott (1979), who mapped out the basic goals of death education in the form of a triad of overlapping objectives: information sharing, values, and coping behaviours. In the centre of this triad is death education. The triad emphasizes that knowledge alone is not enough to bring about positive change and learning that is integrated into one's behaviour. Rather, there needs to be instruction concentrating on attitude formation and the development of the whole person as well. Each element of the triad is both separate and connected. This is not unlike the substantive theory that emerged in this study—"Learning with Hands, Head, and Heart"—as each of these three elements (3 H's) are both separate and connect-

ed, and at the centre is the product of learning palliative care. Abby spoke to the need of connecting all of these elements in her palliative care education when she shared:

> "If you don't have the hands-on, you're not going to know what you find to be triggering to you personally and how it will make you feel or what you're not going to know when you need it and what interventions work best for you as a (healthcare provider) in the field."

The field of palliative care is very aware of what knowledge future care providers need to possess. The time is now to nurture and develop these practitioners, and concentrate on how this education is delivered by incorporating hands, head, and heart into the learning experience.

A challenge in educational settings is to differentiate "between what is openly intended that the students learn and what, although not openly intended, they do, in fact learn" (Martin, 1976, p. 136). This refers to the informal expectations or messages that are conveyed in the social milieu of a training program, which in turn influence members' "values, attitudes, beliefs, and behaviors" (Sullivan, Lakoma, & Block, 2003). According to O'Callaghan (2013), in health education the learning environment is recognized as having three curricula: (a) the formal curriculum: the stated, intended, and offered curriculum, (b) the informal curriculum: the ad hoc interpersonal teaching that occurs within interactions between educators and students, and (c) the implicit learning, which is the set of messages that function at the institutional and cultural level.

Healthcare students can learn about palliative care via unintended messages communicated by faculty, other students, in their clinical placements, and through institutional constructs (Billings et al., 2010). This is the broad culture in which the learning occurs and includes the values, attitudes, and assumptions held by the educators and organization. These

underlying messages have been found to have a profound influence on the student learning experience (Wee & Hughes, 2007). Billings et al. (2010) identify that negative attitudes and poorly modeled behaviours may negatively influence learners' appreciation of palliative care. This may also lead to an "ethical erosion" of a learner's values and idealized way of practice (p. 320). It is important to be aware that the knowledge and skills gained in formal education about palliative care may be "undermined" by mixed messages in the hidden curriculum (Fins & Nilson, 2000; Sullivan, Lakoma, & Block, 2003). An example of the underlying messages sometimes inadvertently communicated in palliative care is that the technical, mechanical aspects of palliative care are prioritized over the skills needed to deliver care effectively and compassionately to an individual who is dying. Conversely, education offered in a setting that values palliative care may lead to improved attitudes and practice of end-of-life care (Anderson, Williams, Bost, & Barnard, 2008; Billings et al., 2010).

Also worthy of note is the idea of avoiding the topic of death within healthcare education, and avoidance as a conscious omission or an underlying message. An absence of death education is still a form of death education. The action of "not doing" perpetuates the status quo, endorsing denial and communicating attitudes and fears that can be harmful to our sense of being (Attig, 1992). Wass (2006) supports this when she states:

> Whether we know it or not, agree or disagree, children are recipients of death education from our actions as well as our inaction. Children grow up in society, learn from it, absorb its wisdom, myths and practices, its ambivalence, and its anxieties. (p. 27)

It is these children who are our future healthcare providers. Thus, developing insight into how learners integrate their formal, informal, and hidden curriculum is key to grounding

education offerings designed to produce healthcare providers who can provide high-quality and compassionate palliative care (Billings et al., 2010). By not including death education in our systems of learning, and not engaging actively in death education, we send the message that dying and death are events to be feared and ignored. We are not adequately preparing ourselves to care for each other when we face our own death (Kortes-Miller, 2014). As Olivia, Kate, Hayley, Abby, and Lily all communicated at different times throughout this study: "It should be mandatory for (healthcare) students to take a palliative care course."

Students graduating from undergraduate healthcare education programs need to be "prepared with foundational palliative approach knowledge and capabilities" (Ramjan, Costa, Hickman, Kearns, & Phillips, 2010, p. 86) because they will inevitably and regularly encounter death and dying in their professional practice as healthcare providers. They know this and identify this need. The undergraduate participants in this study were motivated to care for people who are dying and wanted to be prepared, both personally and professionally. As Kate shared:

"The more that I learn about how I can help somebody else have the right death for them makes me more motivated. Like I'm just learning more and more and more about it, and then getting that hands-on stuff is helpful as well because it just brought in a whole different aspect than before."

If higher education does not meet this increasing societal need, this avoidance will result in new professional graduates feeling unprepared, isolated, and anxious about caring for people who are dying and their families (Gillan et al., 2014; Johnson et al., 2009; Mallory, 2003). As Kate stated: "I don't want to be in that situation where someone needs me as a nurse and I don't know how to help them in that situation. So it's [simulation] a good opportunity." She expanded

on this line of thinking in her final interview when she offered: "This [simulation] will make me a better care provider being able to go into that [palliative/end of life] situation and see how it's very, very difficult but I will learn what I can do."

This returns to Simpson's (1979) statement: "We are not free to choose whether anyone will learn about death, though we have some choice about how they will learn" (p. 170). This statement was a driving force in this research. It is time for interprofessional healthcare educators to concentrate on the "how" piece and, as the participants in this study demonstrated, the use of HFS can be one of the pedagogical strategies employed to achieve this.

Socio-Cultural Level: Dying and Death in Canada

The current national socio-cultural climate in Canada demonstrates that many Canadians desire to improve the care of the dying and their families or to have more options for end-of-life care. Numerous researchers, advocacy groups, politicians, Canadian citizens, and healthcare organizations are working diligently to address the gaps in our system (Candian Hospice Palliative Care Association, Hospice Palliative Care Ontario, End-of Life Care Networks). Many Canadians would be shocked to learn there is still an overwhelming majority of Canadians who die each year without receiving any palliative care (Wilson, Birch, & Sheps, 2008). It has also been estimated that only 16-30% of Canadians have had any access to palliative care, and generally only had access within the last days or weeks of life. This critical lack of access is recognized as the most serious gap and growing public healthcare issue in Canada (Canadian Hospice Palliative Care Association, 2012).

Public Heath Palliative Care International (n.d.) insists on its website homepage that "death, dying, loss and care is everyone's responsibility," and the Canadian Medical Association is advocating for a national palliative care strategy (n.d). Yet in current North American society, elderly family members often spend their last days of living in nursing homes, hospitals, or extended care facilities. As a result, many family members are not active, hands-on caregivers involved in their dying (DeSpelder & Strickland, 2009). Families no longer learn about dying and death through the provision of care for their loved ones at home. Kate's own life experience reflects this deep disconnect: "I don't see death. I'm not around it. People who are dying are somewhere else." The prevalence of loss and death in the lives of children is increasing through exposure to divorce, school violence, media reports of murder, and the preponderance of television violence, yet parents tend to avoid communication with children about death. They often find themselves without support or guidance on how to engage in these discussions (Northcott & Wilson, 2001), and become worried and anxious (Wass, 2006).

Kellehear (1995) poses the question, "Why not death education for us all?" (p. 83), arguing that nothing in life is more certain than death and that we will encounter death throughout our lives. The longer we live—and Canadians are living longer than ever—the more experiences we will have with death. Recognizing the universality of death as a shared life experience, and the healthcare system's concentration on best-practice interventions throughout the continuum of life, it stands to reason that there is a need to inform citizens about healthy ways to die. The bigger challenge, argues Rumbold (2011), is "to understand health as inclusive of human mortality" (p. 80). The message that the participants in this study felt—that an education including dying and death was integral to their higher education experience—was heard clearly. Again,

as shared earlier in this chapter by Lily and now echoed by Abby and repeated by more than half of the other participants in this study: "A course in palliative care should be mandatory for all university students!"

Corr (2006) noted that "all the mediating and expressive functions of a societal death system involve education" (p. 47), and argued that "no one can expect a democratic system to function effectively when its educational underpinnings on matters such as these are inadequate" (p. 54). For example, caring for individuals who are dying requires recognition of the needs of vulnerable persons, and drawing attention to how and why support should be provided. Working from a constructivist theoretical perspective, educators in Kindergarten to Grade 12 schools can begin teaching about death as a normative life experience through curricula that integrates dying and death into social and physical sciences, literature, and the arts in ways that are culturally sensitive, age appropriate, and that build from students' prior knowledge. This education can be continued through intergenerational learning and into healthcare education in higher education. Learning about death promotes quality of living as we learn throughout our lives (Hadad, 2009). This promotion of quality of living through dying can also be motivational for undergraduate learners, as demonstrated by Chloe who shared that she wanted to use her interprofessional palliative care education in her home community. She stated: "I want to help my community to learn to die better."

When people are educated appropriately on matters of death and dying, there can be more opportunities for stakeholders to initiate and implement sound public policy (Dennis, 2009; Hadad, 2009) on important issues such as assisted dying and allocation of resources at the end of life. As societies adjust to changing demographics of age and cultural diversity, its informed citi-

zens can be tasked with and given greater responsibility to contribute to policy development on issues such as the definition of death, physician-assisted dying, euthanasia, organ and tissue donation, and capital punishment through their votes and action in the political process. From a constructivist perspective, it is essential that death education occur at each level of society and respect and incorporate prior understandings and knowledge built from an informed, respectful, and shared understanding of these critical policy issues. The grassroots efforts of educators in our schools and communities are important foundations in the process of understanding dying and death.

Death systems are not neutral; they reflect attitudes and perspectives through which education is delivered. According to Dennis (2009), death education is now perceived as having replaced sex as the last "taboo"—despite it being every bit as essential to society's and individual's developmental processes as sex. Each society speaks through its death system, identifying how its members cope with death currently and predicting how they will strive to cope with death in the future. These messages are part of the milieu in which humanity lives and thrives and are "powerful and omnipresent" (Corr, 2006, p. 48). As long as death continues to be an unknown phenomenon or shrouded in mystery and taboo, there will always be fear attached to it. Kellehear (1995) states that fear of death as the "unknown" is a "contradiction in terms" because people will "fill the unknown with particular fears that they associate with death" (p. 83), but these fears are founded in ignorance, especially ignorance of experience. These fears may include a painful death or a concept of no life after death. The goal of constructivist death education is not to remove this fear, as some variation of it will always be present, but rather to explore ways in which individuals can effectively incorporate this fear, as a respect for the dying process, into their liv-

ing (Miller & Rotatori, 1986). As Lily shared, "Sometimes I'm scared of dying but other times it's more a respect of how hard I think it can be!" And Olivia offered, "My palliative care courses are important to me. I want and need to learn about dying and having a good death for family... and myself."

Not everyone has the opportunity to be educated about death by those who are actively engaged in the process of dying. Death education is needed so that when it is time to die, individuals and those to whom they are connected have already begun to grapple with their understanding and integration of the meaning of dying in living (Wass, 2004). In all of its diverse forms—formal, informal, academic, public, and cultural, and as expressed, replicated, and created via the media, religion, art and language—death education serves to provide society's members with materials to suggest insights, guide personal reflection, and make meaning. Ultimately, these diverse arenas contribute tools to assist people in coping more effectively with and developing greater understanding about dying and death, for themselves and those they love (DeSpelder & Strickland, 2009). When death education is viewed and addressed through an experiential, constructivist pedagogy, individuals, consumers, caregivers, and citizens of society are supported in making informed decisions about the implications of death throughout their lives (Hadad, 2009; Wass, 2004). We need death education across our lifespan, as we are all dying to know.

Summary

Central to the provision of equal access to palliative and end-of-life care for all Canadians is a great need for an adequate number of effectively trained healthcare providers with specialized palliative care education. Effective palliative care practice is when healthcare

providers have the necessary knowledge and expertise to improve not only the daily delivery of care but also the scholarship and leadership for palliative care across Canada (Parliamentary Committee on Palliative and Compassionate Care, 2011). The interprofessional undergraduate students in this study demonstrated through their reflections on their experiences in the specialized palliative care simulation labs that they strongly desire an education that connects their "hands, head, and heart" (3H) and supports them in learning to care for dying Canadians and their families. This 3H education will impact these new healthcare professionals personally as individuals, in the roles and services that they will be making in health organizations, and in the socio-cultural contributions that they will make as members of Canadian society, as they communicate their close understandings of death and dying from their daily work and practice.

The next and concluding chapter of this dissertation will provide a review of the dissertation and present another set of implications and recommendations for specific areas of palliative care education, practice, and research. It will conclude with final personal reflections.

CHAPTER SEVEN

A MATTER OF LIFE AND DEATH: EDUCATING THE PALLIATIVE CARE PROVIDERS OF TOMORROW

This dissertation has provided a close examination of the advantages of using high fidelity simulation (HFS) in healthcare education, and particularly in palliative care. The learning benefits of HFS are many: it has been found to be an effective educational tool particularly suited to a constructivist pedagogy (Parker & Myrick, 2011), an experiential pedagogy (Adamson, 2010), and praxis pedagogy (Baker, Pulling, McGraw, Damon-Dagone, Hopkins-Rosseel, & Medves, 2008). Healthcare education, such as palliative care, that utilizes HFS can provide a safe and flexible learning environment that emotionally engages the learner and encourages ongoing reflection, during and following the simulation session. That being said, HFS simulation is an imperfect construct with some challenges. As a technology, it is unable to completely represent the uniqueness of a human being and their experience of dying because humans are very complex, emergent in their encounters of dying, and contextual with families, histories, dreams, realities, and wishes. Living and dying transcends what technology can offer and what can be "realistically" represented in simulation. Yet simulation, both as a technology and a pedagogical strategy for learning, can provide a connection to the experience of greater reality than students might otherwise experience, and can provide that connection in a safe intermediary environment between university preparation and clinical practice.

The purpose of this final chapter is twofold. First, I review my dissertation research study using Tracy's (2010) eight key markers of quality in qualitative research as a guide. Second, based on the results of my research, I present implications and recommendations for specific areas of pedagogy, practice, and research, as they relate to undergraduate interprofessional palliative care education. The chapter concludes with suggestions for future research, and some personal reflections.

Meeting the Criteria for Quality Qualitative Research

In response to Lincoln and Guba's (1985) challenge: "How can an inquirer persuade his or her audiences that the research findings of an inquiry are worth paying attention to?" (p. 290), Tracy (2010) conceptualized eight "Big-Tent" (p. 847) criteria for qualitative research. This conceptualization was designed to provide a framework that qualitative scholars can use to encourage dialogue and learning from various research paradigms. Tracy's (2010) eight "Big-Tent" criteria include the following qualities: worthy topic, rich rigour, sincerity, credibility, resonance, significant contribution, ethical research, and meaningful coherence. I will utilize these criteria to appraise and defend my own doctoral study.

Worthy Topic

Tracy (2010) describes good quality qualitative research as being "relevant, timely, significant, interesting, or evocative" (p. 840). I argue that my research study contributes to the understanding of a comprehensive delivery of interprofessional palliative care education, which in turn could improve the care of individuals who are dying and their families. It is timely from a healthcare education perspective because the study examines the use of simulation in an innovative way and focuses on interprofessional palliative care by answering the call of Walton, Chute,

and Ball (2011), that: “It is time for the discovery of new knowledge and the development of pedagogy of high fidelity simulation” (p. 299). This study is also significant and relevant on a national scale as Canadians are facing an aging tsunami in the healthcare system, and healthcare educators are already challenged to produce job-ready palliative care providers capable of responding to this exponentially growing healthcare crisis.

Rich Rigour

According to Tracy (2010), rigour in qualitative research is assessed by the care and richness of data collection alongside a deliberative practice of analysis. Tracy (2010) suggests a number of questions pertaining to rigour that a qualitative researcher may ask, including: Did the researcher spend enough time to gather interesting and significant data? In my doctoral study, the data was collected from an interprofessional group of undergraduate learners during the simulation lab sessions, in focus groups that were the simulation debriefings, and via individual interviews over a period of six months, subsequent to the simulation lab sessions. This appeared to be an ample amount of data collection and a long enough time period of study; I realized this when participants began to repeat themselves with comments such as, “I think I told you this already.”

Another question Tracy (2010) poses in terms of rigour is the following: Is the context or sample appropriate given the goals of the study? I would argue that the sample for my study was appropriate—a small interprofessional group of undergraduate learners, representing years 2-4 of their program—however, the sample did lack an adequate representation of males. While palliative care services and support tend to be delivered primarily by female providers, and the overwhelming majority of students in palliative care courses at this study’s university site tend to be

predominantly female, I did try to actively recruit for male participants. Two men did agree initially to participate in the study, but unfortunately could not or did not continue.

Sincerity

Tracy (2010) describes the need for sincerity in qualitative research as a process where the study achieves "self-reflexivity, vulnerability, honesty, transparency, and data auditing" (p. 841). Tracy argues that sincerity in a qualitative research project necessitates that the researchers are honest and transparent about their biases, goals, decisions, and imperfections, and understand how these traits may have impacted the study. In Chapter 1 of this dissertation, I very clearly articulated my motivation for doing this research. I situated myself, my experiences, and my commitments as a palliative care educator within the context of the study, and outlined my roles and responsibilities as a researcher. I was also very open with my participants about my experiences as a doctoral student, a palliative care provider, and a patient who has faced death, so that they would have greater insight into why I was engaging in this research.

Credibility

The importance of credibility in qualitative research is recognized by many scholars (Pillow, 2003; Richard & Morse, 2007; Richardson, 2001; Urquhart, 2013) because credibility establishes the trustworthiness and plausibility of the research findings (Tracy, 2010). Trustworthiness and plausibility are qualities within research that a reader can align themselves with and depend upon to guide future decisions. Tracy (2010) argues that one of the most important means of attaining credibility in qualitative research representation is through thick descriptions that provide in-depth illustrations, contextual information, and detail that establish meanings. It is important that the researcher account for the complexity and circumstances of the data and can articulate

these layers, so that meaning is not lost when data is separated from its original or primary source context (Tracy, 2010). In my study, rich and robust descriptions were utilized to describe the data and to contextualize the study. It is the recognition of the need for this contextualization that drove the development of Chapter 4, which provides the reader with insights into the simulation experiences that the participants were exposed to as part of this study. Several procedures for ensuring credibility and rigour of analysis were incorporated into this study from the start of the research process: I began writing thick descriptions with each step, invited peer reviews of observations and check-ins with the participants, and had an audit trail of field notes, observations, memos, and research writing that could stand on its own as strongly constructed, rich texts.

The constructivist grounded theory methodology used for this study design aimed to reveal, through a methodical and credible process of grounding, each data piece and research interaction to understand the deeper "story" of the simulation intervention, alongside the "stories" of the undergraduate participants' experiences, all related and filtered through the participants' learning processes, perceptions, and meanings attached to the simulation labs. Furthermore, as the researcher "story-teller," I strove to thoroughly document the process of how the simulation lab experiences unfolded, and I analyzed the data to depict participants' emerging stories of death and palliative care learning. In my role as research-documentarian, I made sure that I remained an active listener during the simulation labs and individual interviews, using techniques such as probing, clarification, and active reflection. These are research skills in which I am well-versed as an experienced social worker, so I know how to support an environment in which deep sharing can manifest and result in rich data collection. Possessing these active listening skills,

alongside my established research interviewing record, gave me confidence and credibility, and allowed me to delve into a deeper level of dialogue with the participants.

Resonance

Tracy (2010) uses the term resonance to "refer to the research's ability to meaningfully reverberate and affect an audience" (p. 844). One of the characteristics of resonance that Tracy identifies is "transferability," which she describes as a research quality achieved when the reader of the study connects the "story" of the research with their own situation or experience. The findings in this study are transferable to any individual looking to learn more about undergraduate healthcare education or seeking to inquire more about the palliative approach to care. The core 3H theory of "Learning with Hands, Head, and Heart" will resonate across professional disciplines in higher education, to both pre- and post- licensure level practitioners. For example, in one small study of which I was a member of a research team and the participants were unregulated care-providers in long-term care, the desire for greater hands-on learning opportunities and the ability to observe and learn from other care providers was clearly stated and repeated by the participants (see Kortes-Miller, Jones-Bonofiglio, Hendrickson, & Kelley, 2014).

Conclusions from this doctoral study are clear and evidentiary in the benefits of the use of HFS as a pedagogical strategy for interprofessional palliative care education. My findings are consistent with but more detailed than other HFS research in palliative care education. For example, students in one study (Kameg, Howard, Clochesy, Mitchell, & Suresky, 2010) reported general satisfaction with the simulation experience, stating that simulation was a valuable learning experience that should be incorporated into the curriculum. My study participants expressed strongly and repeatedly that they found HFS to be a valuable educational tool that they wanted in

many of their healthcare courses, especially relevant to enhance online courses such as Gerontology 101: Introduction to Palliative Care.

The results of this doctoral study are also consistent with studies in simulation literature that focused specifically on the use of HFS for teaching palliative or end-of life care (Gillan, Jeong, & van der Riet, 2013; Leighton & Dubas, 2009; Smith-Stoner, 2009; Sperlazza & Cangelosi, 2009). In each study that I reviewed that inquired into the use of HFS in palliative care education, the research emphasized the importance of fidelity and realistic scenarios, opportunities for learners to engage with the mannequin, and the importance of debriefing (Gillan et al., 2014; Leighton & Dubas, 2009; Smith-Stoner, 2009; Sperlazza & Cangelosi, 2009). The importance of each of these characteristics were highlighted and underscored in the undergraduate student experiences of this 3H study.

Another finding of my research that has confirmatory significance concentrates on the importance of healthcare providers receiving professional education on the specific issue of death and dying communication. Both Gaba (2004) and Leighton and Dubas (2009) found that by learning how to talk to patients and their families when death is near, the comfort level of students providing end-of-life care increases. I observed in this study that a number of participants reported that their comfort level around dying and death had increased since partaking in the simulation lab experiences. Participants also reported that they found themselves engaging in these types of conversations more frequently, whether on clinical placement or with family and friends, as a result of becoming more comfortable talking about issues relating to death and dying.

Significant Contribution

Tracy (2010) encourages qualitative researchers to pose the following questions when judging the significance of a research study's contribution: Does the study extend knowledge? Improve practice? Generate ongoing research? Liberate or empower? (p.845). Tracy argues that these questions help to demonstrate the contribution that research can make, whether it is theoretical significance, heuristic significance, practical significance, or methodological significance. This 3H study not only adds to the limited literature on the effects of HFS as a pedagogical strategy for teaching end-of-life care, but it also provides insights specifically related to the undergraduate student experience in a new technological learning environment.

From a theoretical perspective, this research offers a new theory (3H) that can be used by palliative care educators to ground the simulation learning experience for undergraduate learners. Currently, the simulation literature is growing with research describing the efficacy of simulation as a tool for healthcare content and skills. The gap in the research, according to Cook, Brydges, Hamstra, Zendejas, Szostek, Wang, and Hatala (2012), lies in the exploration and examination of *how*, *when*, *why,* and *with whom* simulation works as a pedagogical tool. The use of simulation to teach, reinforce, and assess self-reflection is a relatively new idea, and is perceived to be a strong model for encouraging reflective practice (Bandali, Parker, Mummery, & Preece, 2008).

The new grounded theory of this study, "Learning with Hands, Head, and Heart," contributes to three areas of healthcare education: palliative, interprofessional, and simulation, articulating the success of this learning experience from the perspective of the student. Based on the findings of this study it can be concluded that HFS has the potential to be an effective pedagogical strategy for interprofessional palliative care education for undergraduate students. The findings of this study, and ultimately the substantive theory that emerged from it, will inevitably in-

crease and deepen understandings of the use of HFS technology as a teaching tool for palliative care education interprofessional undergraduates.

Recent studies (Gillan et al., 2014; Leighton & Dubas, 2009) have begun to explore simulation as a teaching and learning strategy for palliative care education, but have tended to focus on one healthcare discipline: either medicine or nursing. There is a paucity of research from the interprofessional undergraduate healthcare student perspective, which highlights a need to examine this pedagogical strategy in relation to these learners. This research begins the process of articulating the positive experience that undergraduate participants had with collaborative, interprofessional learning in the simulation lab. This study has both confirmatory and innovative significance, providing a foundation for the further development of HFS education for interprofessional undergraduate healthcare students.

This study also has heuristic significance as it provides the groundwork for opportunities for future research. For example, further research is recommended for exploring the use of HFS for the development of critical thinking in interprofessional undergraduate palliative/healthcare learners. Critical judgment, the ability to decide what is "best" in a situation (Coles, 2002), is an important outcome for undergraduate students as they prepare to work in the healthcare field and encounter individuals who are dying and their families.

More research could be conducted to explore the use of HFS for evaluation of knowledge and skill performance. Two participants in this study suggested that HFS could replace the traditional written exam and could be used to evaluate interprofessional undergraduate learners on how they integrate palliative care knowledge into their practice. Also, additional research exploring the use of HFS in the development of interprofessional teams to prepare undergraduate learn-

ers for a real practice context, in which they are expected to function as a member of a team, is imperative. This study recognized the need for interprofessional learners to participate in collaborative learning opportunities, but examining the use of HFS for more formalized teamwork skill development would also be a significant research opportunity.

This study also presents practical research significance. The present national climate in Canada demonstrates a strong desire to improve the care of the dying and their families. Numerous researchers, advocacy groups, politicians, Canadian citizens, and healthcare organizations are working diligently to address the gaps in our system. An overwhelming majority of Canadians who die each year do not receive palliative care (Wilson, Birch, & Sheps, 2008) and it is estimated that only 16-30% of Canadians have access to palliative care and generally only within the last days or weeks of life. This lack of access is recognized as a serious gap and a growing public healthcare issue in Canada (CHPCA, 2012).

Central to the provision of equal access of palliative and end-of-life care to Canadians is a lack of healthcare providers educated in this delivery of care (Parliamentary Committee on Palliative and Compassionate Care, 2011, CHPCA, 2012). Presently in Canada, there are not enough healthcare providers educated in palliative care to meet the needs of our aging population (CHPCA, 2012). In order to improve access to palliative care, there needs to be education and training for healthcare providers to ensure they have the necessary knowledge and expertise to improve not only the delivery of palliative care in Canada, but also scholarship and leadership (Parliamentary Committee on Palliative and Compassionate Care, 2011).

Healthcare providers encounter death in every work setting (Wee & Hughes, 2007). A lack of education is a major contributing factor for inadequate palliative care (Wee & Hughes,

2007; Gillan et al., 2014; WHO, 2004). This reality underlines the need for undergraduate healthcare students to receive palliative care education so that they can provide competent and compassionate care (McClement, Care, & Dean, 2005). As 100 percent of the patients that student healthcare providers will encounter in their future careers will eventually die, it is essential that students receive education in this area. This study offers a theory supported by the undergraduate learner who will soon be practicing healthcare providers, and it was these learners who recognized that their university professional education needs to be delivered in a model beyond a typical, didactic delivery. By combining the 3Hs—Hands, Head, and Heart in a simulated (almost real) clinical setting with a speaking patient, the undergraduate learners engaged in and preferred a holistic, whole-provider palliative care education experience.

Ethical Research

The seventh "big tent" criterion for qualitative research concerns ethical conduct. This criterion emphasizes that the researcher must reflect on her actions and the impact they have on participants, colleagues, and the fields to which the research contributes (Tracy, 2010). Tracy recognizes that there are a variety of practices supporting ethical approaches in qualitative research, including procedural, situational, and relational ethics.

Procedural ethics criteria were described by Tracy (2010) as the ethical actions dictated by governing organizations, such as Institutional Review Boards (or REB in Canada). In this study, ethics approval was obtained from the Review Ethics Committee (REB) at Lakehead University (Please see Appendix J). Participation was voluntary, and informed consent for participation was obtained. To protect confidentiality, interviews were conducted in mutually agreed-upon private locations. No faculty (who may have influence over the participants' future

grades) or individuals from the sampling site university was given notice of the participants' names or other forms of identification. In writing this dissertation I included only the participant details that were pertinent to the study. I collected, managed, analyzed, and stored all the data as per REB guidelines. Code numbers were assigned to transcripts to assist with tracking information but only I, as the researcher, had access to the information linking participants to their data. All data, including computer files, audio recordings, video recordings, memos, emails, written notes, and transcripts were secured in my home office.

Situational ethics in research poses the question, "Do the means justify the ends?" (Tracy, 2010, p. 847). This study meets this criterion as it is unethical for individuals to work in situations where they have no previous knowledge or experience, and by gaining exposure to death and dying in undergraduate education, healthcare students will have a foundation and confidence to deliver care in a safe environment. This environment will be safe not only for patients, who will receive care from an educated, compassionate care provider, but also safe for the (new) professional providing the care, because they will be equipped with the knowledge and tools to deliver it.

Palliative care education covers topics, issues, and situations that tend to be emotionally charged. In this study, participants explored their feelings and beliefs related to those topics and issues. For some participants, this experience was emotionally challenging, and for others it reignited unresolved grief from the past or raised current emotionally difficult issues in their lives. All participants reported that this served to be valuable learning for them, and that the safety of the simulation lab provided a much better forum to engage in this type of reflection than would the bedside of a person who is dying. Support arrangements were made with the

counseling department at the Lakehead University Student Health Centre, in case participants exhibited a need or requested it, but to the best of my knowledge no participants required this support or took advantage of the services offered. Most participants appeared to think that the opportunities for reflection in the debriefing segment of the simulation lab or individual interviews offered adequate support. I am confident in my skills as a seasoned social worker and a palliative care educator who is regularly exposed to individuals having strong reactions to grief and loss. Given this, I am confident that the environment created in this research was a supportive and caring one that could be described as situationally ethical.

Relational ethics are the third type of ethics that Tracy identifies. Tracy describes relational ethics as a researcher stance that involves an "ethical self-consciousness in which researchers are mindful of their character, actions, and consequences on others" (2010, p. 847). Relational ethics acknowledges the need for mutual respect and connectedness between the participants and the researcher, and that the relationship should be mutually reciprocal. To demonstrate appreciation for their time and energy dedicated to this study, participants were entered into a draw to receive an iPod Touch and a Chapters gift certificate. These rewards were meant to be symbolic of my appreciation of their participation and time, rather than to serve as "payment." It is interesting to note that the majority of participants reported forgetting that this draw was going to occur when they were reminded during the last individual interview. Of greater value to the participants was the certificate they received, outlining the additional palliative care education they had received from the university research centre where I am an affiliate. This research centre is responsible for a great deal of the continuing palliative care education that occurs in the region, and participants reported that this would be valuable for their

resumes and career development.

When I designed this study I took into consideration the impacts that it might have on participants, including the emotional risk that sometimes results from talking about dying and death. Perhaps naively, I did not consider that I too might experience distress in my role as a researcher resulting from my concern for the participants. Throughout the study I developed relationships with the participants. I felt connected to them and invested in their future education development and career plans. As we examined their experiences with interprofessional palliative care education, I was excited by their interest in the field and wanted to support them in cultivating a commitment that could transfer to a potential career path. This is not an unusual occurrence for palliative care or gerontology educators, who might perceive themselves as champions for their respective field and possess a desire to see it grow and expand with new, dedicated, and passionate members.

There is a shortage of palliative care providers in Canada and palliative care educators such as myself are always on the outlook to recruit capable providers. I know firsthand, as a former social worker working in palliative care, how challenging the work can be on a daily basis, let alone when the provider does not feel adequately prepared or resourced to do their job. As I listened and talked with participants about their experiences in palliative care education and how their brief experiences in the simulation lab had resonated and impacted on their learning, I felt that, in some ways, I had let them down in my previous role as an educator. I felt I had let them down because I was introducing them to an important field, developing their interest in this type of HFS healthcare education, but powerless or unable to direct them to courses or other opportunities that would allow them to develop more palliative care abilities through simulation. It was

hard to respond to participants when they asked why the simulation lab was not part of their undergraduate education, as they recognized how different and potentially improved their learning experiences might have been. They were all well-versed in the need for moving their learning from theory into practice (Adamson, 2010; Council for the Accreditation of Healthcare Simulation Programs (CAHSP), 2012), but where they identified their education as lacking and their knowledge as having serious gaps was exactly in this critical domain of professional capacity. Participants saw simulation as a fairly simple solution to some of their concerns with their gaps in higher education, and I was unable to make them any promises that this would become an integral part of healthcare education, currently or in the near future. As a researcher, this caused me ethical discomfort when reflecting on my relational responsibilities to my participants.

Meaningful Coherence

The final "big tent" criterion identified by Tracy (2010) is meaningful coherence. Here she offers that meaningfully coherent studies need to meet four benchmarks: "(a) achieve their stated purpose; (b) accomplish what they espouse to be about; (c) use methods and representation practices that partner well with espoused theories and paradigms and (d) attentively interconnect literature reviewed with research foci, methods and findings" (p. 848). The purpose of my doctoral study was to examine the core experiences of undergraduate students as they explored the pedagogical uses of simulation technologies and how they may enhance and support interprofessional palliative care education at a small university in Ontario. As outlined in Chapter 5, the research answered the following questions: *What forms of knowledge and processes of learning are generated in an interprofessional palliative care simulation learning environment? And what is the nature of the interprofessional palliative care simulation experience from the learner's per-*

spective? Overall, the research focused on the intersection of palliative care education, IPE, and simulation-based education. The remainder of this chapter will demonstrate how the research interconnects with the established literature, and will outline recommendations and suggestions for future research.

Implications and Recommendations for Education, Practice, and Research

This study had multiple entry points because it crosses over several disciplines in an attempt to address the interprofessional nature of my research purpose. These multiple research entry points—the aims of simulation-enhanced or technology-intensive undergraduate teaching, interprofessional collaborative work, and palliative care education—are all necessary to integrate the multiplicities of clinical knowledge, interprofessional competencies, and reflective practices required for improving patient and family care at the end of life. The next section examines each of these entry points and offer implications and recommendations for education, practice, and research that evolved from this study.

Simulation-Based Healthcare Education

Student opinion of simulation-based education using HFS is generally positive and enthusiastic (Morgan & Cleave-Hogg, 2000; Weller, 2004); this enthusiastic response was strongly communicated by participants in this study. Student participation in HFS has found to be both an effective and efficient tool for deepening the learning process (Baker et al., 2008; Decker, Sportsman, Puetz, & Billings, 2008; Masters, O'Toole, Baker, & Jodon, 2012). And it is this opportunity for deepening the learning process that the "Learning with Hands, Head, and Heart" theory conveys, resulting from the strong desire for and connection to this learning experience, as expressed by the participants in this study.

Simulation-based education offers the advantage of providing greater rigour and efficiency than opportunistic clinical experiences. It further serves to provide opportunity for undergraduate learners to develop clinical skills, knowledge, and competency before engaging in exposure to real patients (Weller, Nestel, Brooks, & Conn, 2012). Educators in the simulation lab are able to facilitate scenarios in a controlled manner, using specially designed software and their own knowledge and practice, to provide an opportunity for students to develop their skills and knowledge in a secure environment. The participants in this study communicated a strong desire for access to a safe and controlled environment in which they could develop their knowledge of palliative care and understanding of dying and death.

Simulation provides a chance for learners to test newly acquired knowledge prior to imparting it in a clinical environment (Issenberg, McGaghie, Petrusa, Gordon, & Scalese, 2005). It was this opportunity to engage with the learning, in a "hands on" experiential manner, that the undergraduate participants spoke of as lacking in their education. They assessed simulation as being able to fill that gap. Recognizing and appreciating that hands-on experience with human recipients of care is fundamental to the development of future healthcare providers, HFS can provide value, instruction, and support to many domains of undergraduate healthcare education (Weller et al., 2012). The gap in the research lies in the exploration and examination of how, when, and why simulation works as pedagogical tool (Cook, Brydges, Hamstra, Zendejas, Szostek, Wang, & Hatala, 2012). The grounded theory that emerged from this research offers a glimpse into this exploration and argues that simulation works for interprofessional undergraduate learners of palliative care because it offers them the opportunity to learn in a safe environment with their "hands, head, and heart" together.

Interprofessional Education

Very little research has been conducted about interprofessional education in palliative care, despite the field priding itself on the interprofessional nature and approach to the delivery of care (MacLeod & Egan, 2007). There is a shift in the focus of healthcare education curricula in Canada (Reeves, Perrier, Goldman, Freeth, & Zwarenstein, 2013) from isolated "silo" learning to education that provides opportunity for interactive learning between and among students from various health disciplines (Robertson & Bandali, 2008). This shift was evident in this study as learning about palliative care in an interprofessional context did not appear to seem novel to the participants. They spoke frequently of the learning that occurred when they worked together in the simulation lab. This idea of "working together" meant that they were able to talk, offer support, and observe each other during the simulation experience, thus increasing their knowledge in an informal way of other healthcare disciplines and approaches. Multiple studies have found that HFS can be utilized to enhance teamwork skills, an important aspect of IPE (Kaddoura, 2010, Kuehster & Hall, 2010). Winterbottom and Seoane (2012) report that student satisfaction with IPE participation is generally positive. They found that the student satisfaction originates from learning through collaboration and dialogue, and in experiential learning through an examination of real-life clinical scenarios.

It is believed that IPE encourages the development of collaborative abilities and promotes skills linked to relationship-building in students preparing for professional careers in the health and/or human services (D'Eon, 2005). Successful collaborative practice incorporates respect for other professions, an understanding of roles and responsibilities, and effective communication

(Barr, Koppel, Reeves, Hammick, & Freeth, 2005; Clark, 2006; D'Amour & Oandasa, 2005; Reeves, Lewin, Espin, & Zwarenstein, 2010).

There is a clear need for IPE initiatives to be grounded in educational contexts. Educational theory impacts the pedagogy, curriculum, and teaching strategies used in university IPE and depends on the successful implementation of this critical initiative (Hall & Weaver, 2001). IPE is found to be constructivist in nature as IPE facilitators need to possess facilitation skills to engage learners and support interpersonal interaction and learning, to develop a collaborative approach to practice (Winterbottom & Seoane, 2012). Barr et al. (2005) report that IPE has been linked to a number of different theories including adult learning (Knowles, 1985; Schön, 1983), experiential learning (Kolb, 1984), and situated learning (Lave & Wenger, 1991).

Educators of future healthcare providers have a responsibility to prepare workforce-ready graduates who can effectively practice as members of an interprofessional team. IPE provides opportunity to develop interpersonal skills and knowledge by encouraging favourable collaborative attitudes and behaviours amongst healthcare providers. Student interprofessional learning is "education specifically designed to help students to function as part of the health care team when they graduate" (Allison, 2007, p. 565).

The result of IPE simulation learning is that students have opportunity to learn with, from, and about one another (Bandali et al., 2008), and deepen their understanding of their shared roles and responsibilities in caring for patients (Masters et al., 2012). As Winterbottom and Seoane (2012) state: "Enhancing interprofessional skills in education and clinical practice allows diverse professionals to work together to deliver high-quality, efficient, team-based care and to improve health outcomes" (p. 393).

Palliative Care Education

Healthcare educators are facing new challenges in the 21st century. Central to these challenges for Canadians is a lack of healthcare providers educated in this delivery of care. Presently in Canada, there are simply not enough healthcare providers educated in palliative care to meet the needs of our aging population. In order to improve access to palliative care, there needs to be education and training for healthcare providers to ensure they have the necessary knowledge and expertise to improve not only the delivery of palliative care in Canada, but also the scholarship and leadership of a palliative approach to care (Parliamentary Committee on Palliative and Compassionate Care, 2011).

An aging patient population that has shifted to a predominantly outpatient population is limiting the ability of new healthcare providers to develop and fine-tune their skills. The willingness of the patient population to have inexperienced undergraduate learners learn "on them" has changed, along with a heightened public awareness of issues regarding patient safety (Jeffries & Rizzolo, 2006). Healthcare curricula are moving away from didactic lectures and toward an experiential learning environment where students focus on learning while doing. As Jeffries & Rizzolo (2006) describe, "education methodology is becoming more focused on knowing how, rather than knowing all" (p. e13).

As educators in interprofessional palliative care education, we need to search for new and innovative ways to ensure that our undergraduate learners receive the education they need, to face the challenges of an aging and vulnerable population. The substantive grounded theory "Learning with Hands, Head, and Heart" that emerged from this study offers HFS as one of the potential innovative learning strategies that can support undergraduate healthcare learners to

increase their knowledge and experience in providing care with a palliative approach.

No studies of interprofessional palliative care education interventions for undergraduate healthcare learners that would enable comparisons with the present study were found. Given the rapid growth and development in this field, extensive research in this area is required to allow for appropriate curriculum development, implementation, and evaluation. The overarching goal of this future research would be, as it was for this study, to improve the delivery of this education and ultimately improve the care of Canadians who are dying and their families. This study indicates the value of interprofessional palliative care education using HFS from the undergraduate student perspective, and should encourage educators to continue to provide experiential learning using simulation technology as part of palliative care education programs.

It is time to fulfill the promise to our undergraduate interprofessional learners in palliative care and explore sustainable strategies to integrate HFS into their learning experiences.

Recommendations for Future Research

This constructivist grounded theory study lays a foundation in developing understanding of how the pedagogical uses of simulation technologies may enhance and support interprofessional palliative care education. This study offers a preliminary response to Gillan et al.'s (2014) call to give "urgent attention … to embedding theoretical content in sufficient depth combined with teaching strategies to promote critical reflection in end of life care" (p. 332). Palliative care educators in higher education programs know that death and palliative care education still do not have a firm or established presence within undergraduate healthcare curricula. Furthermore, opportunities for clinical application and placement experiences are rare or inadequate.

As often happens in research, the contributions of study findings lead to further research questions. This grounded theory study piloted a new pedagogical strategy for interprofessional palliative care education and as such allowed for a limited inclusion of students, and a minimal application of the approach within the healthcare population. There is much research still to be done. This future research could include different approaches. For example, the participant groups in this study had slightly different simulation experiences because of group dynamics. Each group of participants had different questions, responses, and actions during each simulation. It might be worthwhile to do a case study methodology approach following the student participants over a longer time period of time, such as two semesters (8 months) during which they complete four simulation labs focusing on pertinent topics in palliative care such as pain management, advance care planning, communication, and working with families. This type of research could also be conducted using other learning outcomes, such as knowledge and skill performance. For example, students' perceptions of their competency of a specific skill performed during simulations could be evaluated. This possibility originated from a participant in this study who suggested that evaluation in the simulation lab may be more illuminating and accurate than evaluation via a multiple choice exam. A simulation lab evaluation could demonstrate how interprofessional undergraduate learners integrate their palliative care knowledge into practice.

Beyond an integration of palliative care practical knowledge, death education allows future healthcare providers to examine death, which may support them in developing a greater appreciation, understanding, and reverence for life (Eddy & Alles, 1983). Death education is needed so that when it is our turn to die, or we are called upon to provide care for someone who is dying, we have already begun to grapple with our understanding and integration of the meaning

of dying in our lives. Unfortunately, it continues to be well-documented that healthcare professionals are insufficiently prepared to care for individuals who are dying and their families (Fineberg, Wenger, & Forrow, 2004; Gillian et al., 2014; Ury, Berkman, Weber, Pignotti, & Leipzig, 2003) and that educators are still uncertain as to how to better increase the comfort level around dying and death. Given that a comfort level around dying and death is integral to this form of care giving, and that the participants in this study reported feeling more comfortable after two simulation lab exercises, more research could reveal further understanding of how the element of comfort around death and dying could be integrated into palliative care education.

The simulation labs provided a brief opportunity for the participants to explore their values, beliefs and attitudes towards dying and death and demonstrated that more work could and should be done here. Participants had opportunity to put their attitudes and belief into action with the mannequin, view the interactions of others and discuss their thoughts and integration of learning in the debriefing sessions. This is an area that I would expand on in future simulation sessions as there is great opportunity to examine this closer within the context of reflective practice (Brockbank & McGill, 2007).

Further research is also recommended to explore the use of HFS for the development of critical thinking. Critical thinking is an important outcome for undergraduate students as they prepare to work in the healthcare field and encounter individuals who are dying and their families. HFS could offer the opportunity for students to participate in a scenario that requires them to problem-solve and work together as an interprofessional team, to best serve the interests of individuals who are dying and their families. The complexity of palliative care calls for coordination and collaboration among an interprofessional team (Fineberg et al., 2004). Greater focus on

teamwork would take the conscious collaborative learning that was facilitated in this study to a more advanced level. More research in this area would also begin to fulfill the need for exploring the use of HFS in the development of interprofessional teams to prepare undergraduate learners for a real practice context in which they are expected to function as a member of a team.

Finally, further research needs to be conducted to examine the relationships between education, clinical practice, and the individual who is dying and their family's experience of care. Patient and family care at the end of life will only be improved when interprofessional palliative care education is enhanced and supported by evaluation and research within undergraduate, graduate, and continuing education (Ferrell & Coyle, 2010).

Final Reflections

There is much work to be done to advance interprofessional palliative care education in undergraduate programs. It is highly unlikely that there is one formula or sole pedagogical strategy to educate future healthcare providers to care for individuals who are dying and their families. The provision of a palliative approach to care challenges the hands, head, and heart of healthcare providers. It demands that healthcare providers use all aspects of themselves in their caring. It is not enough to only be versed in the tasks and skills of palliation; palliative care professionals need to also possess strong self-awareness and high levels of comfort and confidence around dying and death. A practice of caring for people who are dying, along with caring for their families, offers a wide range of challenges on all levels: intellect, emotional, personal, and social. The depth and diversity of these challenges, alongside the increased need for this care within Canadian society, demands that our future healthcare providers are better prepared to do this important work.

It was my ultimate hope that this research might play a small part in improving care for individuals who are dying and their families by contributing to the development of effective pedagogical strategies using HFS for interprofessional palliative education. The undergraduate participants' experiences in the simulation lab have given voice to develop new theoretical thrusts that examine the "how" as it pertains to the delivery of interprofessional palliative care education. For these participants, the use of HFS in interprofessional palliative care education was appreciated for its support in transferring knowledge from theory into practice. Participants reported feeling engaged and connected, on cognitive and emotional levels and as a community of future healthcare providers. They revealed that they gained new knowledge in the simulation lab that they could link to a clinical context or "real-life experience," and they reported that it is easier for them to retain information that way. They found that the simulation experience added a relevance to the learning that occurred in their coursework and that they were engaged in the learning process. During the debrief they also appreciated the opportunity to discuss and examine what that learning meant to them as individuals and future healthcare providers offering a palliative approach to care. The findings of this research will contribute to the advancement of thinking around interprofessional palliative care education, and help to form a foundation for future studies as we continually strive to improve the care for individuals who are dying and their families.

I thoroughly enjoyed the time I had to engage with the participants in this study. I learned a great deal from them about the research topic and about myself as an educator and researcher. Throughout this research I was both a student and an educator as the participants and I reflected on learning and caring for people who are dying. It was a reciprocal opportunity for me to share

more of my knowledge about palliative care, and for participants to share their experiences learning palliative care. As thinking about learning, examining education, and considering how they wanted to experience and receive their palliative care education were novel topics to most participants, I wonder now how this research experience impacted them. I also consider how this experience impacted me, as both a student and an educator. My expectations of both the education I am a recipient of and the education I facilitate are different. I want to do this better. Together, the participants and I embarked on a journey about learning to learn, so we can provide the best care possible.

It was never my intention that the participants in this study become disillusioned by the experience of a learning opportunity that most of them will not have again. Part of me hopes that they will critically consider how their undergraduate education is being delivered and feel empowered to advocate for change, for technology to be embraced and for them to be recognized as a new and developing generation of learners. I would like to think that when they find themselves caring for a person who is dying in their future careers as healthcare providers or in their personal lives, they will reflect on our time together in the simulation lab and recognize what they taught me: that a palliative care approach requires the "hands, head, and heart."

As 100% of the patients that new (student) healthcare providers serve will eventually die, it is essential that students receive education in this area. Branch, Kern, Haidet, Weissmann, Gracey, and Mitchell (2001) state that healthcare educators need to be reminded that how students are treated in their educational milieu is how those students may also end up treating the individuals in their care. Healthcare educators need to value a humanistic approach to educating undergraduate palliative care students that incorporates hands, head, and heart into the learning.

This is, after all, an expectation of both the learners and the future recipients of care. I want to be a part of the effort to achieve a better balance between the technical learning and the caring attitudes fostered in healthcare educational systems.

Perhaps I am selfish, but now as I teach, I imagine the students in my courses as one day being charged with caring for me at the end of my life. I try to instil in them a desire to connect with people as individuals, separate from their diseases or conditions. I challenge them to recognize that learning with their heart is a part of their education and needs to be nurtured and developed, every bit as much as their clinical competencies, skills, and theoretical knowledge. I encourage them to think about how they will want to be cared for when they are dying. Ratner and Song (2002) speak to an overarching goal for comprehensive death education that resonates with me and speaks to the findings in this study, as articulated by the participants: "as educators, we claim to prepare our students for life. We need to prepare them for death as well" (p. 15).

References

Abdo, A., & Ravert, P. (2006). Student satisfaction with simulation experiences. *Clinical Simulation in Nursing*, *2*(1), e13-e16.

Adamson, K. (2010). Integrating human patient simulation into associate degree nursing curricula: Faculty experiences, barriers, and facilitators. *Clinical Simulation in Nursing*, *6*(3), e75-e81.

Allchin, L. (2006). Caring for the dying: Nursing student perspectives. *Journal of Hospice & Palliative Nursing*, *8*(2), 112-117.

Allison, S. (2007). Up a river! Interprofessional education and the Canadian healthcare professional of the future**.** *Journal of Interprofessional Care, 21*(5), 565-568.

Alinier G. (2010). Developing high-fidelity health care simulation scenarios: A guide for educators and professionals. Simul Gaming.;41:9–26.

Alinier, G, Hunt, B., Gordon, R., & Harwood C. (2006). Effectieness of intermediate-fidelity simulation training technology in undergraduate nursing education. *Journal of Advanced Nursing, 54*(3), 359-369.

Anderson, D. S. L. C. E. (1999). Constructivism: A paradigm for older learners. *Educational Gerontology*, *25*(3), 203-209.

Anderson, W., Williams, J., Bost, J., & Barnard, D. (2008). Exposure to death is associated with positive attitudes and higher knowledge about end-of-life care in graduating medical students. *Journal of Palliative Medicine, 11,*1227-1233.

Apple, M. (1971). The hidden curriculum and the nature of conflict. *Interchange, 2*(4), 27- 40.

Attig, T. (1981). Death education as care of the dying. In R. Pacholski, & C. Corr (Eds.), *New directions in death education and counselling* (pp. 168–175). Arlington, VI: Forum for Death Education and Counselling.

Attig, T. (1992). Person-centered death education. *Death Studies, 16*, 357-370.

Backman, K., & Kyngäs, H. A. (1999). Challenges of the grounded theory approach to a novice researcher. *Nursing & Health Sciences*, *1*(3), 147-153.

Bainbridge, L. (2010). Submission to the UBCMJ: Guest editorial. *UBC Medical Journal*, *2*(1).

Baker, G. R., Norton, P. G., Flintoft, V., Blais, R., Brown, A., Cox, J. (2004). The Canadian

adverse events study: The incidence of adverse events among patients in Canada. *Canadian Medical Journal, 170*(11), 1678-1685.

Baker, C., Pulling, C., McGraw, R., Damon-Dagone, J., Hopkins-Rosseel, D., & Medves, C. (2008). Simulation in interprofessional education for patient-centered collaborative care. *Journal of Advanced Nursing, 64*(4), 372-379.

Balk, D. (2007). *Handbook of Thanatology*. New York: Routledge.

Baldwin, D. C., Jr. (1996). Some historical notes on interprofessional and interprofessional education and practice in health care in the USA. *Journal of Interprofessional Care, 10*(2),173-187.

Bambini, D., Washburn, J., & Perkins, R. (2009). Outcomes of clinical simulation for novice nursing students: Communication, confidence, clinical judgment. *Nursing Education Perspectives*, *30*(2), 79-82.

Bandali, K., Parker, K., Mummery, M., & Preece, M. (2008). A skills integration in a simulated and interprofessional environment: An innovative and undergraduate applied health curriculum. *Journal of Interprofessional Care, 22*(2), 179-189.

Barr, H. (2002). *Interprofessional education: Today, yesterday and tomorrow* (Occasional Paper No. 5). London: Centre for the Advancement of Interprofessional Education.

Barr, H., Koppel, I., Reeves, S., Hammick, M., & Freeth, D. (2005). *Effective interprofessional education: Argument, assumption and evidence.* Oxford, UK: Blackwell.

Bates, A., & Poole, G. (2003). *Effective teaching with technology in high education*. New York: Jossey-Bass.

Bereiter, C., & Scardamalia, M. (1993). Surpassing ourselves. *An inquiry into the nature and implications of expertise. Chicago: Open Court*.

Berragan, L. (2011). Simulation: an effective pedagogical approach for nursing?. *Nurse Education Today*, *31*(7), 660-663.

Berridge, E.J., Mackintosh, N. & Freeth, D. (2010). Supporting patient safety: examining communication within delivery suite teams through contrasting approaches to research observation. *Midwifery, 26* 512-9.

Billings, J. & Block, S. (1997). Palliative care in undergraduate medical education. Status report and future directions. *Journal of the American Medical Association, 278,* 733-738.

Billings, M., Engelberg, R., Curtis, J., Block, S., & Sullivan, A. (2010). Determinants of medical students' perceived preparation to perform end-of-life care, quality of end-of-life care education, and attitudes toward end-of-life care. *Journal of Palliative Medicine, 13*(3), 319-326.

Birks, M., & Mills, J. (2011). *Grounded theory: A practical guide*. Sage publications.

Blake, H. (2010). Computer-based learning objects in healthcare: the student experience. *International journal of nursing education scholarship*, *7*(1).

Blumer, H. (1969). The methodological position of symbolic interactionism. *Symbolic interactionism: Perspective and method*, 1-60.

Borrill, C. S., Carletta, J., Carter, A. J., Dawson, J. F., Garrod, S. (2002). *The effectiveness of healthcare teams in the National Health Service.* Retrieved from http:// homepages.inf.ed.ac.uk/DOH-final-report.pdf

Boud, D., Cohen, R. & Walker, D. (Eds.). (1993). *Using experience for learning.* Buckingham: SRHE and Open University Press.

Borodzicz, E. (2004). The missing ingredient is the value of flexibility. *Simulation & Gaming, 35*(3), 414-426.

Bradley, P. (2006). The history of simulation in medical education and possible future directions. *Medical Education*, *40*, 254-262.

Bradley, P., & Postelthwaite, K. (2003). Simulation in clinical learning. *Medical Education, 37* (Suppl.1), 1-5.

Brajtman, S., Fothergill-Bourbonnais, F., Casey, A., Alain, D. & Fiset, V. (2007). Providing direction for change: assessing Canadian nursing students' learning needs. *International Journal of Palliative Nursing, 13*(5): 213-21.

Brajtman, S., Fothergill-Bourbonnais, F., Fiset, V. & Alain, D. (2009). Survey of educators' end-of-life care learning needs in a Canadian bacclalureate nursing programme. *International Journal of Palliative Nursing, 15*(5): 170 - 178.

Branch W, Kern D, Haidet P, Weissmann P, Gracey C, & Mitchell G. (2001) The patient–physician relationship: teaching the human dimensions of care in clinical settings. J Am Med Assoc;286:1067–74.

Bremmer, M., Aduddell, K., Bennett, D., & VanGeest, J. (2006). The use of human patient

simulators: Best practices with novice nursing students. *Nurse Educator, 31*(4), 170-174.

Brockbank, A. & McGill, I. (2007). *Facilitating reflective learning in higher education* (2nd ed). London: McGraw-Hill International.

Brown Wright, G. (2011). Student-Centered Learning in Higher Education. *International Journal of Teaching and Learning in Higher Education, 23*(3): 92-97.

Brown, J. S., & Adler, R. P. (2008). Open education, the long tail, and learning 2.0. *Educause review*, *43*(1), 16-20.

Bruera, E. & Hui, D. (2010). Integrating Supportive and Palliative Care in the Trajectory of Cancer: Establishing Goals and Models of Care. *Journal of Clinical Oncology, 28*(25), 4013-7.

Bryant, A., & Charmaz, K. (2010) *The Sage Handbook of Grounded Theory*. Thousand Oaks, CA: Sage Publications Inc.

Canadian Hospice Palliative Care Association. (2011). *National fact sheet: Hospice palliative care in Canada* (CHPCA Publication). Ottawa, ON: Canadian Hospice Palliative Care Association.

Canadian Interprofessional Health Collaborative. (2007). *Interprofessional education and core competencies: Literature review*. Vancouver, BC: CIHC.

Carstairs, S. (2000). Quality End-of-Life Care: The Right of Every Canadian, Subcommittee to update "Of Life and Death" of the Standing Senate Committee on Social Affairs, Science and Technology, FINAL REPORT, June 2000, http://www.parl.gc.ca/36/2/parlbus/commbus/senate/Com-e/upda-e/rep-e/repfinjun00-e.htm

Carstairs S. (2010). Raising the bar: a roadmap for the future of palliative care in Canada. Ottawa, ON: The Senate of Canada. Available from: www.chpca.net/media/7859/Raising_the_Bar_June_2010.pdf. Accessed 2012 Aug 15.

The Centre for the Advancement of Interprofessional Education, (2001). Interprofessional Education 1997-2000: A Review.

Chamberlain-Salaun, J., Mills, J., & Usher, K. (2013). Terminology used to describe health care teams: an integrative review of the literature. *Journal of multidisciplinary healthcare*, *6*, 65.

Charmaz, K. (2000). Looking backward, moving forward: Expanding sociological horizons in

the twenty-first century. *Sociological Perspectives,* 43, 527-549.

Charmaz, K. (2003). Grounded theory. In M. Lewis-Beck, A.E. Bryman, & T. Furtig Liao (Eds.), *The Sage Encyclopedia of Social Science Research Methods* (pp.440-444). London:Sage.

Charmaz, K. (2005). Grounded theory in the 21st century. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage handbook of qualitative research* (3rd ed). (pp. 507-535) Thousand Oaks, CA: Sage.

Charmaz, K. (2006). *Constructing Grounded Theory: A Practical Guide Through Qualitative Analysis.* London: Sage.

Charmaz,K. (2008). Grounded theory as an emergent method. In S. N. Hess-Biber & P. Leavy (Eds.), *Handbook of Emergent Methods.* (pp. 155-172) New York: Guilford Press.

Charmaz, K. (2009). Shifting the grounds: Grounded theory in the 21st century. *JM Morse et al. Developing grounded theory: The second generation*, 125-140.

Charmaz, K. (2012). The power and potential of grounded theory. *A Journal of the BSA MedSoc Group*, *6*(3).

Childs, J. C., & Sepples, S. (2006). Clinical teaching by simulation lessons learned from a complex patient care scenario. *Nursing Education Perspectives*, *27*(3), 154-158.

Cioffi, J., Purcal, N., & Arundell, F. (2005). A pilot study to investigate the effect of a simulation strategy on the clinical decision making of midwifery students. *Journal of Nursing Education, 44*(3), 131-134.

Clark, A. (2003). Situational analysis: Grounded theory mapping after the postmodern turn. *Symbolic Interaction, 26*(4), 553-576.

Clark, P.G. (2006). What would a theory of Interprofessional education look like? Some suggestions for developing a theoretical framework for teamwork training. *Journal of Interprofessional Care, 20*(6), 577-589.

Clossan, T., & Oandason, I. (2007). *Interprofessional care: A blueprint for action in Ontario (Blueprint).* Toronto, ON: Healthforce Ontario.

Cooper, J. (Ed.). (2006). Stepping into palliative care 1: Relationships and responses (Vol. 1). Radcliffe Publishing.

Corbin, J., & Strauss, A. (Eds.). (2008). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Sage.

Coles, C. (2002). Developing Professional Judgement. *Journal of Continuing Education in the Health Professions, 22*, 3-10.

Cook, D. A., Brydges, R., Hamstra, S. J., Zendejas, B., Szostek, J. H., Wang, A. T., & Hatala, R. (2012). Comparative effectiveness of technology-enhanced simulation versus other instructional methods: a systematic review and meta-analysis. *Simulation in Healthcare*, *7*(5), 308-320.

Corr, C., Nabe, C., & Corr, D. (2006). *Death and dying: Life and living* (5th ed.). Toronto, Canada: Thomson Nelson.

Council for the Accreditation of Healthcare Simulation Programs (CAHSP). (2012). *An informational guide for the 2012 Society for Simulation in Healthcare Accreditation Program.* Cincinnati, OH: Society for Simulation in Healthcare.

D'Amour, D., & Oandasan, I. (2005, May). Interprofessionality as the field of interprofessional practice and interprofessional education: An emerging concept. *Journal of Interprofessional Care, Supplement 1,* 8-20.

D'Eon, M. (2005, May). A blueprint for interprofessional learning. *Journal of Interprofessional Care, Supplement 1,* 49-59.

Dabbagh, N., & Bannan-Ritland, B. (2005). *Online learning: Concepts, strategies, and application*. Prentice Hall.

Decker, S., Sportsman, S., Puetz, L., & Billings, L. (2008). The evolution of simulation and its contribution to competency. *Journal of Continuing Education for Nurses*, *39*(2), 74-80.

Dede, C. (2005). Planning for "Neomillennial" Learning Styles: Implications for Investments in Technology and Faculty. In J. Oblinger and D. Oblinger (Eds.), Educating the Net Generation,pp. 226-247. Boulder, CO: EDUCAUSE Publishers. http://www.educause.edu/educatingthenetgen/

Dearnley, C., McClelland, G. T., & Irving, D. (2013). Innovation in Teaching and Learning in Health Higher Education.

Dennis, D. (2009). *Living, dying, grieving.* Mississauga, Canada: Jones and Bartlett.

DeSpelder, L., & Strickland, A. (2009). *The last dance: Encountering death and dying* (8th ed.). Toronto, Canada: McGraw Hill.

Dewey, J. (1933). *How We Think: A Restatement of the Relation of Reflective Thinking to the Educative Process.* New York: D.C. Heath and Co.

Dewey, J. (1938). *Experience and education*. New York: 595 Macmillan.

Dey, I. (2003). *Qualitative data analysis: A user friendly guide for social scientists*. Routledge.

Dillon, P., Noble., K. & Kaplan, L. (2009). Simulation as a means to foster collaborative interprofessional education. *Nursing Education Research, 30*(2), 87-90.

Dobson, T. M. & Boyce, M. J. (2011). Introduction. *Media : Culture : Pedagogy, 15*(1). Retrieved from http://mcp.educ.ubc.ca/BornDigitalGeneration_Introduction

Docherty, C., Hoy, D., Topp, H., & Trinder, K. (2005). eLearning techniques supporting problem based learning in clinical simulation. *International Journal of medical informatics*, *74*(7), 527-533.

Duffy, F., Gordon, G., Whelan, G., Cole-Kelly, K & Frankel, R. (2004). Assessing Competence in Communication and Interpersonal Skills: The Kalamazoo II Report. *Academic Medicine, 79*(6), 495-507.

Durham, C., & Alden, K. (2008). Enhancing Patient Safety in Nursing Education through Patient Simulation. In R. Hughes (Ed.), *Patient Safety and Quality: An Evidence-Based Handbook for Nurses.* Rockville, MD: Agency for Healthcare Research and Quality. http://www.ncbi.nlm.nih.gov/books/NBK2628/#ch51.rll

Eaton, M. K., Floyd, K., & Brooks, S. (2012). Student perceptions of simulation's influence on home health and hospice practicum learning. *Clinical Simulation in Nursing*, *8*(6), e239-e247.

Eddy, J., & Alles, W. (1983). *Death education*. St. Louis, MO: The C.V. Mosby Company.

Eggen, P., & Kauchak, D. (1999). *Educational Psychology: Windows on Classrooms (4th ed.).* Prentice Hall.

Ellis, C, & Hughes, G. (1999). Use of human patient simulation to teach emergency medicine trainees advanced airway skills. *Journal of Emergency Medicine, 16*, 395-399.

Entwistle, N. (2010). Taking Stock: An Overview of Key Research Findings. In Christensen Hughes, J. & Mighty, J. (Eds.). *Taking Stock: Research on Teaching and Learning in Higher Education.* (15-57). Montreal & Kingston: McGill-Queen's University Press.

Erler, C. J., & Rudman, S. D. (1993). Effect of intensive care simulation on anxiety of nursing students in the clinical ICU. *Heart Lung, 22*(3), 259-265.

Fanning, R. & Gaba, D. (2007). The Role of Debriefing in Simulation-Based Learning. *Simulation in Healthcare, 2*(2), 115-125.

Feifel, F. (1959). *The meaning of death.* New York, NY: McGraw Hill.

Feingold, C. E., Calaluce, M., & Kallen, M. A. (2004). Computerized patient model and simulated clinical experiences: Evaluation with baccalaureate nursing students. *The Journal of nursing education*, *43*(4), 156-163.

Fenwick, T. (2001). *Experiential Learning: A critical review of theory and practice*. ERIC Clearninghouse on Adult, Career, and Vocational Education, Information Series No. 385. Columbus Ohio: ERIC. Access July, 2013. http://www.calpro-online.org/eric/textonly/mp_fenwick_01.asp.

Fenwick, T. (2003). *Learning through experience: Troubling orthodoxies and intersecting questions*. Malabar, FL: Kreiger Publishing Company.

Ferris, F. & von Gunten, C. (2007). North America. In B. Wee & N. Hughes (Eds.), *Education in palliative care: Building a culture of learning* (pp. 85-92). Oxford: Oxford University Press.

Ferrell, B., Virani, R., Grant, M., Phome, A., Malloy, P., Bednash, G. & Grimm, M. (2005). Evaluation of the End-of-Life Nursing Education Consortium undergraduate faculty training program. *Journal of Palliative Medicine, 8*(1), 107-114.

Ferrell, B. R. (2010). *Oxford textbook of palliative nursing*. Oxford University Press.

Field, M.J., & C.K. (Eds.). (1997). *Approaching death: Improving care at the end of life. Report of the Institute of Medicine Task Force on End of Life Care.* Washington, DC: National Academy of Sciences.

Fineberg, I. C., Wenger, N. S., & Forrow, L. (2004). Interprofessional education: evaluation of a palliative care training intervention for pre-professionals. *Academic Medicine*, *79*(8), 769-776.

Fins, J. J., & Nilson, E. G. (2000). An approach to educating residents about palliative care and clinical ethics. *Academic Medicine, 75*(6), 662-665.

Fitzsimmons, D., Mullan, D., Wilson, J. S., & Conway, B. (2007). The Challenge of Patients' Unmet Palliative Care Needs in the Final Stages of Chronic Illness. *Palliative Medicine, 21*(4):313-22.

Fluharty, L., Hayes, A. S., Milgrom, L., Malarney, K., Smith, D., Reklau, M. A., ... & McNelis, A. M. (2012). A Multisite, Multi–Academic Track Evaluation of End-of-Life Simulation for Nursing Education. *Clinical Simulation in Nursing*, *8*(4), e135-e143.

Fountain, R. A., & Alfred, D. (2009). Student satisfaction with high-fidelity simulation: does it correlate with learning styles?. *Nursing Education Perspectives*, *30*(2), 96-98.

Freeth, D., Hammick, M., Reeves, S., Koppel, I., & Barr, H. (2005). *Effective interprofessional education: Development, delivery & evaluation.* Oxford, UK: Blackwell Publishing Ltd.

Freire, P. (1970). *Pedagogy of the Oppressed*, trans. M. B. Ramos. New York: Herder and Herder.

Freire, P. (2003). *Pedagogy of the Oppressed.* New York: Continuum.

Gaba, D.M. (2004). The future vision of simulation in healthcare. *Quality Safety Healthcare, 13* (suppl.1), 11-18.

Gaba, D.M. (2007). The future vision of simulation in healthcare. *Simulation Healthcare, 2,* 126-135.

Garcia-Ruiz, M.A., Tashiro, J., Kapralos, B., & Vargas Martin, M. (2011). Crouching tangents, hidden dangers: Assessing development of dangerous misconceptions within serious games for healthcare education. *Virtual immersive and 3D learning spaces: Emerging technologies and trends,* 269-306.

Gamondi, C., Larkin, P., & Payne, S. (2013). Core competencies in palliative care: an EAPC White Paper on palliative care education - part 1, *European Journal of Palliative Care, 20*(2), 86-91.

Garmondi, C., Larkin, P., & Payne, S. (2013). Core competencies in palliative care: an EAPC White Paper on palliative care education - part 2, *European Journal of Palliative Care, 20*(3), 140-145.

Gillan, P., Jeong, S., & van der Riet, P. (2013). End of life care simulation: A review of the literature. *Nurse Education Today,* http://dx.doi.org/10.1016/j.nedt.2013.10.0005

Gillan, P., van der Riet, P., & Jeong, S. (2014). End of life care education, past and present: A review of the literature. *Nurse Education Today, 34,* 331-342.

Glaser, B. G. (1978). *Theoretical sensitivity: Advances in the methodology of grounded theory* (Vol. 2). Mill Valley, CA: Sociology Press.

Glaser, Barney G. (2001). *The Grounded Theory Perspective: Conceptualization Contrasted with Description* Mill Valley, CA: Sociology Press.

Glaser, B. G. (2002, September). Constructivist grounded theory?. In *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research*, *3,* (3).

Glaser, B. G. (2005). *The grounded theory perspective III: Theoretical coding*. Sociology Press.

Glaser, B., & Strauss, A. (1967). The discovery of grounded theory. 1967. *Weidenfield & Nicolson, London*.

Glick, M.D., & Kupiec, J. (2001). E=MC2: The answer is still technology—strategic technology. *EduCause Review, 36*(6), 32-44.

Gordon, M., Issenberg, S., Mayer, J., & Felner, J. (1999). Developments in the use of simulators and multimedia computer systems in medical education. *Medical Teacher, 2*(1), 32-36.

Gould, N. & Taylor, I. (Eds.). (1996). *Reflective learning for social work: Research, theory and practice.* Aldershot: Arena.

Grant, M., Elk, R., Ferrell, B., Morrison, R., & von Gunten, C. (2009). Current status of palliative care, education, and research. *CA Cancer J Clin, 59*(5), 327-335.

Gredler, M. (2004). Games and Simulations and their Relationships to Learning. In D. Jonassen (Ed.), *Handbook of Research on Educational Communications and Technology (*pp. 571-581). Mahwah, N.J.: Lawrence Erlbaum Assoc. Inc.

Griffin, C. (1992). Absorbing experiential learning. In J. Mulligan & C. Griffin (Eds.), *Empowerment through experiential learning: Explorations of good practice* (pp. 29-38). Bristol, PA: Taylor and Francis.

Hadad, M. (2009). *The ultimate challenge: Coping with death, dying and bereavement*. Toronto, ON: Nelson Education.

Hall, P., & Weaver, L. (2001). Interprofessional education and teamwork: A long andwinding road. *Medical Education, 30*, 129-133.

Hamilton, C. A. (2010). The simulation imperative of end-of-life education. *Clinical Simulation in Nursing*, *6*(4), e131-e138.

Hammick, M., Freeth, D., Koppel, I., Reeves, S., & Barr, H. (2007). A best evidence systembatic review of interprofessional education:BEME Guide no. 9. *Medical Teacher, 29*, 735-751.

Hayasaki, E. (2014). *The Death Class: A True Story about Life*. New York, NY: Simon and Schuster.

Health Council of Canada. (2007). *Health care renewal in Canada: Measuring up?* Ottawa, ON: Health Canada.

Hoadley, C., & Kilner, P. (2011). Using technology to transform communities of practice into knowledge-building communities. *SIGGroup Bulletin, 25*(1), 31-40.

Hopkins, M., & Field, G. (1997). A palliative care education model for the hospital setting. *European Journal of Cancer Care, 6*, 280-290.

Hovancsek, M. (2007). Using simulation in nursing education. In P.R. Jeffries (Ed.), *Simulation in nursing education: From conceptualization to evaluation* (pp.1-9). New York, NY: National League for Nursing.

Howe, N., & Strauss, W. (2003). *Millennials Go To College: Strategies for a New Generation on Campus*. Washington, D.C: American Association of Collegiate Registrars and Admissions Officers.

Howkins, E., & Bray, J. (2008). *Preparing for interprofessional teaching*. Oxon, UK: Radcliffe Publishing Ltd.

Huber, M. T., & Hutchings, P. (2004). Integrative Learning: Mapping the Terrain. The Academy in Transition. *Association of American Colleges and Universities*.

Hughes, H. (2008). *Incidents for reflection in research.* In: 5th International Lifelong Learning Conference, 16-19 June 2008, Yeppoon, Queensland.

Illingworth, P., & Chelvanayagum, S. (2007). Benefits of interprofessional education in health care. *British Journal of Nursing, 16*, 121-124.

Institute of Medicine (IOM). (2003). Health professions education: A bridge to quality (electronic version). Retrieved June 26,2013 from http://www.iom.edu/Reports/2003/Health-Professions-Education-A-Bridge-to-Quality.aspx

Institute of Medicine (IOM). (2004). Keeping patients safe. (electronic version). Retrieved June 26, 2013 from http://www.iom.edu/Reports/2004/The-Richard-and-Hinda-Rosenthal-Lecture-2003-Keeping-Patients-Safe.aspx

International Work Group on Death, Dying and Bereavement. (2000). The arts and humanities in health care and education. Death Studies, 24(5), 365-375.

Interprofessional Care Steering Committee. Implementing Interprofessional Care in Ontario. (2010) . Available at: www.healthforceontario.ca/.../hfo%20ipcsic%20final %20reportengfinal.pdf.

Issenberg, S., McGaghie, W., Petrusa, E., Gordon, D., & Scalese, R. (2005). Features and uses of high-fidelity medical simulations that lead to effective learning: A BEME systemic review. *Medical Teacher, 27*(1), 10-28.

Issenberg, B., & Scalese, R. (2008). Simulation in healthcare education. *Perspectives in Biology and Medicine, 51*(1), 31-46.

Jefferies, P., & Battin, J. (2012). Developing Successful Health Care Education Simulation Centers: The Consortium Model. Springer Publishing Company. New York.

Jeffries, P. R., & Rogers, K. J. (2007). Theoretical framework for simulation design. *Simulation in nursing education: From conceptualization to evaluation*, 21-33.

Jeffries, P. & Rizzolo, M. (2006). *Designing and Implementing Models for the Innovative use of Simulation to Teach Nursing Care of Ill Adults and Children: A National, Multi-Site, Multi-Method Study.* New York, N.Y.: National League for Nursing.

Jeon, Y. H. (2004). The application of grounded theory and symbolic interactionism. *Scandinavian Journal of Caring Sciences*, *18*(3), 249-256.

Johnson, A., Chang, E., & O'Brien, L. (2009). Nursing the dying: a descriptive survey of Australian Undergraduate nursing curricula. *International Journal of Nursing Practice, 15,* 417-425.

Jones, C., & Shao, B. (2011). The net generation and digital natives: implications for higher education. Higher Education Academy, York.

Kaddoura, M. A. (2010). New graduate nurses' perceptions of the effects of clinical simulation on their critical thinking, learning, and confidence. *Journal of continuing education in nursing*, *41*(11), 506-516.

Kardong-Edgren, S., Willhaus, J., Bennett, D., & Hayden, J. (2012). Results of the National Council of State Boards of Nursing national simulation survey: Part II. *Clinical Simulation in Nursing*, *8*(4), e117-e123.

Kastenbaum, R. (1981). *Death, society and human experience* (2nd ed.). St. Louis, MO: C.V. Mosby.

Kastenbaum, R. (2007). *Death, society, and human experience* (9th ed.). New York, New York: Pearson Education Inc.

Kahn, K., Pattison, T., & Sherwood, M. (2011). Simulation in medical education. *Medical Teacher, 33,* 1-3.

Kameg, K., Howard, V. M., Clochesy, J., Mitchell, A. M., & Suresky, J. M. (2010). The impact of high fidelity human simulation on self-efficacy of communication skills. *Issues in mental health nursing*, *31*(5), 315-323.

Kayes, C. (2002) Experiential learning and its critics: Preserving the role of experience in management learning and education. *Academy of Management Learning and Education 1*(2), 137-149.

Kellehear, A. (1995). *Health promoting palliative care.* Melbourne: Oxford University Press.

Kerr, A. (2011). *Teaching and Learning in Large Classes at Ontario Universities: An Exploratory Study.* Toronto: Higher Education Quality Council of Ontario

Klunklin, A., & Greenwood, J. (2006). Symbolic interactionism in grounded theory studies: Women surviving with HIV/AIDS in rural northern Thailand. *Journal of the Association of Nurses in AIDS Care*, *17*(5), 32-41.

Kneebone, R. (2010). Simulation, Safety and Surgery. *Quality & Safety in Health Care, 19*(Suppl 3): i47-52.

Knowles, M.S. (1985). Andragogy in action: Applying the principles of adult learning. London, England: Jossey-Bass.

Knott, J. E. (1979). Death education for all. In H. Wass (Ed.), *Dying: Facing the facts* (1st ed.) (pp. 389-391). New York: McGraw-Hill Book Co.

Kobulniky, P. J. (1999). Critical factors in information technology planning for the academy. *Cause/Effect, 22*(2), n.p.

Kolb, D. (1984). *Experiential learning.* Englewood Cliffs, NJ: Prentice-Hall.

Kopp, W. & Hanson, M.A.(2012). High-fidelity and gaming simulations enhance nursing education in end-of-life care. *Clinical Simulation in Nursing, 8*(3), e97-e102.

Kortes-Miller, K. (2013). Critical caring. *Patient Education and Counseling, 93,* 153-154.

Kortes-Miller, K. A Matter of Life and Death: Situating Death in Education. (2014).Canadian Journal of New Scholars in Education. *5*(2). www.cjnse-rcjce.ca

Kortes-Miller, K., Jones-Bonofiglio, K., Hendrickson, S. & Kelley, ML. (in press). Improving Communication around Death and Dying: An Educational Intervention Using High- Fidelity Simulation with Unregulated Care Providers in Long Term Care Homes. *Journal of Applied Gerontology.*

Kuehster, C. R., & Hall, C. D. (2010). Simulation: Learning from mistakes while building communication and teamwork. Journal for Nurses in Professional Development, 26(3), 123-127.

Kuhl, D. (2002). *What Dying People Want; Practical Wisdom for the End of Life.* Toronto: Double Day Canada.

Kyle, M., & Murray, W. (2008). *Clinical Simulation: operations, engineering and management.* NewYork: Elesvier.

Ladd, C., Grimley, K., Hickman, C., & Touhy, T.A. (2013). Teaching end-of-life nursing simulation. *Journal of Hospice and Palliative Nursing, 15*(1), 41-51.

Lapkin, S., Levett-Jones, T., Bellchambers, H., & Fernandez, R. (2010). Effectiveness of patient simulation manikins in teaching clinical reasoning skills to undergraduate nursing students: A systematic review. *Clinical Simulation in Nursing*, *6*(6), e207-e222.

Lange, M., Thom, B., & Kline, N. (2008). Assessing nurses' attitudes toward death and caring for dying patients in a comprehensive cancer center. *Oncology Nursing Forum, 35*(6). 955-959.

Laurillard, D. (2002). *Rethinking university teaching.* (2nd Ed). London: Routledge.

Lave, J. (1988). Cognition in practice: Mind, mathematics, and culture in everyday life. New York: Cambridge University Press.

Lave, J., & Wenger, E. (1991). *Situated learning – legitimate peripheral participation*. Cambridge, MA: Cambridge University Press.

Leighton, K., & Dubas, J. (2009). Simulated death: An innovative approach to teaching end-of-life care. *Clinical Simulation in Nursing, 5,* 223-230.

Leinonen, P.. & Jarvela, S. (2006). Facilitating interprofessional evaluation of knowledge in a

context of distributed team collaboration. *British Journal of Educational Technology, 37*(6), 897-916.

Li, L., Grimshaw, J., Nielsen, C., Judd, M., Coyte, P., & Graham, I. (2009). Evolution of Wenger's concept of community of practice. *Implementation Science, 4*, 11.

Lincoln, Y. S., & Guba, E. G. (1985). Naturalistic inquiry. Beverly Hills, CA: Sage.

Lindemann, E. C. (1961). *The meaning of adult education*. New York: Harvest House.

Lunenburg, F. C. (1998). Constructivism and Technology: Instructional Designs for Successful Education Reform. *Journal of Instructional Psychology*, *25*(2), 75-81.

MacLeod, R., & Egan, T. (2007). Interprofessional education. In B. Wee & N. Hughes (Eds.), *Education in palliative care: Building a culture of learning* (pp. 235-249). Oxford: Oxford University Press.

Mallory, J. L. (2003). The impact of a palliative care education component on attitudes toward care of the dying in undergraduate nursing students. *Journal of Professional Nursing, 19*(5), 305-312.

Maran, N., & Glavin, R. (2003). Low- to high-fidelity simulation: A continuum of medical education? *Medical Education, 37*(1), 22-8.

Martin, J.R. (1976). What should we do with a hidden curriculum when we find one? *Curriculum Inquiry, 6*(2), 135-151.

Masters, C., O'Toole Baker, V., & Jodon, H. (2012) Multidisciplinary, team-based learning: the Simulated Interprofessional to Multidisciplinary Progressive-Level Education (SIMPLE) approach. *Clinical Simulation in Nursing*, Feb, pp. el–e8.

McCaffery, M., Ferrell, B., & Paserco, C. (2000). Nurses' personal opinions about patients' pain and their effect on recorded assessments and titration of opiod doses. *Pain Management Nursing, 1*(3), 79-87.

McCann, Terence V., & Clark, E. (2004).Grounded theory in nursing research: Part 2–Critique. *Nurse Researcher* 11.2 : 19-28.

McCauley, K., & Irwin, R.S. (2006). Changing the work environment in ICUs to achieve patient-focused care: The time has come. *Chest*, *130*, 1571-1578.

McClement, S. E., Care, D., Dean, R., & Cheang, M. (2005). Evaluation of education in

palliative care: determining the effects on nurses' knowledge and attitudes. *Journal of palliative care*, *21*(1), 44.

McGaghie, W.C., Issenberg, S. B., Petrusa, E. R., & Scalese, R. J. (2010). A critical review of simulation−based medical education research: 2003–2009. *Medical education*, *44*(1), 50-63.

Michelson, E. (1996a). Beyond Galileo's telescope: Situated knowledge and the assessment of experiential learning. *Adult Education Quarterly, 46,* 185-196.

Michelson, E. (1996b). Usual suspect: Experience, reflection and the (en)gendering of knowledge. *Journal of Lifelong Education*, *15*(6), 438-454.

Miller, J., & Rotatori, A. (1986). *Death education and the educator* (1st ed.). Springfield, IL: Charles C Thomas.

Milliken, P. J., & Schreiber, R. S. (2001). Can you "do" grounded theory without symbolic inter actionism? In R. S. Schreiber & P. N. Stern (Eds.), Using grounded theory in nursing (pp. 177-191). New York, NY: Springer.

Moon, J. (2004). *A handbook of reflective and experiential education: Theory*. New York: RoutledgeFalmer.

Morgan, P. J., Cleave-Hogg, D., Cleave-Hogg, D., Desousa, S., & Lam-Mcculloch, J. (2006). Applying theory to practice in undergraduate education using high fidelity simulation. *Medical teacher*, *28*(1), e10-e15.

Morse, C. (2012). *Debriefing After Simulated Patient Experiences.* In Linda Wilson and Leland Rockstraw (Eds.), *Human Simulation for Nursing and Health Professions. (pp.58-68).* New York: Springer Publishing Co.

Morse, J. M. (1995). The significance of saturation. *Qualitative health research*, *5*(2), 147-149.

Morse, J.M. Stern, P. N., Corbin, J., Bowers, B., & Clarke, A. E. (2009). *Developing grounded theory: The second generation*. Walnut Creek, CA: Left Coast Press.

Morton, P.J. (1995). Creating a laboratory that simulates the critical care environment. *Critical Care Nurse, 16*(6), 76-81.

Morzinski, J., & Montagnini, M. (2002). Logic modelling: A tool for improving educational programs. *Journal of Palliative Medicine, 5*(4), 566-570.

Mount, B., & Kearney, M. (2003). Healing and Palliative Care: Charting our way forward. *Journal of Palliative Medicine, 17*(8), 657-658.

Muir, J.C. (2008). Team, diversity, and building communities. *Journal of Palliative Medicine, 11,* 5-7.

Murray Frommelt, K.H. (2003). Attitudes toward care of the terminally ill: An educational intervention. *American Journal of Hospice and Palliative Medicine, 20*(1), 13-22.

Nadolski, R.J., Hummel, H.G. K., van den Brink, H.J., Slootmaker, A., Kurvers, H.J., & Storm, J. (2008). EMERGO: A methodology and toolkit for developing serious games in higher education. *Simulation & Gaming, 39*(3), 338-352.

Nehring, W. (2010). *History of Simulation in Nursing.* Wendy Nehring and Felissa Lashley (Eds.), *High Fidelity Patient Simulation*. (pp. 3-26). Boston: Jones and Bartlett Publishers.

Ng, K., & Hase, S. (2008). Grounded suggestions for doing a grounded theory business research. *Electronic Journal of Business Research Methods*, *6*(2), 155-170.

Northcott, H., & Wilson, D. (2001). *Dying and death in Canada*. Aurora, ON: Garamond Press.

Oandasan, I., D'Amour, D., Zwarenstein, M., Barker, K., Purden, M., Beaulieau, M.D. et al. (2004). *Interprofessional education for collaborative, patient-centred practice: Research and findings report.* Ottawa, ON: Health Canada.

Oandasan, I., & Reeves, S. (2005, May). Key elements for interprofessional education. Part 1: The learner, the educator and the learning context. *Journal of Interprofessional Care, supplement 1,19*(2), 21-28.

Oandasan, I., & Reeves, S. (2005, May). Key elements for interprofessional education. Part 2: Factors, processes and outcomes. *Journal of Interprofessional Care, supplement 1,19*(2), 39-48.

Oberleitner, M. G., Broussard, A. B., & Bourque, J. (2011). An Unintended Consequence of Simulation: A Case Report. *Clinical Simulation in Nursing*, *7*(2), e35-e40.

O'Callaghan, A. (2013). Emotional congruence in learning and health encounters in medicine: addressing an aspect of the hidden curriculum. *Adv in Health Sci Educ, 18,* 305-317.

Paice, J., Ferrell, B., Coyle, N., Coyne, P., & Callaway, M. (2008). Global efforts to improve palliative care: the International End-of-Life Nursing Education Consortium Training Programme. *Journal of Advanced Nursing*, *61*(2), 173-180

Palaganas, J.C., Epps, C., & Raemer, D. B. (2013). A history of simulation-enhanced interprofessional education. *Journal of interprofessional care*, *28*(2), 110-115.

Parker, B., & Myrick, F. (2011). The grounded theory method: Deconstruction and reconstruction in a human patient simulation context. *International Journal of Qualitative Methods, 10*(1), 73-85).

Parliamentary Committee on Palliative and Compassionate Care (2011). Not to be forgotten: care of vulnerable Canadians. Ottawa (ON): The Committee. Available: http:// pcpcc- cpspsc.com/wp-content/uploads/2011/11/ReportEN.pdf (accessed 2012 Apr. 1).

Paskins, Z., & Peile, E. (2010). Final year medical students' views on simulation-based teaching: a comparison with the Best Evidence Medical Education Systematic Review. *Medical teacher*, *32*(7), 569-577.

Phillips, D. (2000). *Constructivism in Education.* Chicago, USA: University of Chicago Press.

Pinar, W., Reynolds, W., Slattery, P., & Taubman, P. (1995). *Understanding curriculum.* New York: Peter Lang Publishing Inc.

Pingelton, S. K. (2012). Millennial Health Care Change You Can Believe in. *CHEST Journal*, *142*(1), 22-29.

Pillow, W. (2003). Confession, catharsis, or cure? Rethinking the uses of reflexivity as methodological power in qualitative research. *Qualitative Studies in Education, 16*(2), 175-196.

Prensky, M. (2001). Digital natives, digital immigrants Part 2: Do they really think differently? *On the horizon, 9*(6), 1-6.

Prensky, M. (2005). "Engage Me or Enrage Me": What today's learners demand. *Educause,* Sept/Oct, 60-64.

Quality Palliative Care in Long Term Care (2012). Website located at; http:// www.palliativealliance.ca/

Race, P. (2005). *Making learning happen.* London: Sage.

Ramjan, J., Costa, C., Hickman, L., Kearns, M., & Phillips, J. (2010). Integrating palliative care content into a new undergraduate nursing curriculum: The University of Notre Dame, Australia - Sydney experience. *Collegian, 17*, 85-91.

Ratner, E. R., & Song, J. K. (2002). Education for the end of life. *Chronicle of Higher Education, 48*(39), 12-15.

Reese, C. E., Jeffries, P. R., & Engum, S. A. (2010). Learning together: Using simulations to develop nursing and medical student collaboration. *Nursing education perspectives*, *31*(1), 33-37.

Reeve, F., & Gallacher, J. (2000). Researching the implementation of work-based learning within higher education: Questioning collusion and resistance. *Adult Education Research Conference,* Vancouver, BC, Canada.

Reeves, S., Lewin, S., Espin, S., & Zwarenstein, M. (2010). *Interprofessional Teamwork for Health and Social Care.* London: Blackwell-Wiley.

Reeves, S., Perrier, L., Goldman, J., & Zwarenstein, M. (2013) Interprofessional education: effects on professional practice and healthcare outcomes (update). *Cochrane Database of Systemic Reviews*, Issue 3. Art. No.: CD002213. DOI: 10.1002/14651858.CD002213.pub3.

Richards, L., & Morse, J. M. (2007). *Read me first for a user's guide to qualitative methods*. (2nd Ed.). Thousand Oaks, CA: Sage.

Richardson, Laurel. (2001). Getting personal: writing-stories. *International Journal of Qualitative Studies in Education, 14*(1), 33-38.

Richardson, V. (2003). Constructivst Pedagogy. *Teachers College Record. 105*(9), 1623-1643.

Riesen, E., Morley, M., Clendinneng, D., Ogilvie, S., & Ann Murray, M. (2012). Improving interprofessional competence in undergraduate students using a novel blended learning approach. *Journal of interprofessional care*, *26*(4), 312-318.

Robertson, J., & Bandali, K. (2008). Bridging the gap: Enhancing interprofessional education using simulation. *Journal of Interprofessional Care, 22*(5), 499-508.

Robertson, B., Kaplan, B., Atallah, H., Higgins, M., Lewitt, M., & Ander, D. (2010). The use of simulation and a modified TeamSTEPPS curriculum for medical and nursing students team training. *Simulation in Healthcare,* 5(6), 332-337.

Roblyer, M. D., & Knezek, G. A. (2003). New millennium research for educational technology: A call for a national research agenda. *Journal of research on Technology in Education*, *36*(1), 60-71.

Rose, E. (2013). *On Reflection: An Essay on Technology, Education, and the Status of Thought in the Twenty First Century.* Toronto: Canadian Scholars Press.

Rosen, K.R. (2008). The history of medical simulation, 157-166. doi: 10.1016/j.jcrc.2007.12.004

Rumbold, B. (2011). Health promoting palliative care and dying in old age. In Gott, M. & Ingleton, C. (Eds.) Living with ageing and dying: palliative and end of life care for older people (pp. 75-89). Oxford: Oxford University Press.

San Martin-Rodriguez, L., Beaulieu, M., D'Amour, M., & Ferrada-Videla, M. (2005). The determinants of successful collaboration: A review of theoretical and empirical studies. *Journal of Interprofessional Care, 19*(Suppl.1), 132-147.

Scardamalia, M., & Bereiter, C. (2002). *Knowledge building. In encyclopedia of education* (2nd ed.). New York: Macmillan Reference.

Schön, D. (1983). *The reflective practitioner.* New York: Basic Books.

Schön, D. (1987). *Educating the Reflective Practitioner.* New York: Basic Books.

Selwyn, N. (2009, July). The digital native–myth and reality. In *Aslib Proceedings* (Vol. 61, No. 4, pp. 364-379). Emerald Group Publishing Limited.

Sheehan, D., & Malloy, P. (2010). Nursing education. In B. Ferrell & N. Coyle (Eds.), *Oxford textbook of palliative nursing* (3rd ed.) (pp. 310-418). New York: Oxford University Publishing.

Simpson, M. (1979). Death education; where is thy sting? *Death Education, 3*(165), 165-173.

Sipos, Y., Battisti, B., & Grimm, K. (2008). Achieving transformative sustainability learning: engaging head, hands and heart. International Journal of Sustainability in Higher Educa tion, 9(1), 68-86.

Slattery, P. (2006). *Curriculum development in the postmodern era.* (2nd ed.). New York:Routledge.

Sleeper, J. A., & Thompson, C. (2008). The use of hi fidelity simulation to enhance nursing students' therapeutic communication skills. *International Journal of Nursing Education Scholarship*, *5*(1), 1-12.

Smith, D.C. (2006). Educating the Millennial Student: Some Challenges for Academics. Retrieved from:http://www.sacla.org.za/sacla2006/papers/WP15%20Derek%20Smith%20Educating%20the%20Millenium%20Student.pdf Jan 30,2014.

Smith-Stoner, M. (2009). Using high-fidelity simulation to educate nursing students about end-of-life care. *Nursing Education Perspectives*, *30*(2), 115-120.

Solnick, A., & Weiss, S. (2007). High fidelity simulation in nursing education: A review of the literature. *Clinical Simulation in Nursing*, *3*(1), e41-e45.

Sperlazza, E. & Cangelosi, R. (2009). The Power of Pretend; Using Simulation to Teach End-of-Life Care. *Nurse Educator, 34*(6), 276-280.

Strauss, A., & Corbin, J. (1998). Grounded theory methodology: An overview. In N. K. Denzin & Y. S. Lincoln (Eds.), *Strategies of qualitative inquiry*. Thousand Oaks, CA: Sage

Sullivan, A,M., Lakoma, M.D., &Block SD. (2003). The status of medical education in end-of-life care: A national report. *J Gen Intern Med,* 18, 685–695.

Tapscott, D. (2009). *Grown up digital: How the net generation is changing your world.* Toronto, ON: McGraw-Hill.

Tashiro, J. Hung, P., & Martin, M. (2011). Evidence-based Educational Practices and a Theoretical Framework for Hybrid Learning. *Technology.*

Tracy, S. J. (2010). Qualitative quality: Eight "big-tent" criteria for excellent qualitative research. *Qualitative inquiry*, *16*(10), 837-851.

Twigg, R.D., & Lynn, M.C. (2012). Teaching end-of-life care via a hybrid simulation approach. *Journal of Hospice and Palliative Nursing, 14*(5), 374-379.

Urquhart, C. (2013). *Grounded theory for qualitative research: A practical guide*. Sage.

Ury, W. A., Berkman, C. S., Weber, C. M., Pignotti, M. G., & Leipzig, R. M. (2003). Assessing medical students' training in end-of-life communication: a survey of interns at one urban teaching hospital. *Academic Medicine*, *78*(5), 530-537.

Vygotsky, L.S. (1987). *The Collected Works of L.S. Vygotsky* (Vol. 1). In R.W. Rieber and A.S. Caron (Eds), Plenum Press, New York.

Walker, D., & Myrick, F. (2006). Grounded theory: An exploration of process and procedure. *Qualitative Health Research*, *16*(4), 547-559.

Walton, J., Chute, E., & Ball, L. (2011). Negotiating the role of the professional nurse: The pedagogy of simulation: A grounded theory study. *Journal of Professional Nursing*, *27*(5), 299-310.

Wass, H. (2004). A perspective on the current state of death education. *Death studies*, *28*(4), 289-308.

Wass, H. (2006). Death education for children. In I. Coreless, B. Germino & M. Pittman (Eds.), *Dying, death and bereavement: A challenge for living* (2nd ed.). New York: Springer Publishing.

Webster, M. (2012). An encyclopedia Britannica company. *electronic source] http://www. Merriam-Webster. com/dictionary/education.*

Wee, B., & Hughes, N. (Eds.). (2007). *Education in palliative care: Building a culture of learning*. Oxford: Oxford University Press.

Weimer, M. (2010). Taking Stock of What Faculty Know About Learning. In Christensen Hughes, J. & Mighty, J. (Eds.). *Taking Stock: Research on Teaching and Learning in Higher Education*. (81-93). Montreal & Kingston: McGill-Queen's University Press.

Weimer, M. (2002). *Learner-centered teaching; Five key changes to practice.* San Francisco, CA: Josey-Bass.

Weller, M. (2004). Learning objects and the e-learning cost dilemma. *Open Learning*, *19*(3), 293-302.

Weller, J. M., Nestel, D., Marshall, S. D., Brooks, P. M., & Conn, J. J. (2012). Simulation in clinical teaching and learning. *Med J Aust*, *196*(9), 594.

Wenger, E. (1998). *Communities of practice: learning, meaning and identity*. Cambridge, MA: Cambridge University Press.

Wenger, E. (2000). Communities of practice and social learning systems. *Organization*, *7*(2), 225-246.

Wenger, E., McDermott, R., & Snyder, W. (2002). *Cultivating communities of practice: A guide to managing knowledge.* Boston, MA: Harvard Business School Press.

Wilson, D. M., Birch, S., & Sheps, S. (2008). Researching a Best-Practice End-of-Life Care Model for Canada. *Canadian Journal on Aging, 27*(4), 319-330.

Wimpenny, P., & Gass, J. (2000). Interviewing in phenomenology and grounded theory: is there

a difference?. *Journal of advanced nursing*, *31*(6), 1485-1492.

Windham, C. (2005). The Student's Perspective. In J. Oblinger and D. Oblinger (Eds.), Educating the Net Generation, pp. 50-65. Boulder, CO: EDUCAUSE Publishers. http://www.educause.edu/educatingthenetgen/

Winterbottom, F., & Seonane, L. (2012). Crossing the Quality Chasm: It takes a team to build the bridge. *The Ochsner Journal, 12,* 389-393.

Woods, P. (1992). Symbolic interactionism: Theory and method. In M.D. LeCompte, W.L. Mill roy, & J. Preissle (Eds.), *The handbook of qualitative research in education* **(pp. 337– 404). Academic Press, San Diego.**

World Health Organization. (1988). *Learning together to work together for health: Report of a WHO study group on multiprofessional education for health personnel: The team approach.* (Technical Report Series 769: 1-72). Geneva, Switzerland: World Health Organization.

World Health Organization. (2000). *Integrating workforce planning, human resources,and service planning. Retrieved from* http://www.who.int/entity/hrh/documents/en/Integrating_workforce.pdf

World Health Organization. (2004). Palliative care: the solid facts. *World Health Organization, Geneva.*

World Health Organization. (2010). *WHO definition of palliative care*. Retrieved from http://www.who.int/cancer/palliative/definition/en/ (accessed May, 2010).

World Wide Palliative Care Alliance (2014). *Global Atlas of Palliative Care at the End of Life*. Retrieved from: http://www.who.int/cancer/publications/palliative-care-atlas/en/ (accessed 08, Aug, 2014).

Wuest, J. (2007). Grounded theory: The method. In P.L. Munhall (Ed.), *Nursing research: A qualitative perspective* (pp. 239-271). Sudbury, MA: Jones and Bartlett.

Yilmaz, K. (2008). Constructivism: It's theoretical underpinnings, variations and implications for classroom instruction. *Educational Horizons, 86*(3), 161-172.

Zwarenstein M., & Reeves, S. (2006).Knowledge translation and interprofessional collaboration: where the rubber of evidence based care hits the road of teamwork. *J Contin Edu Health Prof* ,26:46-54.

Zwarenstein, M., Atkins, J., Barr, H., Hammick M., Koppel, I., & Reeves, S. (2001). A systemic review of interprofessional education. *Journal of Interprofessional Care, 13*(4), 417-424.

Zwarenstein, M., Goldman, J., & Reeves, S. (2009). Interprofessional collaboration: effects of practice-based interventions on professional practice and healthcare outcomes. *Cochrane Database Systematic Reviews. 8*(3), Article Number: CD000072.

Ziv, A., Ben-David, S., & Ziv, M. (2005). Simulation based medical education: an opportunity to learn from errors. *Medical Teacher,* 27(3), 193-199.

APPENDIX A: CONSENT FORM

Lakehead
UNIVERSITY

Consent Form

Project Title: Interprofessional Palliative Care Education using High Fidelity Simulation.

Investigator: Kathy Kortes-Miller, HBMT, MSW
PhD Candidate, Faculty of Education, Lakehead University

Supervisor: Dr. Lisa Korteweg, PhD
Professor, Faculty of Education, Lakehead University

My signature on this sheet indicates I agree to participate in a study conducted by Kathy Kortes-Miller examining the student experience in interprofessional palliative care education using high fidelity simulation. It also indicates that I understand the following:

- I understand to my satisfaction the information regarding participation in this study
- I am a volunteer and can withdraw from this study at anytime, except in the last stage of the final dissertation preparation for oral defense (approx. the last 6 months when the thesis is with the committee and external examiner).
- My participation in this research study will be recorded by video and audio taping
- The research procedures, risks and benefits have been fully explained to me
- I have had the opportunity to ask questions regarding this study and am satisfied with the answers to my questions
- Data from this study may be used for education and publications and that I am anonymous
- I understand that I may not benefit personally from participation in this research but I am contributing to improving the overall understanding of interprofessional palliative care education.
- This consent will be reviewed with me throughout the study to ensure I am fully informed.
- I am encouraged to ask the researcher, Kathy Kortes-Miller, any questions at any time during my participation.

With this understanding, I agree to participate in this research.

Signature:
Date:

APPENDIX B: INTERVIEW GUIDES

First Semi-Structured Interview Guide

These questions will be used to guide the first set of interviews and provide for systematic collection of data.

- What interests you about palliative care?
- Why are you interested in palliative care education?
- Tell me a bit about your experiences with palliative care education
- What are your expectations? Are these being met?
- What was your impression of the first interprofessional palliative care simulation lab which you participated in?
- What are some of the experiences in that lab that stood out for you?
- Was there something that occurred that was especially helpful for your learning? Something that was unhelpful?
- What was it like working with a group of other healthcare students in the simulation lab?
- How can or did simulation impact your palliative care education experiences?
- How do you see palliative care education preparing you for your future career as a healthcare provider?
- At this point, if you could make any recommendations to palliative care educators about learning and your experiences, what might you say to them?
- If you could make any recommendations to educators facilitating simulation labs, what might you say?
- Is there anything else you want me to know?

Second Semi-Structured Interview Guide

As data analysis will be occurring throughout the research, the categories will be emerging as well as guiding the second set of interviews. However, some questions that may be asked could include the following:

- What is working for you in your palliative care education? What isn't working?
- How do you see yourself changing as a result of your learning and palliative care education experiences?
- What was your impression of the second interprofessional palliative care simulation lab you participated in?
- How has simulation impact your palliative care education experiences?
- How might you describe some of the key processes or forces that are shaping your

learning?

- What was it like working with a group of other healthcare students in the simulation lab?
- How did working with other palliative care learners from different backgrounds expand your learning in the simulation lab? How did this hinder it or make it more challenging? Or enhance your learning?
- Is there anything you might change in the simulation lab experiences you have had?
- Any recommendations for me or other palliative care educators?
- Anything else you might want me to know or to say?

Third Semi-Structured Interview Guide

Similar to the 2nd interview guide, as data analysis will be ongoing, the categories will be emerging as well as guiding the second set of interviews. However, some questions that may be asked could include the following:

- Since our last interview, what are you doing these days? How are things going for you?
- What is your impression of palliative care now?
- What is your impression of the use of simulation in interprofessional healthcare now?
- What did you learn from the other students involved in the simulation labs?
- Can you take a moment to highlight the top three things that have impacted your learning in palliative care?
- Can you take a moment to highlight the top three things that have impacted your learning in healthcare?
- What forces or processes have shaped your learning in healthcare?
- Is there something that you would change in your healthcare education to make your learning experience better?
- What does your education in palliative care mean to you?
- Anything else you would like to tell me?

APPENDIX C: SIMULATION LAB AGENDAS

Agenda Simulation Lab #1 "Jane"

9:30-10:00 am Welcome
Review of consent forms
Introductions "Bucket List"
Sim Lab "rules"

10:00 - 10:30am Review of what is palliative care, needs/fears of the dying and communication skills

10:30 - 10:45am: Speed dating Jane

10:45 - 11:00am: Scenario #2

11:00 - 11:15am: Scenario #3

11:15 - 12pm - Debrief

Agenda Simulation Lab #2 "Bianca"

9:30-9:45am Welcome and Ice Breaker:

9:45-10:00am: Speed dating Bianca!

10:00 - 10:05am Spring Break!

10:10-10:30am - Scenario #2 Confusion.

10:30-10:35am MSRA Outbreak!

10:40-11:00am Companioning Bianca

11:00am: Bianca dies

11:00-11:10am Red Back Pack

11:10-11:30am - Debrief

11:30am - Goodbye, Interview sign-up sheets.

APPENDIX D: SCENARIO SCRIPT "JANE"

Sim Lab #1
Agenda

The focus of this lab is on communication - beginning to talk about death and dying with an individual with a terminal illness.
One of the goals is to encourage students to consider the holistic nature of palliative care and what this type of active care can offer a patient and their family.

The "Back story".

Jane is a 40 year old woman who was diagnosed with metastatic breast cancer who was admitted yesterday to the hospice unit where you are doing your student placement. Jane received her diagnosis 2 years ago and her life has been a real roller coaster since. Breast cancer has run in her family - her mom had it, her sister had it so getting breast cancer wasn't a real surprise to Jane. However, the rest of her family members, were diagnosed, some had surgery, some did chemo and radiation and they all went into remission. Jane, however, has had both a radical mastectomy and numerous routes of chemo and radiation and her cancer did not go into remission but rather it has spread to different parts of her body including her bones where it is causing her a great deal of pain.

Jane has been married to Rob for 15 years. Rob used to work at the mill in Thunder Bay until he was laid off. He now works in Fort McMurray, Alberta 12 days on, 6 days off and has quite the commute between his home and work. Money has been quite tight since Jane has been ill so Rob tries to work as much as he can and picks up extra shifts whenever possible. Jane worked as an elementary school teacher (taught mainly grade 3) until she went on sick leave 8 months ago. Jane and Rob have two children - Emma, 9 and Sam 7. Emma and Sam are cared for by Jane's younger sister Maggie while Jane is in the hospital and Rob is at work. Jane's parents also help out as much as possible although Jane says they aren't too much help as they are too emotional and concerned that she's going to die.

This is Jane's first admission to hospice. She was told by her oncologist that there isn't anymore treatment that can be offered her to cure her cancer. Jane feels like her doctors and nurses at the cancer clinic have just "given up" on her. She only agreed to come to hospice for a "tune up" - a short stay so she can have her medications "tweeked" and her pain and symptom management improved so she can return home to be with her children.

One of the new meds Jane is on, causes her some chest congestion. Jane will cough slightly when she needs a slight break. This is when you are to excuse yourself, take your seat and let an-

other student visit with Jane. The time between coughs will be varied and this is not an indication of if you are doing a "good job" or have made a mistake or anything like that. It's just important that everyone has a turn at the bedside.

Scenario #1 Speed Dating

Jane has just been admitted to the hospice unit. While she was agreeable to the transfer from Thunder Bay Regional Health Sciences Centre the transfer was done really fast and she's not exactly sure why she was transferred. Apparently "someone" tried to tell her what palliative care was all about but she's still a little confused as to what is all means. She's a bit concerned that she's been "ditched" by her oncologist and that this is "end of the road care" that she will be receiving.

In this scenario, you want to get as much information from Jane as possible. She might have some questions for you, but try to use your time with her to get information from her too. During this scenario she will be very open to lots of questions and won't be overly concerned about "niceties".

Nuggets to plant:

Jane is really angry with what is going on with her.
She hasn't told Rob or her parents about the extent of her disease but has confided in her sister Maggie.
She doesn't use the "d" words but rather speaks in euphemisms if she even addresses her situation at all.
Jane is in a great deal of pain which really scares her.
She wants to go home and is always making plans for the future.
Pictures - from children, get well notes from students
Travel books
Loves food
Wants to protect her children from her illness and really hasn't told them much of anything about what is going on.
Tends to be nauseated and has low energy.
Doesn't believe in God but wants her children to give religion a try.
Doesn't really understand about palliative care and what it can offer her.

Scenario #2 "Am I dying"?

Jane has now been on hospice for 10 days - much longer than she ever hoped or anticipated. She had a couple of really good days when she felt stronger and her pain was well managed but something has changed and she's been sleeping more and finds that her pain is also manifesting differently - hurts on movement, finding it difficult to get around. Her appetite is very minimal which is really stressing out her family. She is sleeping more and doesn't ask to see her children

as often and finds their visits really difficult. It's late afternoon and you are about to head home but poke your head in on Jane. Her room is dark, there's no one around. You think she's asleep but she looks at you and asks "Am I dying"?

Nuggets to plant:

Jane is fearful about dying - not so much for herself but what it will do to her family
Doesn't want to be a burden on anyone
Hopes to live until Christmas
Heard from her physician that she's probably looking at a few months at best
Doesn't want to die at home but would like to go home and have somemore time there
Wonders what dying feels like
What happens to your body when you die?
Is not really sure what she believes in regarding an afterlife.
Still hesitant to use the "d" words.

Scenario #3 - Talking to her children

Almost a week has passed since Jane asked you if she was dying. Jane's pain is now better controlled, she is sleeping less and finds herself with a bit more energy. She and her family are anxiously anticipating a "trial discharge" home which is happening this afternoon. Plans are in place for a hospital bed for Jane's home, nursing support is in place, all her meds taken care of and Rob has managed to figure out his work so he can be home for the first few days while Jane is there. You stop in to see Jane just before she leaves to wish her the best and are surprised when she asks you "so, what do I tell my kids"?

Nuggets to plant:

age appropriate language
not making promises
She has told them that she won't die
Books
Fluidity of hope
Advanced care planning
Unfinished business
Wants to leave something for her children but doesn't know what.
Worried about how Rob will be as a single parent with his work etc.

NB - Jane ends the scenario saying thank you for the chat and that she needs to rest before the ambulance and Rob come to pick her up and take her home.

APPENDIX E: SCENARIO SCRIPT "BIANCA"

Sim Lab #2
Agenda

9:30-9:45am Welcome and Ice Breaker:

"Thorns and Roses"
- what are you most fearful about working with someone who is dying? What do you think is the most important gift you have to offer someone who is dying?

Companioning the dying
(Packing the backpack)
What can you offer? (Time, commitment and presence, compassion and knowledge) Treat - tractare - to drag
Patient "passive long-term sufferers
companioning is the art of bringing comfort to another by becoming familiar with her story (experiences and needs)

9:45am- 10:00am: Speed dating Bianca!

It's one of your very first days of placement at the LTC. Your supervisor just wants you to "get a feel" from the residents who you will be caring for. She heard from some other staff that Bianca is having a tough time transitioning to LTC and thinks you can go in and "cheer her up".

Meet Bianca:

Bianca is a 94 year old woman who was recently admitted to the Long Term Care facility where you have just started doing a student placement. She was living alone in the house where she had lived for almost 60 years when she fell one early evening when she went downstairs to get a jar of her famous tomatoe sauce for dinner. Unfortunately Bianca ended up in acute care having broken her hip. She underwent surgery to repair her hip and that seemed to have gone fine but Bianca started to demonstrate some periods of confusion and memory difficulties while in acute care. This worried her healthcare team who assessed Bianca as being unsafe at home and had her transferred to LTC.

10:00 - 10:05am Spring Break!

Students will leave the room and move to the hallway to discuss what they know about Bianca, and hear this:

Before you went away for spring break, Bianca seemed to be settling into her new life in LTC ok. She was still often sad and missing home but had made a number of new friends and while she was not a fan of the food, she loved the music program - especially the days the LU music students came. But when you return, she almost seems like a different person. The report from your supervisor is that Bianca is sleeping more, not eating or drinking much and hasn't been out of bed for almost 5 days.

Please mess up Bianca's appearance, bed area, kleenexes, pictures etc.

10:10-10:30am - Scenario #2 Confusion.

While one of the students is in visiting, the phone should ring and it's Erin. She wants to speak with Bianca who is too agitated and upset to take the phone. Erin wants to know what is going on and if she should come to visit. Erin could also prompt students with ideas of things that might be used to comfort Bianca if required. OR if things are proceeding well, she could grumble about lack of physician visits, care concerns, ageism (giving up on her because she's old), feeding issues ie) food isn't any good - how do you expect an Italian chef to adjust? Maybe even advance care planning discussions?

Nuggets to plant:
Holding her picture of Tony sometimes helps her to relax.
Will speak primarily in Italian.
Reciting the recipe for tomato sauce or say the "Our Father" tends to ground her.
Likes to have her hand stroked.
Not eating much anymore
Too weak to get out of bed.
Doesn't want to be alone

10:30-10:35am MSRA Outbreak!

Students will leave the room and move to the hallway to discuss what they know about Bianca, and hear this:

You missed placement for a few of days because there was a MRSA outbreak and you weren't allowed in. When the outbreak was over, you were surprised to hear from your supervisor that "things had really changed" for Bianca and that she "wasn't doing well". You heard from one of the PSWs who worked closely with Bianca that the PSW thought she was going to "pass soon".

Please straighten out Bianca's appearance if this hasn't already been done, lower the bed, change the lighting, take off glasses, change breathing and pulse to actively dying.

10:40-11:00am Companioning Bianca

While one of the students is in visiting, the phone should ring and it's Erin. She has been calling everyday over the outbreak and knows that Bianca isn't doing well. She is planning on catching a flight later in the afternoon and hopes to be there by early evening. She wants to know if Bianca will still be there.

Breathing should change, dying needs to occur.

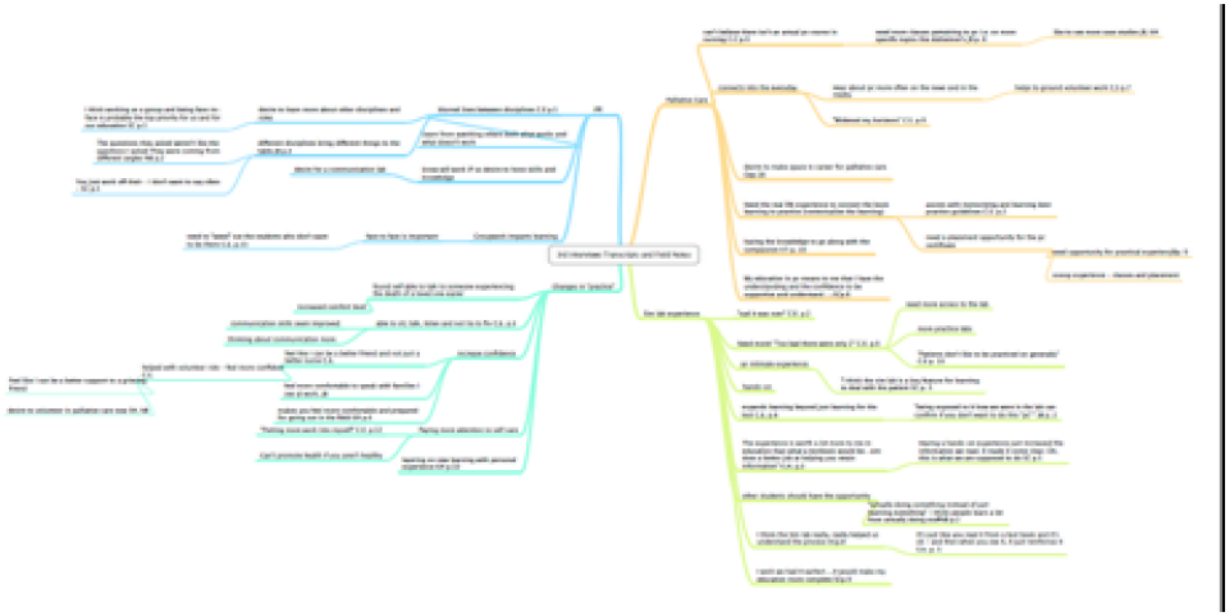
11am: Bianca dies

11:00-11:10am Red Back Pack

11:10-11:30am - Debrief

11:30am - Goodbye, Interview sign-up sheets.

APPENDIX F: MIND NODE



APPENDIX G: DEMOGRAPHIC SURVEY

Lakehead
UNIVERSITY

Welcome to the research study, Interprofessional Palliative Care Education using High Fidelity Simulation (Researcher: Kathy Kortes-Miller, PhD candidate). Please answer the following questions to provide some introductory information about yourself and your learning experiences in palliative care education.

Name: _____

Age: _____ M/F (circle one)

What program are you registered in at Lakehead?_____

What year are you in? _____

Have you completed Gero 101 Introduction to Palliative Care? _____

Have you taken any other courses in palliative care and if so, which courses?

_____

Have you done a placement where the focus has been on palliative care (if yes, where)?

_____

Have you ever been employed in a palliative care setting? _____

Have you taken an online course? _____

Have you participated in education in a simulation lab before? _____

Have you taken any courses where there was a focus in Interprofessional Education (learning with, from and about other healthcare professions?)_____

Have you experienced the death of a close family member or friend?_____

Have you witnessed a death in a clinical setting? (either as part of your work or student placement?)

APPENDIX H: INFORMATION COVER LETTER

Lakehead
UNIVERSITY

Information Cover Letter

Project Title: Interprofessional Palliative Care Education using High Fidelity Simulation.
Investigator: Kathy Kortes-Miller, HBMT, MSW
PhD Candidate, Faculty of Education, Lakehead University
Supervisor: Dr. Lisa Korteweg, PhD
Professor, Faculty of Education, Lakehead University

DearPotential Participant,

Thank you for considering participation in this research study. Please read the following to understand the specifics of this study.

Purpose: I am interested in understanding about the learning experiences of undergraduate students in healthcare fields who engage in interprofessional palliative care education using high fidelity simulation. My goal is to develop a theory about the student learning process in this area as experienced by students. My hope is that by examining the student experience in interprofessional palliative care education using high fidelity simulation, that this will assist healthcare educators in their delivery of palliative care education.

Your Participation: Participation in this study is completely voluntary and you may withdraw at anytime. Should you choose to be involved, participation means that you will discuss your learning experiences in interprofessional palliative care education using high fidelity simulation. You will participate in two interprofessional palliative care education labs with other students from different hea2lthcare related disciplines at Lakehead University. After each lab there will be a group debrief session that will be video recorded. It is estimated that each lab and subsequent debrief session will take approximately 3 hours per lab. I will also conduct three individual interviews with you throughout the study and I estimate that each will be approximately one hour in length. These interviews will be conducted at a time and location that is convenient for you. All interviews will be audio-recorded, transcribed and shown to you so

that you may check and verify the accuracy of the transcription. In total, your time commitment to this study will be approximately 9 hours over a period of 6 months.

Benefits of Participation: This research aims to improve the quality of interprofessional palliative care education for undergraduate students. Your participation will be of benefit to yourself, future students, and the field of palliative care. Your participation will provide you with an opportunity to receive a type of palliative care education that is not presently being offered at Lakehead. As this is an educational intervention alongside a research study, the Centre for Education and Research on Agin

and Health (CERAH) will provide you with a certificate of participation in this education which you can add to your resume/CV. Participation will also provide you with the opportunity to learn about research. At the conclusion of the study, names of participants will be entered into a draw for two prizes; an iPod touch and a $50 Chapters gift card. A copy of a summary of the results is available to you upon request.

Risks of Participation: Your participation in this study poses minimal risks, however, I will be taking the following steps to ensure that risk is minimized and to respect your confidentiality:

- All information from interviews will be kept strictly confidential. Any data, tapes, transcripts will be identified with a code number keeping your identity separate from the data. This connection will only be known by myself as the researcher. Your name, or any identifying information will not be released or made public in any research findings, reports, presentations or subsequent publications. Any references made to information you share will be altered to remove any identifying information.

- As the simulation labs will be group experiences, you confidentiality in this study cannot be guaranteed. However, all participants will be encouraged to respect what occurs in the lab and to not speak about their experiences publicly or divulge the identity of other participants.

- All tapes, transcripts and computer files will be secured either in a locked cabinet or password protected. After completion of the study, the data will be stored securely in a locked cabinet for a minimum of five years after which time it will be destroyed. Anonymized data from this study may be used in a future study pending appropriate ethics approval.

- You should know that I am a sessional lecturer at Lakehead University and teach as part of the Interprofessional Palliative Care Certificate. In the past, I have been the coordinator of this certificate. However, during the duration of this study, I will not teach

any of your classes or be involved in the evaluation of any of your school work. I will also not communicate with any instructors at LU about your participation in this research study.

- As this study involves thinking and learning about death and dying, this could potentially arouse feelings of uneasiness or upset. Should this occur, you are encouraged to talk about your feelings with the appropriate professional supports. Arrangements have been made with the counselling centre at Lakehead for this.

I look forward to your participation in this interesting study. Consent forms will be available to be signed before the first simulation lab. If you have any questions regarding this study, please do not hesitate to contact me at: kkortesm@lakeheadu.ca for further clarification. I thank you in advance for taking the time to read this information and for your consideration.
I will contact you to schedule the first simulation lab.

This research has been approved by the Lakehead University Research Ethics Board. If you have any questions related to the ethics of the research and would like to speak to someone other than the Principal Investigator, please contact Sue Wright at the Research Ethics Board at 807-343-8283 or swright@lakeheadu.ca.

Sincerely,
Kathy Kortes-Miller, HBMT, MSW, PhD(c).
Researcher

APPENDIX I: SAMPLE COURSE OUTLINE OF GERONTOLOGY 101

GERO 101:
Introduction to Palliative Care
Northern University

Fall 2012

Instructor : Kathy Kortes-Miller, HBMT, MSW, PhD(Cand.)
Phone : Messages may be left with CEDL at: 807-346-7730
Email : kkortesm@lakeheadu.ca or Desire2Learn internal course mail
Course dates: September 10- December 3, 2012
Delivery: Online asynchronous mode using Desire2Learn
Office Hours: Appointments by email

"While I thought that I was learning how to live, I have been learning how to die."
Leonardo da Vinci 1452-1519

Course Description:

Purpose of the course: This course provides students with an **introduction** to the knowledge, values and skills required by health care providers in the delivery of palliative care. It will explore, from an **interprofessional** perspective, critical issues related to death, dying, palliative and end-of-life care relevant to healthcare professionals working in a variety of settings.

The focus of the course is on understanding the purposes, implicit assumptions, and practices of palliative care with a focus on its delivery in Canada. This course is designed to introduce you to the ideas surrounding caring for individuals who are dying and their families. It is also intended to introduce you to some of the literature pertaining to palliative care, end of life care and dying with a view to assist you to become academic readers of this material.

This course should not be viewed as the only course to be taken in the development of your understanding of palliative care; rather, it is intended as a **point of entry** that will enhance your general knowledge of this broad field.

It is hoped that this course will serve to develop an interest in students to further their palliative care education and to strive to improve the delivery of palliative care and end of life care in Canada.

Pre or Co-requisite: This course is the introductory required course in the **Interdisciplinary Palliative Care Certificate Program.** It is **recommended** but not required that this course be taken prior to other required courses. This course may also serve as continuing education for practitioners or an elective course for students in other academic programs. The complete certificate program consists of six courses that the student must pass with an overall average of 70%. **Please note:** this course is **NOT** recommended for first year students. If you are a first year student and wish to take this course, please contact me via email.

Course Format: This course is delivered through online asynchronous mode of education entirely on Desire2Learn. If you have concerns or questions about the platform of this course, please email Continuing Education and Distance Learning (CEDL) at ecourse@lakeheadu.ca or cedl.online@lakeheadu.ca. This course is open to second, third and fourth year students of all disciplines. It is taught from an interdisciplinary and bio-psychosocial perspective reflective of the team approach which is essential to the delivery of excellent palliative care to individuals who are dying and their families.

Learner Outcomes:

At the end of this course, students will:

1). Demonstrate an understanding of the impact of societal values and attitudes toward death and dying on the provision of end-of-life care and analyze the relationship of attitudes and values to hospice palliative care in Canada.

2). Develop awareness of their personal values and attitudes toward death and dying, and comprehend the impact of their values and attitudes on their participation in palliative care for dying people and their families.

3). Outline the history of the hospice movement leading to the current social policy context for palliative care in Canada.

4). Explain the definition, philosophy and principles of hospice care, palliative care and end-of-life care.

5). Identify and describe the roles of members of a multidisciplinary palliative care team and

the contexts in which holistic palliative care is delivered. This includes understanding the function and range of community resources that provide palliative care.

6). Comprehend the importance of addressing the bio-psycho-social and spiritual needs of the dying person and their family (including grief and bereavement) and the components of a holistic palliative care assessment and intervention plan.

7). Develop an understanding that meeting the needs of dying people and their families will vary by age, culture and geographical context.

8). Be introduced to the meaning and application of the following components of competent palliative care provision: the strength's perspective; effective communication with the dying person and family; holistic assessment and care; self-care; teamwork.

9). Describe the ethical issues in end-of-life care and palliative care. This includes the distinction between palliative care, euthanasia and physician-assisted suicide.

10). Be introduced to the Canadian Association of Palliative Care Standards of Practice.

Required Text:

Hadad, M. (2009). *The Ultimate Challenge; Coping with Death, Dying, and Bereavement.* Toronto: Nelson Education Ltd.

It may be possible to purchase an earlier edition of this text used from previous students but please note, it is the students' responsibility to insure that they have all the required information for this course.

I will try to put a copy of the text on reserve at the Lakehead (Thunder Bay campus) library.

Strongly Recommended:
The 6th edition of APA's Publication Manual (2009). Also, please note that some websites offer examples of APA style (e.g., http://webster.commnet.edu/apa/index.htm).

Additional References:
Articles, readings and references along with websites and videos will be available on our course WebCT site for student access.

Assignments:

All writing in this course should adhere to style as outlined in the Publication Manual of the American Psychological Association, 6th edition. Written submissions should be typed, 12-point font and doubled spaced where possible. Online postings are not expected to meet this style expectation but references should be included and be written corresponding to this style.

You must complete all assignments to receive a passing grade in this course.

For the purpose of this course, websites are NOT considered an academic source and nor are information portals such as Wikipedia, Ask Jeeves etc. Academic sources may come from scholarly journals such as The Journal of Palliative Care, Omega, Narrative Inquiry, Death Studies etc (these are only a few examples of journals with articles pertaining to the topics in this course) or in text books written by some of the theorists referenced in this course.

Evaluation:
There are ***3 forms of evaluation*** for this course. They are:

1). Group Assignment (various due dates, please consult the assignment description)
This is a GROUP assignment and individual assignments will not be accepted or substituted. I have developed groups for you and you can find these in the discussion posting section of the course.

2). Evidence of Learning Online Posts Assignment last posts accepted on December 6, 2011 by 6pm

3). Final Exam (date and time TBA, please register your location with CEDL. The exam will occur during the Lakehead exam period of December 8-19th. Please ensure that you will be available to write during this time as special accommodations cannot be made for individual students).

Details for the assignments will be provided online.

Please note:

Due dates are non negotiable. Late assignments will not be accepted unless there is a legitimate medical or compassionate reason. Extensions will be granted only in exceptional circumstances and this must be negotiated with the instructor in advance of the due date. It is the student's responsibility to contact the instructor about any exceptional circumstances.

Students should being assignments and readings immediately, so that any unexpected occurrences will not interfere with your coursework. Although I recognize that most students have many other responsibilities, successful completion of this course requires that you schedule your commitments to ensure that all course requirements are completed on time.

Course Progression:

It is expected that you will use this text actively as a resource to support your learning throughout this course and that you will reference it in **all** your assignments. While you may

read and use the text to suit your learning needs, here is a recommended reading outline to guide you if you choose. (You will notice that some weeks have 2 chapters while others have none). **Please note, that the following outlines only the required reading from the text. When there is a module with additional required reading, video watching, website exploration etc. that will be outlined on the first page of that module.**

Week	Date	Topic	Required Reading
1	12/09/10	Introduction to Dying and Death	Chapter 1
2	12/09/17	Specialized Care for the Living	Chapters 2 & 11
3	12/09/24	History, Models and the Team	
4	12/10/01	Physiology of Dying	
5	12/10/08	Spirituality and Hope	Chapters 3&4
6	12/10/15	The "Good" Death	Chapter 12
7	12/10/22	Pain Management	
8	12/10/29	Families in Transition	Chapters 6,7&8
9	12/11/05	Ethical and Legal issues	Chapters 9 & 14
10	12/11/12	Quality of Life	
11	12/11/19	Grief and Bereavement	Chapters 5& 10
12	12/11/26	Self Care and the future	Chapters 13 & 15

Special Note to Students:

This course covers topics and issues that tend to be emotionally charged, and you may be required throughout the course to engage in personal growth by taking an honest look at your feelings and beliefs related to those topics and issues. For some students, this course may be emotionally challenging because it may bring up unresolved grief from the past or may relate to current life issues that are emotionally difficult. Although this course may involve some level of self-disclosure and sharing, it is not therapy. If you find yourself feeling overwhelmed by the topics covered in this course, or by your reactions to the course, please contact me, your instructor. You may also consider dropping the course and/or seeing a mental health professional and re-registering in this course at another time.

Communication:

Please do the majority of your communication with me and other students via the Desire2Learn platform. Questions pertaining to the functioning or content of the course should be asked in the "Housekeeping Section". If you have a question about something pertaining to the course material, there is a good chance other students will too. We all have private email on the course which is also a good way to contact me around specific questions or personal questions. I will be online generally every 24 hours. If you have emailed me and haven't received a response in 48 hours please feel free to email me again or bring your post to my attention again.

The majority of communication about the functioning of course from me (other than in this course outline) will occur in the "Housekeeping" discussion thread. It is the students responsibility to keep abreast of all information posted there.

Learning Perspective:

Student learning is the shared responsibility of both the students and instructor. Every attempt will be made to make this course stimulating, motivating using active learning principles. Active student engagement is expected. Students are expected to work collaboratively with others and communicate openly with the instructor. Comments, suggestions and constructive feedback are always welcome and appreciated.

Submission of Assignments:

All assignments should be submitted via the dropbox on Desire2Learn. Assignments emailed to my Lakehead email will not be accepted.

Grades

Assignment grades will be posted on Desire2Learn. I strive to return marks within a 2 week period of you submitting your assignment provided they were handed in on the due date. This is a very large class this semester so I hope that this goal will be achievable. Late assignments will be marked and returned over a longer time frame.

Student Appointments:

Please feel free to make appointments with the me online, by telephone or in person if you are in Thunder Bay if you have any questions, comments or concerns about the course and/or your learning experience. I will do my best to return emails within 48 hours. If you have not heard from me in that time period, please do not hesitate to email me again. I welcome the opportunity to speak and meet with you.

Looking forward to a great semester!

Kathy Kortes-Miller

APPENDIX J: ETHICS APPROVAL

Lakehead
UNIVERSITY

Office of Research Services

Tel 807-343-8934
Fax 807-346-7749

November 22, 2012

Principal Investigator: Dr. Lisa Korteweg
Student Investigator: Kathy Kortes-Miller
Faculty of Education
Lakehead University
955 Oliver Road
Thunder Bay, ON P7B 5E1

Dear Dr. Korteweg and Ms Kortes-Miller:

Re: REB Project #: 069 12-13 / Romeo File No: 1462857
Granting Agency: N/A
Granting Agency Project #: N/A

On behalf of the Research Ethics Board, I am pleased to grant ethical approval to your research project titled, "Dying to Know: Interdisciplinary Palliative Care Education using High Fidelity Simulation".

Ethics approval is valid until November 22, 2013. Please submit a Request for Renewal form to the Office of Research Services by October 22, 2013 if your research involving human subjects will continue for longer than one year. A Final Report must be submitted promptly upon completion of the project. Research Ethics Board forms are available at:

http://research.lakeheadu.ca/ethics_resources.html

During the course of the study, any modifications to the protocol or forms must not be initiated without prior written approval from the REB. You must promptly notify the REB of any adverse events that may occur.

Completed reports and correspondence may be directed to:

Research Ethics Board
c/o Office of Research Services
Lakehead University
955 Oliver Road
Thunder Bay, ON P7B 5E1
Fax: (807) 346-7749

Best wishes for a successful research project.

Sincerely,

Dr. Richard Maundrell
Chair, Research Ethics Board

/scw