A Narrative Inquiry into Learning Experiences that Shape Becoming a Paramedic

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A Narrative Inquiry into Learning Experiences that Shape Becoming a Paramedic

by

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Abstract

In this narrative inquiry, I explored 5 paramedics’ experiences of learning within a technical education program grounded in a behaviourist paradigm. I focused on understanding the learning experiences that shaped participants’ knowledge constructs in readiness for the complexities of practice. This research puzzle began with my first experiences as a novice paramedic learning to do practice. My interest in this study evolved through reflection upon my experiences as a student, practitioner, and educator. Story is an important way paramedics can interpret how their experiences shape them. The meanings embedded in paramedic learning experiences can be understood and shared through stories, which can provide insight for future paramedics. I negotiated a relational inquiry space called the field with each of the participants where we shared our stories. Individual audiotaped conversations were guided by the research puzzle. Conversations occurred over a 6-month period. I developed field texts from the recorded conversations and my session notes. Research texts were co-constructed iteratively over time with participants while attending to a 3-dimensional narrative inquiry space (temporality, sociality, and place). As a narrative inquirer coming into relation with participants in order to conduct this inquiry, I brought Dewey’s (1938) experiential theory based on continuity and transaction as central to my understanding of teaching and learning experiences. I interpreted the stories through my postmodernist lens, which shapes my telling as well as my thinking with others’ stories. In this way, I framed this inquiry within the theoretical framework of a humanist, constructivist lens. Participants’ stories form the basis for learning to practice narratives. I honoured participants’ voices as the authority of their particular experiences. The narratives that emerged from the stories revealed what participants found meaningful during their student experiences and how this shaped their knowledge constructs. The narratives illuminated the
complexities, tensions, and possibilities embedded within experiences of learning to become a paramedic. Narratives that arose from thinking with the stories that shape learning for practice feature (a) relational ethics, (b) developing identity, and (c) tacit knowledge. I discuss the personal, practical, and social implications of this inquiry make recommendations for further research and practice.
Acknowledgements

Narrative inquiry begins in the midst of lives and stories that are lived, told, re-told, and re-lived. This is true for this inquiry. I came to this study in the midst of living experiences at work, family, and school, and these experiences will continue as I continue to wonder about what it means to learn and practice as a paramedic. I would like to acknowledge my family, Steve, Cailyn, Allison, and Jason, who have supported me in so many ways on this journey. I would like to thank my graduate committee who accepted me very late in the process. I want to thank my mentor, Dr. Cynthia Mannion, for smoothing the mountains in the graduate road to completion into mere bumps that I could navigate. Your unending patience and passion for learning are something I will continue to aspire to reach. I would like to acknowledge Dr. Andrew Estefan for having faith in my ability to follow the methodological pathway of narrative inquiry—you made this experience possible. I would like to acknowledge Dr. Sandra Reilly and Dr. Veronika Bohac-Clarke for supporting me through this part of my journey by asking all the right questions and providing their wisdom and insight. I would also like to thank Dr. John Friesen for his support during the development of the final research design phase. I would also like to thank my previous supervisors, Dr. Helen Mahoney, Dr. Pam Bishop, and Dr. Jim Field, for their support during the early design phase of this study. This dissertation has been professionally edited.
Dedication

This study is dedicated to those professional paramedics who continue to learn in practice and who strive to practice with integrity and excellence in the complex environment of paramedicine.

I would like to pay tribute to Mary, Roy, Alex, Nigel, and Mark, the five paramedic participants who shared their learning to practice stories in this inquiry. I am honoured to have come to know each of them and to learn from their stories.
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## List of Nomenclature, Acronyms, and Definitions

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<tr>
<th>Acronym</th>
<th>Definition</th>
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<tbody>
<tr>
<td>ACLS</td>
<td>Advanced Cardiac Life Support (ACLS) The national certification course that provides training about the procedures and skills required for resuscitation of the adult patient. This 2-day course is developed for many health care practitioners responsible for resuscitation working in emergency practice settings. This course is required training for all paramedics who work in clinical practice.</td>
</tr>
<tr>
<td>ALS</td>
<td>Advanced Life Support (ALS) The specific level of care provided by paramedics, which includes advanced physical and medical assessment, airway management, advanced medication administration, intervention therapy, and advanced stabilization and transport.</td>
</tr>
<tr>
<td>ACP</td>
<td>Alberta College of Paramedics (ACP) The regulatory body for paramedics in Alberta governed under the Health Disciplines Act (Revised Statutes Act, 2000) and Emergency Medical Technicians MT Regulation 48/93 (Government of Alberta, 2007).</td>
</tr>
<tr>
<td>AOCP</td>
<td>Alberta Occupational Competency Profile (AOCP) The complete scope of practice for which paramedics in Alberta are responsible and to which they will be held accountable. This profile was developed in 2001 by the Alberta College of Paramedics, the provincial regulatory body for this health discipline. The AOCP comprises the list of observable and measurable behaviours and skills that the paramedic is expected to demonstrate in practice.</td>
</tr>
<tr>
<td>BLS</td>
<td>Basic Life Support (BLS) The specific level of care provided by emergency medical technicians (EMTs), which includes cardiopulmonary resuscitation (CPR), oxygen therapy, medication administration, and transport.</td>
</tr>
<tr>
<td>BP</td>
<td>Blood pressure</td>
</tr>
<tr>
<td>Educator</td>
<td>Those paramedic educators who provide classroom instruction within the paramedic education programs. Provincial standards require that paramedic educator qualifications include being registered and practicing in Alberta as a paramedic.</td>
</tr>
<tr>
<td>EMT</td>
<td>Emergency Medical Technician (EMT) A protected title for the certificate-level credential that is the prerequisite for training as a paramedic.</td>
</tr>
</tbody>
</table>
**Emergency Medical Technologist-Paramedic (EMT-P)**  
A protected title for the diploma-level credential. Currently the highest level designation for paramedicine health care providers. Paramedics provide advanced life support care and transport in many practice settings.

GCS  
Glasgow coma scale

**LB IVs**  
Large bore intravenous

**LOC**  
Level of consciousness

**OPA**  
Oropharyngeal airway

**P**  
Pulse

**Paramedicine**  
The science and art of emergency care and transport practice in the out of the hospital environment. Paramedicine practitioners include three levels of designations: emergency medical responder (EMR), emergency medical technician (EMT), and emergency medical technologist-paramedic (EMT-P).

**Preceptor**  
Paramedic preceptors who provide practicum supervision and assessment within the paramedic education programs. Provincial standards require that all paramedic preceptor qualifications include being registered and practicing in Alberta as a paramedic.

**Prehospital**  
The out of hospital environment where paramedics practice. This term is intended to include all areas where paramedics practice that are distinct from the practice settings where other health care providers practice.

**RSI**  
Rapid sequence induction
Prologue

It was 1975 when I first learned about paramedicine from Robert, a recent graduate paramedic and the owner–operator of the new ambulance service in our town. He was also a family friend who had come over for coffee with my parents after meeting with the town council and other officials about the new ambulance service. While sitting at our kitchen table that day, he asked me if I wanted to help out as an occasional driver and attendant. I was 16, and I was not sure what it meant to drive an ambulance, or to help with patient care. However, since it sounded interesting, I agreed.

My first scheduled shift with Robert began with an equipment and vehicle check. It consisted of a walk-around the ambulance—a converted suburban truck—which had a stretcher mounted in the back and some cupboards mounted on the wall. I watched as he performed a check of the emergency lights and siren, and I helped him to check the medical equipment. Then we moved on to the tires, making sure the lug bolts were tight and the air pressure in each tire was up to standard. While we were completing the vehicle check, Robert continued to tell me about paramedics, and how he was one of the first paramedics to graduate from a formal education program in Alberta. He told me how difficult it was to complete the program. Prior to the 1970s, when the first pre-employment paramedic education program became available at the post-secondary level, paramedics learned on the job. During our shift that day, he often reminded me that things were changing in health care—he believed that paramedics were going to make a difference when people in our rural area were sick or injured and, most importantly, that the role was an honourable way to help people in emergency situations.

At the time, deployment of the ambulance to emergencies occurred through the local telephone system—in this case, over a green rotary phone that was recently installed in the
ambulance garage. I remember when the first call came in, the sound, like a claxon so loud I thought it would wake up the neighbours. I also remember my anxiety of not knowing what was going to happen. The motor vehicle collision we were called to was 35 minutes away. I remember that it felt like a lifetime, to take forever, and a few moments all at the same time before we arrived at the accident scene.

In those first moments upon arrival, when we discussed our plan of action, I found myself captivated by the experience. Although it was a new experience, I learned that I could manage my inner fears, while simultaneously presenting a calm demeanour. I recognized that I could help in emergencies. Although I was inexperienced, I worked with Robert to assess the patient and align the compound femur fracture to a neutral position in order to splint and package the patient for transport. I felt satisfied being part of the team that provided care to the injured patient. Looking back, I knew then that I was going to become a paramedic.

My paramedic education research journey began in 1981 during my emergency medical technician (EMT) program, the prerequisite for admission to the paramedic program. It was during this program that I first applied knowledge in practice. The program consisted of five self-study modules and two multiple-choice examinations. I carried the brief study module for 2 years while practicing as an EMT along with a skills checklist for patient assessment, information about delivering a baby in the field, the application of a traction splint, and spinal immobilization. I spent 10 years practicing as an EMT before deciding to enroll in the paramedic education program.

Throughout the paramedic program, I was often disappointed about my lack of certainty in applying theoretical knowledge to clinical practice; I expected that my education and clinical experience as an EMT would help me make the necessary accommodations. I had specific
concerns about the impracticality of some of the skills taught at school because they did not apply or had to be adapted in many clinical situations. I recall asking a colleague about the apparent disconnect between theoretical knowledge and practice. He told me his approach was to learn the information for the exam, then forget it. He told me I would learn what I really needed to know from practicing as a paramedic, not the theory from school; he remarked that practice is reality: the classroom is abstract. I remain concerned about linking theory to practice. Resolving this puzzle led to this inquiry into paramedic education.

To narrow the gap from the theory to practice, I began to re-assess my clinical experiences in terms of what I learned in class. I eventually learned to reflect on the experiences in each context; my practice experiences in relation to the classroom knowledge. For example, I carried the anatomy and physiology kidney exam with me to work so I could review it after interactions with a patient with renal disease. I learned to ask my colleagues about their experiences in treating patients with related renal issues and began comparing my experiences to their stories. Eventually I was more comfortable with the anatomy, physiology, and pathophysiology of the kidney. I became more confident treating patients with related kidney concerns. Indeed, I began to share with others my story of arriving at this process, essentially of developing practice knowledge.

As an educator now, I often return to a particular memory from my student experience to help me understand teaching and learning. It was during my final paramedic practicum placement when we were treating a 6-year-old child who was unconscious and unresponsive. Treating a sick child was a new situation for me. I needed to make critical, clinical decisions, manage the environment, bystanders, and family, while employing various technical skills. In the chaos of this situation, my preceptor created a space where I could apply what I had, until then,
only discussed and practiced in a classroom. She was able to strike “the delicate balance of providing . . . [student] skills practice without compromising patient care” (Michau, Roberts, Williams, & Boyle, 2009, p. 8) and ensure a place for us to listen and speak about the situation at hand, moment to moment. She used a think-out-loud technique that allowed us to share what we were thinking while we were thinking it—in this case, doing patient care (Flavell, 1979). By providing an ongoing commentary of what she was seeing during our patient assessment and what she was thinking, my preceptor revealed her process of utilizing the assessment findings to influence her treatment plan and interventions. Schon (1983) believed “thinking in doing [is inherent within intelligent practice in comparison to an approach of] thinking then doing” (p. 67) patient care.

This experience still resonates with me; it helps me to understand how a process is developed for thinking through patient care. At the time I can remember thinking this is it, the intersection where it all has to come together, where clinical knowledge, technical skill, people management skill, and teamwork, come together to complete the job. I was able to understand when my preceptor started to think out loud that practice is relational; it is a social interaction between the participants. Goldberg (2013) defined this as “an instant that you saw things differently from then on” (p. 28). Until this experience, I struggled with defining the gap between theory and practice. For the first time, I became aware that understanding and managing the relational aspects of practice is directly linked to quality patient care.

The actions of my preceptor kept the parents informed that we were doing everything necessary to help their child; her actions kept me confident that my skills and treatment plan were correct. I remember every word and look shared between us during the event, although the call was more than 15 years ago; it became the benchmark for how I want to learn and teach
other paramedics. I often tell other paramedics about how this experience helped me to understand what to do as a paramedic and how to act as a preceptor. I have become aware of how I use this story from my experience to explain my acquisition of practice knowledge. Loftus and Greenhalgh (2010) supported this approach of acquiring knowledge that has been used for centuries by nurses and physicians when they discuss patient cases. They used the story of particular case histories to discuss what worked or what did not work as a unit of learning that could be helpful for others to understand what to do in their practice.

I return to these stories when I need to explain practice to myself and to others. Aoki (1999) explained, “Whenever I write a story, I not only produce a narrative, but I’m reproducing myself. The very narrating acts upon me, and I’m changing” (p. 8). That is, a story represents more than a sequence of events; the story we choose to tell is charged with meaning because the narrator attends to his or her values and ideology (Fulford, 1999). When paramedics share their practice stories, they, as narrators, are able to decide what is important, what is not said, and what is foregrounded, thus influencing the nature of what is considered valuable.

The first time I listened to a story about practice was from Robert. He shared his experience of delivering a baby in a remote setting. He described the challenges of the response, the frustration of having to find the house location with poor directions from dispatchers who were unable to read a map. He could describe the patient’s specific signs, symptoms, medical history, and what stage of labour. He described how he felt hearing her healthy cry when holding the newborn. I remember his story vividly today, almost 30 years later. This particular story is foundational to my practice of maternal care during labour and delivery. It has shaped me in some way by becoming a part of who I am.
I think with Robert’s story when I am called to manage emergency maternity calls in the field. Clandinin (2013) described thinking with stories as thinking relationally in that when I consider Robert’s story, I consider how he felt at the time, what the conditions were then in comparison to my current situation. I use the story from Robert to help me make sense of my immediate situation.

I can still hear Robert’s voice telling this story whenever I assess a patient in end-stage labour. I watch for the pitfalls he described and try to see myself as I saw him in his story, providing expert care. It is the understanding and knowledge shared through this particular story that I rely on. Okri (1997) explained it best, “One way or another we are living in the stories planted in us early or along the way, or we are also living in the stories we planted—knowingly and unknowingly—in ourselves” (p. 46). Eventually I came to understand that, as paramedics, we come to know each other and our practice experiences through enduring stories, the stories that we live together and those we tell to each other. I have learned that other’s stories play an important role in becoming a paramedic.

The way I understand how to become a paramedic, how to develop clinical judgement is partially shaped by how I have interpreted my own and other paramedics’ stories. I learned to incorporate them into my practice so that these stories shape who I am and who I am becoming as a clinician and educator. I have come to understand the temporality of knowledge building—in that you cannot speak to an experience until you have lived it. I learned about the clinical aspects of labour and delivery becomes practice knowledge linked to thinking with Robert’s story as a specific exemplar of narrative knowing. I see this as my developing narrative knowing (Clandinin, 2013). Belenky, Clinchy, Goldberger, and Tarule (1986) helped me to realize that I “must first begin to hear [my] own voice in order to understand the importance of drawing out
the voices of others” (p. 175). Indeed, I return to the stories I have told, re-told, and lived with other paramedics when considering my current professional responsibilities as an educator.

My experience in learning to become a paramedic tells me it is more complex than a linear path of achieving behavioural objectives identified in the program sequencing. Through my experiences of learning clinical practice as well as learning to become an educator, I have come to understand what Clandinin (2013) referred to as narrative knowing. Narrative knowing is experience is represented by story, within temporality, sociality, and place. My narrative beginnings helped me to understand narrative knowing and to frame this study within narrative inquiry.
Chapter One: The Landscape of Paramedic Practice

In this inquiry, I focused on understanding how paramedics’ learning experiences shape constructs of their knowledge for practice. Story is an important way paramedics interpret and derive meaning from their experiences. As such, in this narrative inquiry, I studied the representations of paramedic experiences as stories (Clandinin, 2013).

The Relationship Between Story, Experience, and Paramedic Practice

Stories are more than a re-telling of experience, (Clandinin & Connelly, 2000); stories can be understood as being synonymous with experience (Caine, Estefan, & Clandinin, 2013; Clandinin & Connelly, 2000). Stories are how we perceive the world, how we know ourselves and others; a story provides a way to speak about what and how we know. It is, then, through story that we experience; our experiences make possible the stories we tell.

The descriptive and interpretive endeavours in this dissertation proceed from the position that paramedics are living stories of learning and practice; over time, they tell these stories to themselves and to others. Living the story, then re-telling it to another allows reframing of the lived experience. This is how they can make sense of the experience in order to attach meaning to moments within the experiences. Stories work on the teller and the listener to give shared meaning. Meaning is determined within the living and telling, which re-shapes the story. Education for practice does not occur in isolation from other aspects of experience, such as relationships between self and others, the influence of context, or where an experience is placed in relation to other experiences (Dewey, 1938).

Exploring particular experiences of learning through story allows the event itself to be studied within aspects of temporality, sociality, and place and at the same time, the social, cultural, and institutional contexts in which the event is important. These are not addressed in
current paramedic programs where *storying* is not acknowledged. As the students become paramedics, this is considered ancillary learning.

Attention to the knowledge and skills required for paramedic practice is an important part of learning. However, as students undertake a program of learning in paramedicine, they acquire more than clinical competency. Rather, they also become paramedics. This process of becoming involves shifts in how people (including self), events, and contexts are experienced. Current literature offers a limited view of how students come to know themselves as paramedics. This view is presently confined to the procedural or competency-based features of paramedic education (Barnett, 2010; Higgs, 2010; Hodges, 2013). Understand how learning and practice experiences shape becoming a paramedic can narrow the gap in the literature regarding curricula and pedagogy.

For paramedics to succeed in practice, they are dependent on education that encompasses relevant curriculum and pedagogy. This is challenging because little is known about what paramedics find meaningful in learning to practice (Barnett, 2010). Professional practice is complex, it consists of more than routinized or procedural events; practice is a sociocultural process that demands clinical judgement and decision-making in diverse and changing circumstances among multiple stakeholders (Higgs, 2010). Leaders in a variety of health disciplines education advise that “education for future practice is not about reproduction of today’s professions or occupations, nor is it about educating graduates for current times and contexts” (Higgs et al., 2010, p. 3). Education that prepares practitioners to manage in the uncertain, complex, and changing health care system requires programs that focus on more than routinized, exclusive, and procedural practice. In Menin’s (2010) opinion, “How we respond to and frame the issues of learning and understanding . . . in a complex and rapidly changing world,
can have profound effects on the preparedness of tomorrow’s health professionals and their impact on society” (p. 1). Eraut (2006) argued that education for practice should be based on deep understanding of the actual “theories in use” (p. 63). How paramedic education is framed and modelled currently originates from the notion of the paramedic as an emergency physician extender (Caroline, 2009). However, paramedics are not true physician extenders (Caroline, 2009) because they now practice autonomously and self-sufficiently in uncontrolled prehospital environments.

In this dissertation, I explore the gap in literature regarding the relationship between meaningful paramedic learning, current curricula, and pedagogy. My own learning and practice experiences have led me to thinking narratively; these experiences are a part of my story as well as the stories of the participants in this study. My stories, those that I live, tell, and re-tell, are where I have constructed through interpretation my experiences of becoming a paramedic.

In this study, five participants and I explored how learning and practice experiences shape paramedic practice by thinking with our stories. As such, I provide participants’ particular views of learning and practice experiences. In order to situate these experiences as meaningful and useful in the broader context of paramedic education, I now turn to the practical and educational landscapes of paramedicine as they are represented in the literature.

**Defining and Describing Paramedic Practice**

Professional practice is understood as meeting the needs of patients and public, individually and collectively, through direct provision of specific care prehospital environments. Since such practice takes place between and among human beings, it is relational. Schatzki (2002) described health care practices as “the site of the social” (p. 8). Because paramedics work with a partner, they typically interact with each other as well as others within their practice
communities. Practice, then, always involves social interactions that are focused on clinical interventions. Learning to practice encompasses these social aspects of practice, thus pedagogical considerations should also consider the relational aspects of practice.

All interactions are negotiated through and bound within the cultural, and social, norms (Cresswell, 2007, Merriam & Brockett, 2007). Practice is contextual, always situated in time, space, and event. Moreover, each practice landscape has distinctive features, such as specific language and sayings, activities, and relationships. Paramedic students come to learn with the practice landscape already established and influenced by the historical, social, and political conditions of the time. Hence, local conditions shape the practice of paramedicine in particular ways, and students become competent in these particular settings; knowledge becomes the ability to act accordingly as the circumstances shape the setting.

Becoming a paramedic ready to practice is to “join in [or become] stirred in” (Kemmis & Trede, 2010, p. 31) to the existing practice of paramedicine. Learning to practice then becomes being able to do practice in the local landscape, remaining grounded in an understanding of professional identity simultaneously attached to the broader field of paramedicine as well as the local landscape.

For paramedics, the incident, people, place, and time constitute—the emergency scene—a context that requires specific cognitive understanding, social and emotional understanding, and technical ability (Barnett, 2010; Habbermas, 2003; Kemmis & Trede, 2010). Competence is more than knowing how to do a particular procedure. Kemmis and Trede (2010) indicated that competent paramedics are able to reflect on their practice in order to continuously learn from their experiences in practice. Therefore competence is shaped through engaging with and understanding the many dimensions of the complex practice landscapes.
Paramedics practice differently from other allied health professionals in two ways. First, they practice with self-sufficiency. Second, they often practice at considerable distance from health care in a prehospital environment. Practice takes place anywhere but in a hospital setting. Additionally, at any given time, paramedics are most likely to be the highest trained professional on scene. They are expected to provide not only patient care, but demonstrate leadership and provide direction to other responders. Furthermore, they have a legal obligation (subject to other caveats such as safety) to help those who cannot help themselves and to act in the patient’s best interests. It is the paramedic that manages all aspects of the situation while developing a differential diagnosis for the patient in order to implement a treatment plan and ensure compliance with the transport plan.

**Paramedic Knowledge for Practice**

The practice landscape consists of highly variable and dynamic situations. Paramedics have to think critically in order to apply clinical reasoning to manage complex patient presentations in “continuously changing circumstances” (Menin, 2010, p. 20). When making judgements about the best sequence of action to take, they rely on their cognitive capacity, values, interpretations, and cultural perspectives in addition to their clinical and technical expertise. These decisions do not always follow a linear path (Blaber, 2008). To have expertise in determining appropriate decisions requires much more complex knowing than is possible from propositional knowledge typically the foundation of technical education (Eraut, 1994). It is unknown how learning within the culture, environment, and context of practice settings influences how paramedic students learn the art and science of paramedicine in order to provide high-quality patient care as integral team members in the current health care system. Practice is
complex where knowledge, ethics, technical skills, reflection, judgement, and social interaction
must intersect as a construction of meaning and understanding of competence in the discipline.

Paramedics have to consider their own ethical and moral perspectives to make decisions
and apply judgement while bringing critical self-appraisal to bear on their immediate actions.
Schon (1983) described such situations as a “swampy lowland” (p. 115) where clinicians make
judgements amidst great uncertainty, bearing the responsibility of patient care and safety.
Patients have to trust in the competence and integrity of the paramedic at the point of care (Billet,
2010; Margolis, 2005).

The idea that professional knowledge relates to professional action comes from Eraut
(1994) who described how clinical reasoning, knowledge, and judgement are encompassed in the
action that is required; this is a pragmatic approach of being able to do—to apply judgement and
reasoning to the particular situation at hand. Abstract or propositional knowledge in this case is
left behind. Freidson’s (1971, as cited in Eraut, 1994) work indicated that “those whose work
requires practical application to concrete cases . . . cannot suspend action in the absence of
evidence [and furthermore they] cannot rely on probabilities or general concepts or principles: he
[she] must rely on his own senses” (p.38). This is the case for paramedics who provide care to
patients through their immediate actions, which include clinical reasoning, decision-making, and
judgement.

There is very little evidence to explicate how and when paramedics construct knowledge
and learn to make safe clinical decisions in practice (Jensen, 2010). Evidence provided in a small
cohort study that examined decision-making (when providing complex airway management to
patients in respiratory distress) indicates that up to 18% of actions arising in life-threatening
situations were key decisions having significant impact on patient outcomes (Blanchard,
Clayden, Vogelaar, Klein-Swormink, & Anton, 2009) suggesting the requirement for developing the knowledge and ability to make decisions underpins paramedic practice. Indeed, weak abilities in clinical decision-making are related to clinical errors and poor patient outcomes across the health care system (Kohn, Corrigan, & Molla, 1999).

Learning to apply clinical judgement through clinical reasoning means developing an understanding of how clinical solutions should meet each patient given their clinical presentation. Paramedics, patients, and (during education program practicum placement) preceptors interact with each other to implement care. It is within these interactions, the intersubjective spaces, that paramedics construct, interpret, and attach meaning to their experiences and develop their knowledge accordingly (Lave & Wenger, 1991). How to do this is not well understood (Blaber, 2008; Fish, 2010; Smith, Ajjawi, & Higgs, 2010). What we know thus far is that paramedic competency-based curriculum and pedagogical approaches are designed to focus on technical skill and procedural knowledge and not the relational, interpretive, and morally committed actions required in the clinical setting (Fish, 2010). This discrepancy between technical rational education approaches and relational practice means paramedics may not develop the ability to do both. They may learn how to do certain skills and acquire information about disease processes, but without a clear understanding of how to relate the clinical presentation in a specific situation and context as well as manage the available team of resources and patient wishes, patient care can suffer.

Part of professional practice includes being able to manage the emotional stress they encounter from responding to people in challenging, critical, or emergency situations. Williams (2012) found that paramedics need more education and development for managing the emotional and psychological aspects of their practice. From my own experiences as a practitioner and
educator, many paramedics are not sure what to say or how to act when a patient is crying and upset. Many do not know how to manage their own emotional response during some of the tragic or disturbing events they attend. Learning how to manage their own emotional aspects of the events and those of patients, bystanders, and colleagues is, arguably, beneficial.

Williams (2012) recommended that paramedic programs should consider education similar to that of nursing and medical education curricula. A clearer understanding of the experiences of becoming a paramedic may help to provide some grounding for this curriculum shift. Education needs to address the emotional and psychological needs of paramedic students in their practice (Blaber, 2008; Williams, 2012).

**Evolution of Paramedic Practice**

The discipline of paramedicine in North America, “now barely a generation old” (National Highway Traffic Safety Act [NHTSA] Office of EMS, 2000, p.4) usually consists of emergency triage, stabilization, and transport in the prehospital environment (E. Willis, Pointon, & O’Meara, McCarthy & Lazarsfeld-Jensen 2009). Practice, however, has steadily evolved to include the performance of increasingly complex clinical interventions; diagnostics; public education; patient treatment; preventative care; and referral in the health care, public health and public safety practice settings (Institute of Medicine, 2006; Jensen, Croskerry, & Travers, 2009;). These changes likely have repercussions on clinical outcomes and patient safety, but are understudied. Jensen et al. (2009) found that whereas “clinical decision-making has been evaluated in several health professions . . . there is a paucity of work in this area on paramedics” (p. 4). At the same time, the discipline of paramedicine has evolved into an elaborate prehospital care system (Williams, 2010).
Many documents (Farr, 2007; NHTSA Office of EMS, 2000; Romanow, 2002; Society for Prehospital Educators in Canada, 2007) indicate that demographic changes require improvement to paramedic education. That is, the increasing life expectancy of the baby boomer generation coupled with higher individual health care expectations results in an increase in complex chronic disease complaints and requires specialized care from paramedics. Currently, at the national level, 60% of all paramedic responses are for patients over the age of 60, and patients over the age of 80 representing in excess of 27% of all paramedic responses (Health Care in Canada, 2011). Consequently, paramedics require more critical thinking skills in order to manage these complex and chronic patient presentations in “continuously changing circumstances” (Menin, 2010, p. 20).

Research in Britain has shown that maintaining relevant curricula and adapting pedagogy are critical to ensuring patient safety (Blaber, 2008). Additionally, the Joint Royal Colleges of Ambulance Liaison Committee (JRCALC) (2000) contend that “[e]mergency pre-hospital care can have a profound influence on the morbidity and mortality of those critically ill or injured” (p. 9). This evidence has generated changes to education. A minimum of a baccalaureate level of education is now required in the United Kingdom (UK) for paramedic practice (Armitage, 2012). With an evidence-based foundation of clinical knowledge, better understanding of relational aspects of practice, they can more assuredly make autonomous, informed decisions for their patients in relation to treatment, transport, and referral.

In Alberta, it is expected that by 2041 the population of seniors over the age of 80 will double; one in five adults will be over 65 years old (Alberta Population Projections, Government of Alberta, 2013). The rapid growth in the Canadian population and predicted health care staff shortages contribute to the challenge of health care sustainability, forcing the re-examination of
how health care is delivered by paramedic practitioners and other health care practitioners across
the system. This population will require sophisticated care that is safe, competent, and
compassionate. The Health Human Resource Planning Subcommittee of the Advisory
Committee on Health Delivery and Human Resources (2005) in Canada recommended relevant
and sustainable education programs for all health care providers in order to address the future
challenges to the health care system.

**Alberta Practice Context and Developments**

Alberta Health Services (2009) recommended that all health care practitioners, including
paramedics, have a role in providing health care. Long-term planning undertaken by Alberta
Health Services (2009) indicated that the role should evolve so that paramedics could assume an
enhanced scope of practice in order to provide quality patient care in diverse settings. Prior to
2009, paramedics were not considered to be part of the team due to their alignment with public
and safety agencies operating outside of the health care system.

There are other changes occurring in practice. For example, previously where transport
was the only option, technological changes now allow for more point-of-care testing that allows
for more appropriate treatment in place, transfers, and/or referrals by paramedics (Farr, 2007).
Paramedics now have responsibility for health education and health promotion in the community
(Alberta Health Services, 2009). There are increasing expectations for paramedics to have
specialized care knowledge that keeps patients out of hospitals. Examples include palliative care,
diabetic education and assessment, and fall prevention (Smith et al., 2010). These examples
illustrate how the paramedic role is diversifying. Other practice settings are also available across
the health care system where shared, collaborative practice occurs. This approach is intended to
improve effectiveness and efficiency across the health care system (C. Carmicheal, personal
communication, November 1, 2011) where all practitioners operate as a team to manage all aspects of patient care.

Today, paramedics are expected to practice as professionals, equipped with the ability to manage change in complex practice settings, deliver care to different and specialized populations, and acquire a knowledge base required throughout their careers (Blaber, 2008; Farr, 2007; Higgs, 2010; Margolis, 2005). The education they obtain to gain entry into practice should address this health landscape and provide the new and now necessary skills.

Paramedicine will soon become a self-regulated profession in Alberta. The Alberta College of Paramedics will transition from governance under the 20-year-old legislation of the Health Disciplines Act (2000) and EMT Regulation to the Health Professions Act (2000). This will require paramedics to (a) understand and monitor their own ongoing competence; (b) work collaboratively within a health care team that includes overlapping scopes of practice boundaries; (c) provide evidence-based patient care in all practice settings; (d) understand how their personal values affect their practice; and (e) engage in lifelong learning of developments in the discipline (Alberta Health and Wellness, 2004).

The discipline of paramedicine continues to develop and change to adapt to the changing needs of the health care system. These ongoing changes present challenges to ensuring education programs for paramedics are designed to support learning to practice in the uncertain, complex, and changing health care system. Paramedics must be able to make clinical judgements and work collaboratively with the entire health care and emergency response teams.

Summary

In this chapter I have introduced the context of paramedic practice and education and how current paramedic practice has responded to the needs of the changing health care system. I
have also illustrated some of the social aspects of practice, and the particular places of paramedic practice that pose clinical, educational, and relational challenges for practitioners.

In the next section, I explore the landscape of paramedic practice further, by exploring current literature about paramedic education. This will include a discussion regarding the concerns surrounding competency-based instructional design outcomes in a profession that requires the application of clinical judgement and critical thinking as well as understanding of an ever-changing body of knowledge. Concerns regarding the assessment-focused approach of competency-based curricula in relation to competence are also discussed. Chapter Two concludes with a statement of the research puzzle that guides this narrative inquiry.

The Methodology and Process section outlines the methodology and fieldwork undertaken in this study. I introduce key narrative inquiry research terms and explain the practice of thinking narratively, with stories. I explain the analytic approach of thinking with participant stories within a metaphorical three-dimensional space of temporality, sociality, and place (Clandinin & Connelly, 2000). This approach made possible the telling of participants’ individual stories in this thesis, as well as the exploration of converging narratives that I present in Chapter Five.

The voices of participants are presented in Chapter Four, Paramedic Voices: Looking Backward to Look Forward. These stories emerged from of an iterative process of negotiation between the participants and me of telling and re-telling our stories together. These stories represent the meanings attached through the iterative process of telling and re-telling. My voice serves as a guide to the participants’ experiences, as well as a means to make transparent to the reader how I have woven the various stories together.
In Living and Learning in the Midst of becoming a Paramedic, I present three narratives that arose through an iterative process of thinking across the stories. Rather than attempting to reduce or thematize the experiences of the participants, their stories show important points of convergence. These points of convergence are where participants’ stories come into conversation with each other. In this section, I contend that these convergences make space for thinking about the ways participants’ experiences can assist paramedic educators and student paramedics in teaching/learning and practice contexts. By identifying these converging points, educators can frame curriculum development and pedagogy in paramedicine.

In the final chapter, Imagining Paramedic Education in the Future, I turn to the forward-looking story. In Chapter Six, I refocus on where this current research can take paramedics and those who are responsible for educating them. In light of the view that a narrative inquiry is pedagogical, in Chapter Six I summarize the findings from this study in relation to paramedic practice and education. I also include recommendations for future research.
Chapter Two: The Landscape of Paramedic Education in Alberta

In Alberta, paramedic education is delivered at the post-secondary diploma level and is considered to be a technical education. These programs are under jurisdiction of either the Post-Secondary Learning Act (2004) or the Private Vocational Training Act (2000) as mandated by the Innovation and Advanced Education Ministry. The five paramedic education programs are divided. The division includes two education programs delivered within a polytechnic institute geared for learners interested in specific career programming. Two other programs under the mandate of a comprehensive community institution are geared to learners who are looking for academic upgrading and specific career programming. The third approach to program delivery occurs under the Private Vocational Training Act (2000), which allows for private and independent business to provide specialized career training.

Responsible to their own specific private or public institutional policy and mandates, there is room for differences between the education programs’ teaching methodologies, educator qualifications, and perhaps significant variability in student experiences. This means that education programs in Alberta have inconsistency in educator qualifications as well as admission criteria.

All of the programs follow a technical outcomes-based competency design approach that focuses on developing learners to be able to do the job of a paramedic in the shortest time possible. This is often the case when developments of specific technical education programs respond to economic and workforce needs (Merriam & Brockett, 2007). In this aspect, Alberta is similar to other health and medical competency-based education programs with inconsistencies in program design and content based on local stakeholder needs (Eraut, 1994).
Education Program Design and Delivery

The five education programs in Alberta range from 17 to 24 months in both classroom and practicum learning environments. Each of the programs is split into classroom and practical sessions. Delivery methods include a mix of blended, face-to-face or distance learning approaches; however, the practical application occurs in practical lab sessions, clinical placements, and ambulance practicum placements. Curriculum content, competency evaluation, and sequencing of the program is left to the discretion of individual institutions. Consequently, the program length and sequencing, prerequisites and requirements for completion vary among the programs (see Figure 1).

Figure 1. Education program timeline comparison.

Program Admission Requirements

Admission criteria require that all students graduate from an EMT education program and must obtain EMT licensure with the Alberta College of Paramedics, prior to paramedic practicum placement. There are five public and five privately funded institutions in Alberta that
provide EMT education. Delivery methods and timelines range from 6 to 10 months of face-to-face full-time classroom and practicum placements to blended programs that require some in-classroom time for skills training but predominately rely on a self-study approach. The student selection criteria for these programs range from a minimum of a high school diploma or equivalent to requirement of some specific academic requirements in subject areas of secondary school level mathematics and biology. Some of the programs require non-academic criteria that include a minimum age of 18 years old, Alberta provincial class five driver’s license, and completion of a career investigation report and one to three character references.

For paramedic students, other selection requirements include completion of career planning essays and providing character references. Some of the programs indicate that preference may be given to students with workplace experience as an EMT, but rigid criteria are not indicated and it is unknown how this requirement is evaluated within the education programs. Academic requirements are required for those students not meeting mature student status (see Figure 2).

<table>
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<tr>
<th>Paramedic Education Program</th>
<th>Portage College</th>
<th>NAIT Polytechnic</th>
<th>SAIT Polytechnic</th>
<th>Professional Medical Associates</th>
<th>Medicine Hat College</th>
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<tr>
<td>No Academic Requirements</td>
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<tr>
<td>Character Reference</td>
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<td>Grade 10 Math</td>
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<td>Grade 11 Math</td>
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<td>Grade 12 English</td>
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<td>Grade 12 Science</td>
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*Figure 2. Paramedic program admission requirements.*
**Education Program Curricula**

A curriculum refers to the pathway or program sequencing the student follows in order to achieve the program goals. The curricula in the Alberta education programs are divided into theory and practicum by course content and technical skills. Theory is delivered in a non-contextual classroom lecture format, and skills are learned individually in simulated environments. The ordering and content of a curriculum is intended to assist the learner to become a professional practitioner (Billett, 2010). Theory and skill undergo synthesis in the practical education component where students are placed in practice under the supervision of a paramedic preceptor. Klein and Newell (1997) described synthesis between theory and practice (or learning and doing) as that which “requires proactive attention to process . . . examining how the elements to be synthesized are obtained and interrelated [and further that skills such as] differentiating, comparing, contrasting and identification of commonalities” (p. 406) are needed for success. Furthermore, the elements of achieving synthesis must relate to the task at hand and form a holistic understanding that is “grounded in commonalities but still responsive to the differences” (Vars, 2002, p. 1).

There are many variables that affect the education programming. The interdependency between the educator, employer, and the Alberta College of Paramedic influences the education program’s sequencing, intake numbers, practicum placement timeframe, and preceptor quality and availability. It is difficult to change education programs given the constraints posed by having multiple stakeholders with varying interest. Notwithstanding addressing these constraints by conducting needs assessments and program evaluations in a systematic manner can lead to “promoting better practice” (Merriam & Brockett, 2007, p. 120).
The curricula are derived from the Alberta Occupational Competency Profile (AOCP), which represents an analysis of the job of the paramedic in the workplace. The most recent review of the role was completed in 2007 (Alberta College of Paramedics, 2007). Developing curriculum based on workplace competencies aligned with the rise of behavioural objectives and the need for greater accountability can be theorized within a social efficiency ideology that encompasses behavioural engineering to construct curriculum (Schiro, 2013). In this paradigm, education is driven by the emergency medical services industry that will employ the graduates.

Absent from this perspective are the important ways that learners make sense of their experiences from their own unique perspectives (Greene, 2009). That is, industry-driven approaches to teaching and learning reduces competencies to the smallest measurable units, which facilitates a “monkey see monkey do” (Talbot, 2004, p.28) focus of teaching, learning, and assessment. This is a weakness in current models of curriculum and assessment because providing patient care is a complex endeavour. As such, a curriculum in the practice professions can never remain static and has to respond to the different needs that arise between people in different contexts.

The Alberta curricula require paramedic students to spend at least half of their program time in practicum settings under the direct supervision of a preceptor. Jarvis (2006) suggested that learning by doing is commonly confused with action learning, which he believes is the foundation for apprenticeship program models like the paramedic program. The difference between action learning and learning by doing is the inclusion of reflection as the key to action learning concepts. Most important to successful learning of reflection in clinical practice environments is the “provision of time that members of a small group make to engage in a supportive step of reflecting upon their own learning” (Jarvis, 2006, p.154). Paramedic
practitioners believe in the value of the reflection on action. In a grounded theory study conducted by Donaldson (2004), participants shared that “there is a point where we should be doing self-reflection (p. 178). Schon (1983) agreed “this requires the support of the community of practitioners to enable this through interactive dialogue” (p. 62). This concept aligns skilful practitioners with the ability to think about what they are doing while they are doing it, in the moment, and thus are able to make relevant and timely changes, in this case towards best practice.

Assessing the Competency of Students

Preceptors are expected to provide support to students in the moment of practice and to evaluate the outcomes according to the required competencies achieved. The time preceptors give to this is unknown and likely highly variable. Students employing reflection in practice presupposes that there is enough time to reflect on what they are doing and make relevant and timely changes. Although unique within the paramedic curricula, these processes are challenged given the preceptors are not able to pre-select cases that are appropriate to the students’ abilities and learning needs (S. Reilly, personal communication, November, 2013). Paramedic students are required to participate in all patient care events as they occur. Immediate evaluation by preceptors and self-reflection by students is at best “hit and miss” or entirely absent.

Paramedics and students tend to reflect and share in impromptu and informal ways when congregating in the emergency department hallways to talk about their most recent call at work (and perhaps learning) experiences. It is in these moments that many paramedics share their stories of practice, which constitute reflective capacity and has been referred to as one of the ways to meet practice needs (Brookfield, 1986). This is story telling, and I would venture to situate it as a cultural phenomenon occurring in the workplace. In my experience, it is through
sharing stories that paramedics understand and sustain themselves as practitioners of paramedicine. This highlights the need for students to have the opportunity to learn and practice self-reflection during their educational experiences.

It is difficult to understand how paramedics interpret their own clinical competence. Donaldson (2004) suggested that competence is considered to be a multidimensional construct, a specific relational network as defined by discipline domains, but “the definition of this construct [competence] is subject to many interpretations” (p. 108) and as such allows for many inconsistencies in application and measurement. Donaldson’s definition of competence supports this approach: “The human grasp of reality and the level of response to that reality given the context for performance” (2004, p.100). However, without a standard definition of competence, educational programs cannot reasonably assess the level of paramedic competence. In fact, research indicates that of the 15,000 American paramedic educators, 20% felt uncomfortable and unable to assess psychomotor skills of students in the classroom and in the practicum settings (Ruple, Frazer, Hsieh, Bake, & Freel, 2005, p. 204). Morton-Cooper and Palmer (2000) suggested the removal of the evaluation component within the practicum environment and instead focused on a non-judgemental support role, so that learning in this process is possible. This is not been considered in the current preceptor–student model of paramedicine education.

**Education Program Standards**

Paramedic education programs provide programming according to standards defined by the Alberta College of Paramedics (2011) within the Program Approval Standards document. The standards focus on alignment of the curriculum with the AOCP, program administration and policy, and student safety. Stewardship of the discipline standards and scope of practice and licensure requirements are managed by this body. Education programs are required to meet the
standards in order for students to be eligible for practice. These programs are currently dependent on the health care system for the practice education component of the respective programs, as part of meeting regulatory and accreditation standards; that is, employers provide the preceptors and work sites for practical learning within the practicum placements. As such, it is the employer who determines access to the preceptors, type of work environment, and the total number of placements.

**Paramedic Pedagogy**

Teaching and learning in paramedic education is a social practice that occurs when learners interact with others in order to come to know (Letts, 2010). Generally pedagogy is the enactment of the curriculum, where the learner interacts with others or with self in the learning moment or sequence of learning moments (Higgs, 2010). How paramedics relate their learning moments within the inter-subjective spaces is not well understood (Blaber, 2008; Fish, 2010; Schon 1983; Smith et al., 2010). Pedagogical approaches should focus not only on linking the theoretical and practical, but also on developing capacity for living authentically (Eraut, 1994) within self-monitoring and self-critiquing ways (Flavell, 1976; Higgs, 2010). Hence, professional knowledge involves several different types of knowledge applied in integrated ways; it is context dependent and relates the ability of the paramedic to adapt theory and technical skills at the same time as engaging professional ethos and understanding of identity in practice actions (Eraut, 1994). However, Kilner (2003) found that paramedic education programs do not focus enough attention on the development of the professional paramedic that includes a “broad repertoire of professional skills and attributes” (p. 4).

Current education programs have a narrow curriculum focus on learning technical skills that follows an educator-led model. In this model, paramedics are the educators, and they are
considered experts in clinical practice who share their knowledge and assess the extent to which students are able to perform. This fits with Knowles, Elwood, and Swanson’s (1998) concerns with the pedagogical model:

The pedagogical model assigns to the teacher full responsibility for making all decisions about what will be learned, how it will be learned, when it will be learned, and if it has been learned. It is teacher-directed education, leaving to the learner only the submissive role of following a teacher’s instructions. (p. 62)

Campeau (2008) identified theory, practice, art, science, competence, and performance—all of which inform one another in a complex reciprocal action—as those aspects that should constitute paramedicine pedagogy and be considered in program development. Pedagogical approaches need to be based on an understanding of the learners and their specific needs, including the nature of the subject matter and contexts that may influence the learning processes and the learners (Letts, 2010). Campeau (2008) contended that paramedic practice theory is beginning to evolve; therefore, improved theorized education would envelop professional knowledge that is contextualized, accurate, and useful for paramedics in current practice. There is a gap in the literature regarding curricula and pedagogical approaches in education and the impact of these approaches on paramedic practice.

The emphasis in competency-based education models is placed on practical skill and procedural knowledge (Hodges, 2013; Schiro, 2013). As such, what paramedics know about practice can be observed through their behaviours. Other forms of knowing, such as relational, emotional, cognitive, and tacit can shape identity and practice and are forced into the background, and an opportunity to use these to advance practice is lost. Schiro (2013) pointed out that while there is an assumption of the link between having the information in order to act
“the correct behaviour is emphasized over the correct information” (p. 85). The underlying assumption is that simple propositional knowledge and technical skills can be applied to problems of practice with good success. Doing becomes more important than understanding. Behaviours (defined as competencies) are more easily observed and measured. Fish (2010) and Loftus and Simpson (2010) contended that this technical rationalism approach fore-grounded by competency-based thinking is ubiquitous in health care education. In some instances, technical competency remains paramount such as the ability to intubate a patient trapped in a motor vehicle. However, in practice, the paramedic also had to interpret and discern the differences in the particular situation and make appropriate choices in relation to the patient’s needs. In other words, paramedic competencies take on their value when used alongside critical thinking and clinical judgement.

Paramedic education is similar to other health education models (Hodges, 2012) that follow a competency-based curriculum approach. This approach permits educational institutions to assure employers and regulators and the public receiving care, that students are certified based on their performance of all or some of the required competencies. The competency-based curriculum is under scrutiny (Brawer, 2009; Frank et al., 2010, Smith et al., 2010) because “[l]earners are not artifacts that can be made, or turned into the ideal end-product” (Fish & Brigley, 2010, p.119). Merriam and Brockett (2007) suggested that this reductionist approach to the use of performance-based learning objectives is limiting and prescriptive and does not provide enough teaching or learning opportunities that ensure paramedics are able to focus on the values based upon clinical judgement in practice.
Educators and Preceptors

In Alberta, paramedic educators are typically those with experience in practice but this is non-standardized and highly variable (Northern Alberta Institute of Technology [NAIT], 2012). They are found in the classroom as educators and in the field as preceptors. Paramedic educators bring their practical knowledge into the education arena and are responsible for both teaching and assessment in the programs. This approach assumes that the educators need only present the information about what it takes to do the job and are qualified to present their practice experiences. Without a deeper understanding of appropriate educational theory and the professional practice of education, paramedic educators are not able to make informed choices and link the teaching strategies that best suit individual students; they simply teach the way they were taught, or they deploy off-the-peg methods without knowing if or how such approaches work (Fish & Brigley, 2010; Loftus & Simpson, 2010). Educational programs in other health care disciplines support the development of an understanding memory by focusing on students’ processing levels, learning narratives, collaborative learning, team learning and evaluation, and developing reflective and reflexive capacity by attending to the adult learner as a whole person, who is infused with emotions that influence learning (Jarvis, 2009; Morton-Cooper & Palmer, 2000). There is little or no time spent on these items in paramedicine programs.

Competence is assessed in three ways: through criterion-referenced standardized testing, isolated peer-reviewed skills checks in the classroom, and enumeration of different patient contacts in the practicum setting as observed by preceptors. This competency-based assessment focuses on what the student can do at any particular point in time but does not specifically address the progression of the learner. The assumption of competency-based assessment is that if
the student can demonstrate the correct order of a procedure or skill, or the correct declarative knowledge in response to a specific question, then they are considered competent. Educators are left to their own devices in determining what assessment strategies they prefer and where and when the assessment occurs.

As a preceptor and classroom instructor, I experienced concerns with the competency-based approach. One day, a student could perform, and another day could not perform a procedure or answer a written test question. Many conversations with my students concentrated on checking off assessments found in the practicum logbooks. My students and I constantly negotiated the outcomes; sometimes the student could perform the individual competency under supervision, but he or she was not able to practice it independently. These pedagogical encounters were often confusing for both of us.

Brouhard (2007) described the “role of a paramedic preceptor as part teacher and part evaluator” (p. 1). Fulfilment of educator and evaluators’ expectations relies on “a lot of teaching to go on in the back of the ambulance” (Brouhard, 2007, p. 1). However, Michau et al. (2009) suggested “little research has evaluated the effectiveness and value of clinical placements [including teaching and evaluation] in the back of the ambulance for paramedic students” (p. 2). They are, according to Brookfield (1986), not “limpid, tranquil ponds, cut off from the river of social, cultural, and political life. They are contested spaces, whirlpools containing the contradictory crosscurrents of struggles for material superiority and ideological legitimacy that exist in the world outside” (p. 9). Evaluation particularly, in these circumstances, can prove difficult. The ability to assess competence is not only related to clinical technical skills but shapes professionalism, practical knowledge, communication skills, positive behavioural models, and paramedic personality (Russ-Eft, Dickison, & Levine, 2005).
Slade (2007) suggested that while educators may well be veteran and experienced paramedics, students consider them to be novice educators, and, more importantly, novice facilitators or evaluators that generally lack formalized teacher trainer insight. Their lack of formalized teacher education can interfere with teaching and learning opportunities that provide guidance with which to develop reflective and reflexive capacity (Morton-Cooper & Palmer, 2000). Some question the effectiveness of current education programs where paramedic educators may “have little insight into their own meta-cognition [and entertain the possibility] that they are passing on poor decision-making habits to their students” (Jensen, 2010, p.78).

Moreover, Jarvis (2006) explained that some learners are able to ritualize or complete the motions or behaviours required in practice, but this does not necessarily mean they learned what is needed. Evaluation of student paramedic competence by the paramedic preceptor is limited to what can be measured or observed (Paul, 2005). The learner’s ability to ritualize behaviours that mimic learning becomes a concern because paramedics themselves characterize the milieu of practice as consisting of “confounding variables [and] human imprecision” (Donaldson, 2004, p. 175).

Paramedic students state that the lack of formal teacher education leads to “subjective evaluation of students and varying student outcomes . . . [that] may not result in fully competent paramedic graduates” (Slade, 2007, p. 3). This may be the reason that while more than 90% of paramedic students graduate from their education programs, they report significant stress and anxiety as they transition to their new employment role (Huot, 2013). Understanding how paramedics interpret their formal educational experiences is a significant aspect of ensuring their readiness for high-quality patient care, particularly in new and complex practice settings.
Emerging evidence in medical and health education arenas indicate the need for medical and health education programs such as paramedicine to include cognitive flexibility theory, levels of processing, learning narratives, reflexive and reflective capacity, and learning strategies that maximize study behaviours and facilitate life-long learning attributes (Blaber, 2008). Paramedicine programs currently depend upon untrained educators who although expert paramedics from practice may unintentionally transfer poor habits to students (Brown, Collins, & Duguid, 1989). However, the practicum placements are a unique opportunity where situated learning opportunities are available if they can be underpinned by a framework of social learning theory (Brown, Collins, & Duguid, 1989). Gaining insight into knowledge construction and ways of knowing that is germane and relevant for the current complexities of practice is needed.

The Research Puzzle

My central aim of this study derived from thinking narratively about how people become paramedics, what they experience that is important to learning how to practice, and how these moments help them create their professional knowledge. It arises from my experiences from first learning to be a paramedic in clinical practice and then learning to teach others about becoming a paramedic. It comes from exploring the literature and finding as J. Willis (2007) indicated that paramedic education literature is “sparse, unfocussed, not sustained or cohesive” (p. 29). My experiences tell me there are many aspects to consider when evaluating paramedic education impact on practice and that these are seldom incorporated.

In narrative inquiries, researchers develop and set out to explore a research puzzle rather than answer a narrow or defined research question (Clandinin & Connelly, 2000). Clandinin and Huber (2013) wrote that “framing a research puzzle” (p. 10) is not about developing concrete questions with expectations of finite answers, but rather it is a holistic exploration of the topic.
across temporal, social, and contextual boundaries. The exploration of a research puzzle is, then, an orientation of curiosity and openness to the research field and its features. Such an orientation is particularly suited to the exploration of a field in which little inquiry has been undertaken.

Within the multiple places and spaces of learning to become a paramedic, I am left wondering about the learning constructs developed by paramedics as a result of their pedagogical encounters within the education programs. I contend that understanding the implications of paramedicine pedagogy and curriculum on how paramedics learn can result in better practice. The research focus that guided this study included consideration of the following questions: How well does paramedic education prepare students for practice? Do the curricula objectives in paramedic education programs differ across Alberta? What pedagogical improvements would advance the quality of paramedic education? How do paramedics describe their everyday practice? Do paramedics work to their full scope of practice? Do paramedics endeavour to become lifelong learners?

The stories of learning and practice experiences shared by paramedics formed the basis of this inquiry. Included in the dissertation are my own stories of learning to practice as a paramedic. Thinking with the stories identifies what experiences can do and what they mean to those who have experienced those moments (Webster & Mertova, 2007). Narrative inquiry allows for the opportunity to see into the pedagogical acts through the meanings shared by paramedics in their learning and practice stories. Focusing on experience as story was the phenomenon of this study and enables thinking with the experiences of the paramedic participants (Clandinin, 2103). As a methodological approach, it supports looking into the complexities, ambiguities, and realities of and provides a glimpse into lives being lived in the midst of their continued practice and hopefully continued learning.
Conclusion

In this section, I included the concerns of the education environment in relation to current practice needs. The evidence suggests that the future of paramedicine requires a different educational foundation than previously provided in order to meet changing health care needs, ensure patient safety, and support better health care practice. The research puzzle that guided this study was included in this section. In the following chapter, I describe the methodology and research design of this study.
Chapter Three: Narrative Inquiry Methodology and Process

“Narratives cannot be repeated exactly since words never mean the same thing twice, stories are performed differently in different social contexts, they convey experience through reconstituting it” (Freeman, 2008, p. 4). In this study I wanted to explore how paramedics experience learning to practice, and to understand what is important to their constructions of professional practice knowledge. In this study, I aimed to “get the stories out into the open, to examine their values, sift their conflicts, and explore their power to work on us” (Morris, 2001, p. 10). Thinking with the stories (Clandinin, 2013) in this dissertation is a way to begin to explore how paramedic educational experiences relate to their practice, as well as to curriculum and pedagogy more broadly.

In the following, I outline and explain the methodological and fieldwork considerations that shape the conduct of this narrative inquiry. I explain the underpinnings and practices that enabled the participants in this study—as well as me—to think with our stories, to understand our experiences as paramedics in relation to our educational experiences. In this chapter, I define and explain key narrative inquiry terms and practices as they are understood and enacted within this study.

I begin the discussion in this chapter by discussing the narrative turns taken in education research (Clandinin, 2013) that have made this inquiry possible. Narrative inquiry methodology, as well as the practices of narrative inquirers as they are understood and undertaken in this dissertation, is included in this chapter.

Defining and Situating Narrative Inquiry

Narrative inquiry research was well suited to this study because of the emphasis of narrative inquiry on experience as the fundamental ontological position from which inquiry
proceeds. Narrative inquirers understand experience as being synonymous with stories as they are lived and told by people in particular times and in particular contexts (Clandinin, 2013; Clandinin & Connelly, 2000).

Stories and experience cannot be separated for the narrative inquirer. Stories are the way that people come into the world, know and experience self and other, and stories are the way that people speak about and make sense of those experiences (Caine et al., 2013; Clandinin, 2013; Clandinin & Connelly, 2000). Huberman and Miles (2002) argued that the primary way individuals make sense of their experiences is by casting them in a narrative form. Ontologically, then, human beings can be understood as storying creatures, in that they construct self through stories, as they explain and interpret experiences in order to make sense of the world around them (Sikes, 2010. Thinking with paramedic stories—the ways paramedics come to understand themselves as paramedics, the contexts in which paramedics interpret their learning experiences, what is important to how paramedics construct their practice knowledge and the way they act in practice becomes visible through story (Polkingthorne, 1988)—was the focus of this study. Stories of paramedic practice are, then, a potentially useful way to extend understanding of what it means to learn to practice as a paramedic. For this reason, narrative inquiry is a way of exploring paramedic constructions of knowledge and meaning from within their educational experiences (Riessman, 2008).

There are many ways that narrative research can be undertaken. Different terms are often used in narrative research. Narrative analysis, narrative research, and narrative inquiry mean different things (Reissman, 2008) but are sometimes used interchangeably. Narrative research emerged as an approach from the broader qualitative research field (Riessman, 2008). Narrative research is broadly defined as any approach that encompasses storytelling or production of
narratives. The word narrative is used in different ways by many researchers with the common meaning being that it is the study of story, or that descriptions of events are treated as the fundamental unit accounting for human actions (Martin, 1986; Pinnegar & Daynes, 2007; Polkingthorne, 1988, Reissman, 2008).

Chase (2005) identified five analytic lenses that can be applied, which provide an example of the diversity in narrative research. He included a psychosocial developmental approach, an identity approach, a sociological approach, a narrative ethnographic approach, and an auto-ethnographic approach. While a detailed explication of each of these approaches falls outside of the scope of this research, it is worth mentioning that such a diversity of approaches to narrative research requires researchers to be explicit about their terms, methodological orientation, and constituents of rigour that form a defensible study.

In this present study, I drew upon the approach to narrative inquiry as conceptualized by Clandinin and Connelly (1990; 2000) and further developed by Clandinin (2006; 2007) who defined narrative inquiry as “the study of human lives conceived as a way of honouring lived experience as a source of important knowledge and understanding” (Clandinin, 2013, p.17). In this chapter, I outline the specific elements of narrative inquiry as they frame the current study.

**Turning to Narrative Inquiry**

One of the first experiences for a researcher conducting a narrative inquiry is the experience of taking a *turn* towards narrative. Pinnegar and Daynes (2007) argued that there are four turns educational researchers take that lead to understanding and inquiring narratively: the attention to relationships among participants, the move to words as data, focus of the study on the particular, and alternative epistemologies embraced by the researcher.
The first turn to narrative inquiry, attention to relationships among participants, is a recognition that relationships develop over time between participants and researchers. These relationships develop in ways that mean participants (which include the researcher) come to understand and view the topic differently over the time of the study (Pinnegar & Daynes, 2007). This turn heralds a new openness on the part of the researcher. This openness allows the research puzzle (Clandinin & Connelly, 2000) and questions to distil and evolve in the context of the inquiry.

The second turn to narrative inquiry involves a turn towards words as data that can bring to life and capture a meaningful something about experience. In narrative inquiry, the words that constitute data are the stories that make possible as well as tell of experience. Herein lies a caution for the narrative inquirer: taking a reductionist analytic approach, such as coding thematically, for example, might not evoke the complexity and richness of experiences as they are lived (Pinnegar & Daynes, 2007). Many researchers have found that it was evocative individual stories that added richness and provided a basis for understanding actions, innovation, and new ways of knowing (Belenky et al., 1986; Estefan & Roughley, 2013; Geertz, 1983).

The third turn to narrative inquiry involves cultivating an appreciation for the value of the particular and specific. This turn recognizes the value of individual experience as a source of knowledge for understanding and practice. As an example, Geertz (1983) presented a narrative of a particular event, a Balinese cockfight, as a window into understanding Balinese culture. By looking at this particular event through dimensions of sociality, temporality, and place, the event specifics can become more visible and meaningful to the reader. For example, attending to place where the Balinese cockfight takes place, the people that watch the event, the people who do not watch the fight, or the traditions associated with the particular event allow a perspective and
understanding that was previously inaccessible. In this current research, attending to the particular stories shared by participants presented a metaphorical window through which to view aspects of paramedic identity, practices, learning, and pedagogy.

The final turn to narrative inquiry involves considering multiple or alternate ways of knowing and understanding experience, which allows knowledge to remain tentative and variable. People shape their daily lives by stories of who they and others are as they interpret their contexts and relationships, remember the past, and imagine a future (Connelly & Clandinin, 2006). Therefore stories encompass the cultural, social, and institutional influences on people and how they live, story, re-story, and re-live their lives (Clandinin, 2013). Narrative inquiry in educational research brings “theoretical ideas about the nature of human life as lived to bear on educational experiences as lived” (Clandinin & Connelly, 2000, p. 3), and these ideas are reached through thinking with the stories participants live and tell.

As narrative inquirers attend to these four turns towards narrative, they engage with and interpret the literature alongside ongoing dialogue in their study. A narrative inquiry does not, however, begin with the literature: it begins with experience as it is lived and told through story (Clandinin, 2013; Clandinin & Connelly, 2000). As narrative inquirers proceed from this interest in experience the literature becomes another way of “understanding and inquiring into experience. . . . [It] is situated in relationships, and in community, and it attends to notions of experience and knowing in relational and participatory ways” (Clandinin, 2013, p. 13). Therefore, theory is balanced within the study and is discussed in relation to the stories shared by participants. Put simply, theory follows experience.

With this idea in mind, I now turn to one of my own experiences of learning to practice, which embed my experience of turning to narrative through my practice:
I have just backed the truck into the ambulance bay and am sitting with my paramedic partner just talking about what to do for lunch when the call comes in to respond to 43 North for a motorhome rollover. We groan and roll our eyes, another crazy day in the park. We respond to the helipad and get our bags and equipment ready to put into the helicopter. Too bad if we have to miss lunch, at least we will have another fifteen-minute helicopter ride. Dispatch tells us we have five to six patients,
two pediatric (unknown injuries)
three adults (unknown injuries),
and the caller is a bystander who can’t access the patients directly, so more detailed information will not be forthcoming. One of us has to get in the helicopter and the other has to go by ground with the truck to the scene. As the junior crewmember and newly-minted paramedic I assume I will be driving by ground and my partner, who has many more years of experience than me, will go by helicopter. He looks at me, grins, and says, “Tag. You’re it, you are a paramedic the same as me, so off you go now”
and he closes the helicopter door with me inside.
I put on my headset and confirm with my pilot that we are good to go and we lift off. I check in with dispatch for any updates; their static-filled transmission tells me Fire and First Response is 15 minutes away our from scene; 69 (RCMP) are on the way with unknown ETA; and the motorhome is rolled down a steep embankment,
two patients ejected with critical injuries, further updates to come.
I am seized with panic. I am a paramedic now.
This is my first big trauma call as a paramedic,
(I have to do it alone),
My partner will not be there to help for the first 15-20 minutes
(I have to manage this chaos)
And make the right things happen with the people and resources I have when I get there.
(I can’t believe I thought I could do this.)
It was only six months ago that one of my preceptors would not even speak to me because he thought I should not have been allowed in paramedic school,
(Maybe he was right.)

I look out the window at the scenery and take a breath. Just then, my pilot asks me if I am ready because we are two minutes out. We look at each other and I swear he knows what I am thinking. I say, “Yep. Ready to go. Let’s put down to the north so the incoming can have room, and fire can place their apparatus to secure this motorhome.”

And that’s what we do.

Looking back, as I think with this story of becoming a paramedic, I find myself drawn to the above word image, which, for me, offers an insight into my turn towards narrative thinking. This story suggests the possibility of relationships as an important site for understanding how to become, and what it means to be, a paramedic. As I wrote this story, the way I chose to use and position the words offers a glimpse of how these choices and expressions constitute data through which the experience might be understood. The experience I draw on to make these points is a particular experience; it is my choice, and the choice says something about how I understand my practice. Finally, my account is only one account of becoming a paramedic. Recognizing this as a particular experience is another facet of my research puzzle—the wonder of how other paramedics learn to become paramedics—that creates a context in which it is possible to consider multiple and alternate ways of knowing. As the profession of paramedicine continues to grow, evolve, and advance, paramedic educators are called upon to consider new possibilities for how they teach and learn together. The following story from Mary (Interview # 1) points to current tensions in practice:

*I think in school, we largely don’t teach enough thinking about patient interaction; our job is 90% talking and listening. Using your paramedic thinking for where is this going, what am I prepping for, what am I planning for, what can I do, what is best for this patient? We do the scenario thing so well that I think that what gets missed is the talking*
and the timing of the patient interaction. When I went through school, it was do this, do this, do this, and then you are at the hospital. But in the real world, it doesn’t work that way. I mean I have done calls where you don’t get vitals for 20 minutes because of the way the call needs to flow. That is not taught, it is developed on the fly. We don’t have any formal instruction about it or guidance about the finesse of the patient interaction and call sequence.

It seems, then, that there is a gap, or disconnect, between the experience of learning to be a paramedic and practicing paramedicine. As Mary’s story suggests, clinical practice is more than a linear knowledge-application process (Cody, 2002; Jensen, 2010). The tensions and possibilities that exist in this current gap between learning and practicing paramedicine are well suited to exploration through a holistic and integrated research approach like narrative inquiry.

By asking paramedics to be narrators of their experiences, they are able to determine what is meaningful within the context of learning and practice. Understanding what is important to paramedics when they are learning to practice may help to narrow the gap in the paramedic curriculum and pedagogy literature. Current paramedic education focuses on skills acquisition and propositional knowledge attainment, but attending to these personal stories, practice emerges as relational, and it is within the relationships of practice that paramedics must integrate knowledge from the classroom into practice. Their interpretation of meaning lies within both the construction and content of their stories. Stories are more than strict description; they express thoughts and emotion and speak of places and times, which are revealed through description of particular cultural and historical contexts in which they have been lived.
The Philosophical Underpinnings of Narrative Inquiry

Narrative inquiry is based on John Dewey’s (1859–1952) theory of experience. Dewey was an influential philosopher and educationalist. He is perhaps best known for his substantial contribution to pragmatic philosophy. Dewey’s pragmatism shared and contrasted features of other pragmatists. He believed that to understand (a phenomenon or topic, for example), it was necessary to understand what happened in events, or, put another way, to explore and think about things that happen in experience (Dewey, 1938).

Dewey (1938) adopted the pragmatic stance that there is a necessary, continuous, and intimate relationship between experience (of these things that happen) and knowledge. For Dewey, experience always happens somewhere, at a particular time, and an experience is always an experience “with” (Dewey, 1938, p.42). To clarify, Dewey was drawing attention to the social, temporal, and relational nature of human experience. Dewey also understood experience to be continuous and related. That is to say, one experience leads to another experience, and any given experience occurs in the context of those that have gone before, as well as those that are to come. As Clandinin and Connelly (2000) have expressed: we are always in the midst.

The midst of narrative inquiry is, then, life as it is lived by particular people in particular contexts. This particularistic understanding sensitizes the researcher to instances (of experience) rather than generalities about phenomena. In this way, narrative inquiry can be thought as being situated within a constructionist epistemology. Narrative inquirers attend to how a life is lived, and the meaning that is made as a result of interactions between people, places, times, and objects or phenomena of interest. For the narrative inquirer who attends to experience, it is not necessarily the capstone experience that is of interest, but the experience of the everyday (Caine et al., 2013; Clandinin & Connelly, 2000).
Crites (1971) offered an alternative narrative view of this focus, further sensitizing the narrative inquirer to the relationship between experience and story. For Crites, people experience narratively in the form of sacred and mundane stories. Sacred stories are rarely told directly. Instead, they form part of a consciousness between people in contexts, which help them to make sense of their worlds. Sacred stories are a basis or platform from which we build other stories of self (Aldredge-Clanton, 1998; Crites, 1971). For paramedics, there are perhaps many sacred stories about who they are, what they do, and what it means to be a paramedic that shape the individual stories that paramedics live, tell, re-tell, and re-live.

Mundane stories, by contrast, are those stories that are more directly accessible. The mundane story is a story of self that can be directly told, and that gives insight into the sacred stories that guide and shape identity. This nuance compels the narrative inquirer to think with rather than about stories. Thinking with stories brings the inquirer alongside the participant, engaged and attentive to the relational nature of story. This way of researching narratively also recognizes the possibility that the research relationship might illuminate the relationship between story and experience, between the lived and the told, between the sacred and the mundane.

**Three-Dimensional Narrative Inquiry Space**

Dewey’s (1938) conception of experience as interactive, situated, and continuous underpins what Clandinin and Connelly (2000) termed the “three-dimensional narrative inquiry space” (p.50) for attending to a narrative conception of experience. The three-dimensional narrative inquiry space provides a metaphorical framework for exploring the particular experiences of participants. The framework consists of three *commonplaces* temporality, sociality, and place (Clandinin, 2013; Clandinin & Huber, 2013). These commonplaces allow the researcher to study individuals’ experiences in the world and to consider the particular of what
each person can see, hear, feel, fear, and think over time within their social milieus (Clandinin, 2013). In this way, the researcher can begin to think more holistically with story by being able to attend to multiple dimensions of narrative experience.

Attending to the commonplaces situates the inquirer within a three-dimensional narrative inquiry space that requires the researcher to simultaneously think within the dimensions of experience–story. It is thinking with paramedic experiences in this way that, in part, sets this narrative inquiry apart from other methods. Narrative inquirers use the three-dimensional narrative inquiry to space to look forward, backward, inward, and outward at the people and places within the paramedics’ experiences as they are lived, told, re-lived, and re-told through stories (Clandinin, 2013).

Thinking and researching within the sociality commonplace allows for consideration of the relationship between internal (thoughts, feelings, ideas) and external (relational and interactive) experiences. This attention is directed towards the researcher as well as participants’ experiences (Clandinin & Connelly, 2000). I look inward to be aware of my responses to experiences and consider how my own cultural, institutional, social, and familial narratives impact these responses (Clandinin, 2013). In this research, I attended to how the paramedic participants felt about their shared experiences, how this sharing shaped how they understood their experiences and paramedic identity, and what this might mean in relation to their actions in learning and practice.

Attending to the commonplace of place has much to offer a narrative inquiry into paramedic learning and practice. Understanding how specific places where paramedics learn, such as the physical place of the back of the ambulance, influences how experience can provide insight for educators. Clandinin and Connelly (2000) defined place as “the specific concrete,
physical, and topological boundaries of place or sequence of places where the inquiry takes place” (p. 50). This dimension opens the possibilities for participants “to show how individuals interact with place, in order to construct meaning” (Estefan, 2008, p. 75). According to Estefan and Roughley (2013), knowledge about what to do and how to act is intrinsically linked to the places in which people are situated. Attending to place, as a source of wisdom for practice and learning (Basso, 1996) is an important consideration in narrative inquiry.

The commonplace of temporality enables consideration of the past, present, and preferred, or anticipated, future. Crites (1971) reminded us that “the way people speak . . . bears the imprint of a time and a place” (p. 291). To think narratively about paramedic learning experiences is to consider that both the people and events are in constant transition—a state of temporal flux—where experiences and actions that have already taken place are still being interpreted by the storyteller with an awareness of their present, and a sense of the future. By looking inward, outward, backward, and forward while locating the experiences in place, I am able to navigate individual elements while considering the whole story through this multidimensional space while also honouring the stories of participants.

**Narrative Beginnings**

Narrative inquiry begins with an interest in experience. That is to say, narrative inquirers are concerned with how people compose themselves in the midst of their experiences in time, context, and in relationship. Clandinin (2013) reminded us “narratives of experiences are both lived and told, that is, people both live out stories of experience and tell stories of those experiences” (p. 165). One of the first steps in conducting narrative inquiry research is to consider the researcher’s own story or “narrative beginnings” (Clandinin, 2013, p.55).
Constructing a narrative beginning, as seen in the prologue to this dissertation (and drawn upon and extended throughout the research) is a means to explore and make explicit the relationship of the researcher to the research puzzle, which includes the researcher’s experience of the phenomenon (Clandinin & Connelly, 2000). My own understanding of how I both exist in and see the world has allowed me to recognize that I have been thinking and therefore inquiring narratively since I first began learning to practice as a paramedic. People are “in the parade [they] presume to study” (Clandinin & Connelly, 2000, p. 83), and the inclusion of a narrative beginning in research is an acknowledgement that researchers, too, are in the midst of the experiences into which they inquire. In the midst of their own stories, researchers enter into the midst of their participants’ stories. Similarly, researchers leave in the midst, recognizing that their respective stories, while converging for a time, continue—shifting and changing—after the conclusion of the research. As such, the research becomes a part of the stories of both participants and researcher.

This understanding is the culmination of many years of puzzling over my own experiences both as a student and as an educator. Understanding that people experience and understand experience through story has shaped my approach to the research puzzle that I explored in this study. When I think of the experiences I have had and bring those stories alongside my colleagues’ stories, I have become increasingly aware of how paramedics participate in storytelling. Stories are told and traded in hospital hallways, back at the station, and driving in the truck to the next call. Paramedics tell each other about patient interactions, what they did, what they did not do, what worked or did not work, and attach meanings to these stories in order to make sense of the world of paramedic practice.
These experiences have led me to understand that paramedics communicate knowledge from their experiences through stories. I recognize that these stories have the capacity to teach, and to shape paramedics in some way. These experiences with others and their stories have helped me to understand who I am in relation to the other paramedics—and develop my own knowledge and identity as a paramedic (Caine et al., 2013). In this way, I see story, storytelling, and narrative inquiry as pedagogical (Clandinin & Connelly, 2000).

I understand that I am living in my stories, that I think with these stories, and use the knowledge from these stories in my practice. As Caine et al. (2013) argued, it is in moments like these that I cannot not be a narrative inquirer. These living and thinking places are what Crites (1971) identified as our paramedic “dwelling places” (p. 295). It is in their stories that paramedics live, and thus they must turn to their stories to uncover and recover knowledge for practice.

My experiences make clear to me the social and relational nature of teaching and learning—that they are complex, context-laden, and that emotions necessarily influence our interactions (Goleman, 1996). I know that there is a reciprocal and influential relationship between my education and my practice of paramedicine. It then follows that, for me, committing to understanding paramedic learning and practice means that experience and knowledge are intertwined. Dewey (1938) extended this idea, arguing that experience is knowledge. He went on to say that the generation of knowledge is connected temporally, where experiences are influenced by context and are composed narratively and is thus best understood through the same methods (Dewey, 1938). I have wondered about other paramedics’ experiences of learning to practice and what evoking these experiences and understanding them differently could mean for developing curriculum and informing pedagogical approaches.
Many times during this inquiry I returned to the writings of Dewey (1938) and Clandinin and Connelly (2000) in order to understand my experiences with participants and the construction of research texts. In this way, I was able to remain in relation to my understanding that each of these experiences will in some way affect my attitude about “the quality of the next experience” (Dewey, 1938, p. 37). The continuity of experience is explained in that every experience is a moving force and will have implications on attitudes that influence desires and purpose, which “help decide the quality of further experiences” (Dewey, 1938, p. 38).

As I proceeded with this research, I needed to remind myself that in every experience there is more than what is happening internally to me. By being present, I shape the conditions in which the experience occurs to some degree, therefore altering it in some way in the process. Narrative inquirers view continuity as an ontological matter where what they understand is grounded in stories that are nested in time about what they see, hear, feel, love, taste, and fear, for example. For Clandinin (2013), people’s stories are all that they have (Clandinin, 2013). Furthermore, Clandinin and Rosiek (2007) helped me to understand that thinking as a narrative inquirer is to see experience within a continuous stream that is generative of new relations that will become part of future experiences.

**Relational Responsibilities and Commitments within Narrative Inquiry**

To this point, I have positioned narrative inquiry as a longitudinal, relational, and in-depth form of inquiry that calls forth a methodological commitment (Caine et al., 2013) to attend to experience as it is lived, re-lived, told, and re-told in story. By researching in this way, participants and researcher risk exposure and vulnerability (Clandinin & Huber, 2013). I have a moral and “ethical burden” (Sikes, 2010, p. 11) to remain attentive to this vulnerability, both during and after the study.
Developing and maintaining a relationship of trust with participants is one way to respond to potential vulnerabilities. The development of this relationship is, in part, dependent on a researcher’s ability to be informative of her or his aims and intentions for the study, as well as determining clear expectations for the research relationship. In the fieldwork phase section, I describe the steps I took to be respectful of participants’ needs. I also attempted to remain sensitive to the fact I was entering into the participants’ lives in the midst (Clandinin & Connelly, 2000). As I conducted my study, I was mindful to provide participants with enough ongoing information for them to understand my motivations and perspective in each conversation that we had. This was important because it is “unethical to offer a version of someone’s life without making clear the nature of the gaze that is being brought to bear upon it” (Bathmaker, 2010, p.13).

Clandinin and Huber (2013) suggested that managing this ethical responsibility requires ongoing attendance to relationships within a narrative inquiry. They also argued that it requires respectful negotiation when developing the narratives. This negotiation is important because the final research text needs to honour not only the participants’ narrative authority and voices, but also give consideration to the audience when writing the research text.

In the ethics section, I address the general research ethics and elaborate on a specific example of the relational nature of narrative inquiry, in order to foreground how a relational approach serves to shape the production of stories that feature in narrative inquiry research. I felt my ethical responsibilities throughout the study. As we negotiated the production of interim texts, thee participants, Nigel, Mary, and Roy, became very visible in the stories, and this required us to change some of the times, places, and events in the stories to ensure their anonymity and in some cases the anonymity of the event.
This visibility also became a tension for Nigel and Mark who were surprised that they felt concerned about appearing vulnerable and fragile to the reader. Mary, Roy, and Alex shared more of their personal selves, and this is reflected in the stories, where Alex was more comfortable sharing less about his background. This is reflected in Alex’s stories as we had fewer discussions and meetings together with minimal correspondence over the interim texts. It was different with Nigel and Mark with whom I had many conversations, both scheduled and unscheduled. All participants preferred to meet off-duty; so all conversations and meetings over the 6-month period were completed away from the workplace.

It is here that the notion of particularity arises again, this time in regard to the relationships that were developed with participants. Each participant was different, with different preferences, and different foci of what mattered in relation to their practice and learning. Remaining sensitive to this particularly, resisting attempts to turn towards sameness or themes in their accounts, and working closely to tell their stories in ways that the participants could see themselves were key relational practices that I undertook throughout this inquiry.

**Parameters for the fieldwork of this narrative inquiry.** The fieldwork in this study included recruitment of participants, developing relationships with participants, and negotiating the field, interim, and research texts. In narrative inquiry, there are two ways to approach fieldwork: one is to engage with participants who share stories of their experiences, and the other is to come alongside the participants and live with them in their stories (Clandinin, 2013). In this study, I have engaged participants in conversations about their learning and practice experiences.

**Recruitment of participants.** Five paramedic graduates participated in this study. Sampling was based upon the scholarship of Patricia Benner (1984), a nursing theorist, to guide thinking about paramedic learning over time. This sampling criterion was purposeful and
focused on paramedics with 2 to 3 years of practice experience post-education. Benner used this approach to evaluate student nurses’ skill acquisition and suggested that

1. Nursing students move through the five stages, novice, advanced beginner, competent, proficient, and expert.
2. Novices must find ways of responding to their new experiences.
3. Competence comes after 2 to 3 years of practice.
4. Expertise is developed by incorporating intuition and being proficient in perceiving correctly the whole situation.

Therefore, all participants had completed their education between 24 and 59 months prior participation.

In all cases, I used pseudonyms for the participants and events to ensure anonymity and confidentiality. Paramedic students come to paramedic education programs with many previous experiences, life and career goals, and learning expectations. While there is agreement within the nursing and paramedicine literature that the practice education experience is often messy and eventful for both the educators and students, little is known of the implications of this on paramedics (Blaber, 2008; Donaldson, 2004; Morton-Cooper & Palmer, 2000; Slade, 2007).

Recruitment of participants occurred by email through the employer email database with Alberta Health Services Emergency Medical Services and the Alberta College of Paramedics. The study recruitment notice, email, and consent form (see Appendix A) were emailed to all 458 eligible paramedics. Once potential participants replied via email with an indication of interest I was able to check that they were registered in Alberta as a paramedic on the public access paramedic registration list. This list is updated daily and represents those practitioners by name and registration number that are registered in good standing and their designation of registration.
Through this public registry, I was also able to confirm the length of time post-graduation for each participant.

Any paramedic who was not registered in good standing with the Alberta College of Paramedics and who had not graduated from a paramedic education within the previous 24 to 59 months was excluded from this study. One woman and four men participated in this study. Each participant had experience in clinical practice in rural and urban locations in Alberta, and one male paramedic had clinical practice experience in Saskatchewan. All of the participants were currently working in Alberta in clinical practice within the ground ambulance settings. Two of the paramedics work within integrated fire–EMS services, which means they also work as structural firefighters and rescue technicians as well as paramedics. The age of the participants ranged from 25 to 59 years old.

**Considerations of relational methodology.** Previously I have argued that an important feature of narrative inquiry is that it is a relational methodology. Narrative inquirers intentionally enter into relationships with participants that are extended and in-depth (Clandinin, 2013) in order to explore experience, live, tell, re-tell, and re-live stories, and share their stories about the research puzzle. Although I did not live alongside my participants as they practiced paramedicine, it was during my many conversations with participants that I took up my place in relation to them. It was during this time that I began to think with their experiences in relation to mine and saw myself in their stories and also saw them reflected in stories of my own. In these moments, I would lay my stories alongside theirs and recognize the tensions within and between our stories.

During our conversations, participants and I reflected on what our paramedic stories meant to us, how the stories seemed to work on us; and what it meant for us to share them with
each other. This sharing of stories helps the participant and researcher begin a process of discovery by revealing themselves to each other (Lieblich, Tuval-Maschiach, & Tamar, 1998). In this relational way, the participants and I were then able to move towards co-constructing stories that tell of experiences of learning to practice as a paramedic, and begin to understand what is important in the process of becoming a paramedic.

As a paramedic who has worked in clinical practice, and within education programs teaching and developing curriculum for more than 20 years, I had a sense of the community I was hoping to study. Gaining access to participants was possible in part because of my familiarity with workplace culture and etiquette, shift schedule patterns, and the system in which paramedics practice across the province. Clandinin and Connelly (2000) drew attention to the ongoing negotiation that occurs within the sharing of experiences. I was able to understand this when I became sensitive to how the participant story would elicit an experience of my own I thought long forgotten, or when their stories would evoke emotions in me such as anger or sorrow for their experiences. In this way, the telling and retelling between us directed the course of the next story when some aspects of the discussions were selected over others or when some were not continued. This ongoing negotiation and relationship was complex and somewhat different with each of the participants. Employing a three-dimensional space as a framework to place the individual participant field texts (Clandinin & Connelly, 2000) allowed for richness and depth to the study and supported my intention to honour the individual stories in a holistic way.

Ethics ID 24601 approval was granted on November 14, 2013, by the University of Calgary’s Conjoint Health Research Ethics Board, the Alberta Health Services Emergency Medical Services Provincial Research group, and the Alberta College of Paramedics Research Committee, prior to the study’s initiation. I sought and received an ethics approval amendment in
order to include demographical data collection (see Appendix B). Signed consent was required on the part of all participants to indicate the full consent to participation in the study and acceptance of the information provided.

**Generating field texts.** Field texts are selected reconstructions of field experiences (Clandinin & Connelly, 2000) and are considered the data that form the basis for developing the research texts. I generated field texts from face-to-face semistructured interviews (see Appendix B), conversations, occasional follow-up telephone discussions, and emails with individual participants over a 6-month time frame. Generating the field texts allowed me to develop a record of the selected transcripts that included my thinking about the specific events during the study. Field texts are co-compositions that are reflections of the study experience between the researcher and the participants (Clandinin, 2013) and in this way ground the study in the particular experiences of the participants and researcher.

Central to the generation of field texts in this study is my relationship to the participants. Being a paramedic educator, discussing paramedic practice with other paramedics has shaped the field texts. I found I was sensitive to the links between curriculum and practice. In this inquiry, field texts remain as close to the paramedic experiences as possible. By looking backward and forward in time, inward and outward in relation to the personal and social while thinking about place, I employed the three-dimensional narrative inquiry spaces as the framework to generate the field texts. Field texts provide a way to open up further conversations and stories that in turn become additional field texts that evoke dimensions of temporality, sociality, and place.

I followed Mishler’s (1986) advice that “if we wish to hear respondents’ stories, then we must invite them into our work as collaborators, sharing control with them, so that together we try to understand what their stories are about” (p. 249). As such, working narratively with the
field texts, the generation of interim research texts, and the final research text is a collaborative effort, with participants involved in determining with me what was required to tell their stories. My responsibility as a narrative inquirer within this collaboration was to develop field texts that reflected the stories being told, to work with Alex, Mary, Roy, Mark, and Nigel to represent their experiences in learning to become paramedics.

Our meetings were held at the location preferred by the participants, which ranged from in their home, to their local coffee shop, and my location of work. The discussions were between 1 and 3 hr in duration, depending on participant preferences. Participants were asked to share their experiences about learning in their education programs and their experiences in their current practice. I did not meet with each participant for the same amount of time; depending on their interest and availability, I met with some less and some others more. For example, I met with Alex twice and was able to generate field text from the second meeting, but I met with Alex and Nigel up to five times and had email discussions between their sessions that included more dialogue about their practice. This continued dialogue is what Clandinin and Huber (2013) described as partial texts that allow the participants and researcher to further negotiate meanings and thereby co-compose the research texts. This was different with Mary and Roy who were able to meet up to five times for varying lengths of time but did not participate in email or phone conversations with me.

I asked participants to share stories from their experiences in the field and to reflect on those experiences within the discussion, and from one meeting to next. I also asked participants to share their stories from when they were students and, further, what led them to becoming paramedic students. The questions I posed were open-ended to allow the participant to direct the discussion and focus on what they found relevant to the topic (Clandinin & Connelly, 2000). I
used these questions as guideposts during the inquiry. Participants were not directed or coached and I respected (and noted) the silences and the pauses in the conversations. Sometimes the participants would talk about the last call that they responded to and how those events occurred, not their education experiences.

I participated fully in the conversations with verbal and non-verbal cues and occasionally joined in by sharing a story too. My intent was to ensure a conversational style of discussion occurred that would elicit more stories about learning and practice (Lieblich et al., 1998). My understanding of the practice settings and terms used by other paramedics gained from many years in the field and classrooms helped with the flow of the conversations in that I did not need to interrupt for clarification at any time.

Interviews were audio-recorded during all of the sessions except for Alex’s initial session. His preference at that time was to not be recorded. At that time, he was unsure if he wanted to continue to participate in the study. Alex did decide to continue to participate, and all further conversations were audio-recorded and treated in the same manner as other participants. I completed all audio to text transcription. Notes were occasionally taken during the interview sessions, and I kept a personal journal intermittently during the data collection period.

The development of interim and research texts. Developing the interim and research texts is a tension-filled endeavour (Clandinin & Connelly, 2000). Interim research texts represent the move to interpretation and analysis of the co-composed field texts. In this way, I was able to move between “falling in love and slipping into cool observation” (Clandinin & Connelly, 2000, p. 81). I composed the initial interim texts and shared the texts with each of the participants via email. I asked the participants if the recounting of their stories presented within the interim texts aligned with their living and telling of learning to practice. I met with Mark and Nigel face to
face to further negotiate the interim and research texts, and Alex, Mary, and Roy were comfortable with completing this aspect via email.

Fitting the individual events and stories into a coherent narrative that encompasses the dimensions of temporality, sociality, and place was central to this study. Moreover, the interim and research texts are where I began to think across the stories and with my stories to consider where participants’ stories came together in ways that illuminated or evoked experiences of learning to practice. I considered the participants’ voices and how to present our shared stories while also considering the multiple audiences and readers of this research (Clandinin, 2013; Clandinin & Connelly 2000).

I began to develop the interim and research texts after the first interview audio-files were transcribed, and I continued this approach throughout the study. I transcribed each interview after it had been completed. First, I would listen to the audio recording and transcribe it. Second, I listened again to add notations about voice inflections, as well as the facial expressions of the participant I remembered during the session. I also reviewed my journal and field notes and added these notes to my transcription. These transcriptions were then shared with each participant, either at the following session or, in two cases, by email prior to the interview.

Participants reviewed and commented on interim transcripts. During this stage, one of the participants became concerned that his verbatim script sounding too fragmented with the number of “ums” in the text. I was able to edit some of these except for where they seemed to show a pause for thought. Multiple reading and writing of the interim transcripts allowed me to start thinking with the stories in the transcriptions. I removed any introductory or superfluous conversation (that did not relate to the inquiry) from the transcripts. Then I continued to review the transcriptions and, through attending to the three-dimensional narrative inquiry space, began
to see complete narratives of paramedic learning to practice. Clandinin (2000) explained that this initial aspect of analysis helps narrative inquirers to locate and begin to think of such features as place, scene, characters, plot, and tensions within the stories, but it is not a complete analysis at this point.

Remaining close to my response community was a significant aspect of development of my research texts in this study. Response communities need to be developed for narrative inquiries where the initial research puzzle, ongoing concerns, and research texts can be discussed. Clandinin, (2013) described a response community as a group of people that the inquirer “values and trusts to provide responsive, and responsible, dialogue about his or her unfolding inquiry” (p. 210). Caine and Estefan (2011) explained, “It is in the living of this back-and-forth process that we gain new insights” (p. 968). In essence, a response community includes those with whom a narrative inquirer discusses, reflects upon, and more deeply inquires into the research experience. A response community supports, challenges, and extends the thinking of the researcher.

The response community for this study included supervisors from my committee, another narrative inquirer, as well as other paramedic colleagues. This group provided a place to help me understand the research design puzzle and how to shape the experiences of paramedics. Clandinin (2013) suggested that these communities are able to sustain and support the researcher through the iterative process of conducting this type of study. This was true for this study where my response community was very helpful in providing insight about narrative inquiry methodology and providing time for discussion that promoted generative thinking with the topic.

This process is an opportunity to think about paramedic experience in more in-depth ways and make visible to the reader the complexity of each of the participants’ lives (Clandinin,
My experience in developing paramedic interim research texts helped me to understand that each of the participants has complex lives and that these complexities are inseparable from their narrative identities as practicing paramedics. As I worked with participants to develop the final texts, I remained sensitive to the need to engage the reader to imagine alternatives for paramedic curriculum and pedagogy (Clandinin, 2013).

Writing the interim texts included reviewing my notes in my journal followed by free writing sessions where I would capture my thoughts about the participants’ stories. In some cases in the free writing sessions, I was able to bring my own experiences alongside the participants’ and try to think with their stories. This practice was helpful for me in locating the tensions in and between the stories, and allowed me to better identify my own stories and how they inform this study (Clandinin & Connelly, 2000).

At times, I returned to the education literature to help me understand how curriculum and pedagogy can influence learning. Clandinin and Connelly (2000) argued that this practice represents a “conversation between . . . theory and the stories of life contained in the inquiry” (p. 41). This approach to theory in narrative inquiry is different than formalistic research. A formalistic approach requires theory (rather than experience) as validation for knowledge for practice. Engaging the literature as a further aspect of the inquiry (Clandinin, 2013) meant that I was able to “play” (Clandinin, 2013, p. 206) across the dimensions of temporality, sociality, and place within and across the stories and in the existing literature. In particular, this was helpful for me to find some of the different aspects of the personal and social within the individual stories, as well as my own.

My experience with this method is best described by O’Connor (1998) who said, “I have to write to discover what I am doing, I don’t know as well what I think until I see what I say;
then I have to say it all over again” (p. ix). This helped me to understand my relationship to the participants’ stories and my own relationship to the topic of learning as a paramedic. Engaging in this reciprocal process was an important way to engage with the converging points and intersections of participants’ and my respective stories, and to ensure that I honoured the voices that were present on this emerging narrative landscape.

I provided the field texts to participants to further elicit stories and to allow them time to revise any of the content; the participants requested no retractions. I developed the final research text from iterative review of the field texts, interim texts, including my journal notes, and feedback from my response community (Clandinin, 2013).

**Weaving the texts together.** As a narrative inquirer, I am reminded of my ethical accountability to make visible the processes of how I represent the individual stories and include my own stories (Clandinin, 2013) in developing the research text. Conversations with participants created significant amounts of field text, yet the process of moving from interim to research text meant some stories were foregrounded and some remained silent. Not all of the participants’ accounts are reflected in this research text. Present in this final research text (this dissertation) are the co-constructed and negotiated stories that are shaped within any by the three-dimensional narrative inquiry spaces (Clandinin, 2013).

The research text is created to “critically and deeply represent the inquirer’s and participants’ experiences while also maintaining each person’s integrity and their relationship into the future” (Clandinin & Huber, 2013, p. 13). These stories are not, then, life exactly as it has been lived, but an account of experience that has, necessarily, already been interpreted by the teller to include only what the teller wants to emphasize and chooses to exclude (Bruner, 1986). Foregrounded, then, are the stories of how participants became paramedic students, who they
were at the time of their education, and some of their particular learning and practice experiences. I have included my voice, woven alongside the individual participants’ stories. This approach is a way to honour the rich detail of the events and moments of deciding to pursue paramedic education and learning to become a paramedic in practice. When developing research texts, it is “important to attend to forms that fit the lives of the participants and the narrative inquirers who are being represented” (Clandinin, 2013, p. 207). In Chapter Four, the individual stories of participants, along with my voice as a guide is a way to bring these voices together in a way that reflects the positions of participants and inquirer within the research.

I share my interpretations alongside the participant stories to ensure transparency as I try to sustain my ontological and epistemological commitment to experience as knowledge for practice. It is important that in each story the reader can understand who I am and why I am inquiring into the learning and practice experiences of paramedics. The research text in this form provides a path that traces the journey of the research and the paramedic participants’ lives as they share their stories.

The paramedic storyteller situates their behaviours and actions within particular events, of learning to practice, places about which very little is known. Narrative inquiry includes “the social, cultural, and institutional narratives within which individuals’ experiences are constituted, shaped, expressed, and enacted”(Clandinin & Rosiek, 2007, p.42). Morris said that narrative inquiry can help people “grasp what [their] deepest values are” (2001, p. 216). Story allows me, as the inquirer, to explore beyond the surface of paramedic education, to get “inside the world” (Riley & Hawe, 2004, p. 241) of paramedic learning.
Touchstones of Narrative Inquiry

In this section, I explain the ways that notions of rigour are applied in narrative inquiry. Clandinin (2013) referred to 12 touchstones that, when acknowledged and practiced within narrative inquiry, confer confidence that a researcher has attended to that which constitutes a good narrative inquiry. While there is no one way to conduct a narrative inquiry, all narrative inquiry research is relational. Researchers must therefore demonstrate ethical relational responsibility as well as attend to study design principles throughout the study. I provide the 12 touchstones and relevant study information in this section to help the reader consider how this research met the requirements for methodological rigour in narrative inquiry.

Narrative beginnings. Narrative inquiries contain a narrative beginning, in which researchers explain their part in the research, how they came to their research puzzle, and the ways that their own stories shape orientation to the substantive topic, the field, and the participants within it (Clandinin, 2013). My narrative beginnings are shared in the stories that are found in the prologue and also a story from my first day as a paramedic going on a call without my partner. These are examples of how I live in my stories and how when these experiences are considered within the common places of temporality, sociality, and place, indicate how I have come to think with my stories of experience and other paramedics’ stories. I can recognize now that I was turning to narrative knowing very early in my paramedic career when I began to attend to knowing through stories, of thinking with my own and others stories.

Commitment to relational responsibilities. Committing to relational responsibilities begins with the development of the research puzzle and study design and continues after formal ethics approval. Thinking in a relational way throughout the study meant I remained as wakeful as possible to who I was in the study, and becoming as a researcher, and, how my presence
shaped the spaces for listening to participant stories. As the researcher then, I came alongside the participants and became in relation to them. In this way, I developed an obligation to the relationship. Moving through the co-composition of the field, interim, and final research texts was guided by relational ethics with each participant to ensure their narrative authority was honoured and their anonymity remained intact.

**Inquiring while being in the midst.** Narrative inquirers enter and leave the research field in the midst of life as it is being lived (Clandinin, 2013; Clandinin & Connelly, 2000). I have attended to this aspect throughout the design initially in the prologue where I share a brief insight into how I began my journey to becoming a paramedic and in Chapter Two with how I arrived (in the midst of my practice) at my research puzzle. Furthermore, in each re-telling of a story I consider the moment when the telling happens and consider that this moment is in relation, is partial, as the participants live in other institutional, personal, and professional stories while they live in the research story with me.

**Negotiation of relationship.** This touchstone is an ongoing commitment throughout an inquiry (Clandinin, 2013). Narrative inquirers negotiate all aspects of an inquiry with participants, including the parameters for participation, the format for generating field texts, the content of interim research texts, and the presentation of the final research text. In this study, participants were involved in each of these stages and were given opportunities to regularly review the ways they were participating in the research.

**Negotiating entry into the field.** The arrival of a researcher into participants’ lives can herald excitement, anxiety, uncertainty, and disruption. As such, it is incumbent upon the researcher to negotiate entry to the field in a way that facilitates rather than complicates the experience for the participant. In this study, individual participants retained control over how
they met with me, the role I would play in their practice and lives for the 6 months of field work, and what our interactions would comprise and compose. As a result, in Chapter Four, some participants’ stories are longer and more in-depth than others, since participant preferences shaped the sorts of stories told, the depth to which they explored them with me, and how often they chose to meet.

Moving from field to interim texts. I developed field texts in this study from conversations with participants about their learning and practice experiences. The spaces created in these conversations allowed for the participant and me to share our stories together. The field texts in this study were co-composed from these conversations.

Moving from interim to final research texts. I composed the interim research texts by thinking with the field texts and reviewing my session notes to draft the interim and subsequently develop the final research texts. This process was iterative where I would compose research texts and return to conversations with Roy, Alex, Mary, Nigel, and Mark to engage further re-telling while attending to the three-dimensional narrative inquiry spaces. I read and re-read the field and interim texts when composing the research texts. At times, I returned to my response community to discuss the interim research texts and this helped me to refine the converging points when thinking across the stories.

Representing experience in a way that shows temporality, sociality, and place. This touchstone is demonstrated in two ways: First, participants’ stories are told with attention to the commonplaces of temporality, sociality, and place. Attending to this three-dimensional narrative inquiry space allowed me to evoke the narrative quality of experience. Second, this dissertation, which tells the story of this research, is also written in such a way as to show how the research was conducted within a three-dimensional narrative inquiry space, attending to the complexities
of time, sociality, and place. In Chapter Four, I attend to the concern of voice (Clandinin, 2013) and signature and have tried to tell the stories in a manner close to how they were told by the participants.

**Using a relational response community.** I entered this research puzzle with a response community from paramedicine already developed. Over time, I included others from narrative inquiry and researchers in my relational response community to provide me with more opportunity and time to develop depth and understanding throughout this study. This is presented in Chapter Three as part of the methodology of narrative inquiry.

**Personal, social, and practical justifications for this study.** In the early chapters of this dissertation, I have outlined some of the personal, social, and practical justifications for this study. My narrative beginning, for example, as well as the material in the literature review point to the importance of understanding educational experiences for individual paramedics. I have also argued that paramedics require this education in order to fully participate in the provision of health and social care needs. In order to attain this, I have presented a research puzzle to explore. This puzzle provides an opportunity to explore insights that can lead to different educational and clinical practices. In Chapter Four and Chapter Five, I build upon this foundation, as participants’ experiences become the focus for thinking about what it means to learn to become a paramedic practitioner. In Chapter Six, I link these experiences to broader recommendations that affect personal, social, practical, policy, and research dimensions of practice.

**Attending to multiple audiences.** During this narrative inquiry, I have intended to stay attentive to the audiences that will benefit from the study. Clandinin (2013) reminded me to ensure that the research texts shared are respectful and representative of the participants’ lives lived. Respecting the lives lived in the research texts means representing the experiences in a
way that is not exclusive or marginalized. The form taken to represent and respect the participant’s voice emerged through the iterative process of moving through the development of field texts to interim texts and final research texts. For this reason, the stories are written in the individual participant voices with my voice weaved into the text to show how I negotiated and co-constructed the research text with each participant.

**Commitment to understanding lives in motion.** It is my understanding of the continuity of experience that helps to ground my commitment to lives in motion throughout this inquiry. Clandinin and Rosiek (2007) stated that inquiry is “within a stream of experience that generates new relations that then becomes part of future experience” (p. 41). This statement resonates with me and helps me to understand that each of the participants and I have entered into this inquiry at a particular time and place. However the time and place that provide these particular research texts will change, and time will move on so that this particular view of learning and practice will shift.

**Conclusion**

In this section, I have presented the narrative inquiry approach as the most appropriate approach for the exploration of this topic. A brief review of the turns that need to be taken to arrive at this methodology is provided. I identified the methods used and included the touchstones of narrative inquiry to help identify the rigour of the study methods.

In Chapter Four, the participants’ voices are heard. Each of the participant’s stories of learning and practice are presented. In the negotiation of the research texts, I attended to Clandinin’s (2013) instruction that in narrative inquiry the participant’s voice is the most influential. Included is my voice to make transparent how negotiation and thinking with and across the stories occurred. The individual story of each of the participants represents the
synthesis of our conversations and the ongoing search for meaning of what is important to learning to practice.
Chapter Four: Paramedic Stories: Looking Backward to Look Forward

“The principle of continuity of experience means that every experience both takes up something from those which have gone before and modifies in some way the quality of those which come after” (Dewey, 1938, p.45). The experiences shared by Mary, Alex, Nigel, Roy, and Mark are presented in this section. The stories are presented verbatim and unedited in keeping with narrative inquiry methods. These stories form the basis for inquiring into the research puzzle of paramedic education. I engaged with participants by thinking narratively and by attending to Clandinin and Connelly’s (2000) commonplaces of three-dimensional narrative inquiry space of temporality, sociality, and place while co-constructing these research texts. The weaving of these texts entailed a process of looking forward and backward with participants; reflecting with them on the social and personal landscapes of their practice and learning experiences; and recognizing the different places and contexts in which their stories are situated.

These stories are powerful exemplars of particular paramedic experiences; they are the mundane stories of everyday experience from which it is possible to think with to understand the world of learning to become a paramedic. Furthermore they provide a glimpse of the sacred paramedic stories as “[a] story must be set within a world” (Crites, 1971, p. 296). Stories provide insight into the paramedic learning and practice world in which the shaping of paramedic knowledge constructs occurs. The research texts are framed within my perspective as an educator and thus are concerned primarily with questions of curriculum and pedagogy.

There are many ways the research texts can be formed, from textual to visual to audible (Clandinini, 2013). The textual form presented here is intended to provide the reader with as much of the rich textual detail and depth of the individual participant’s experiences as possible that emerged during the study. Moreover, the texts show how I have included my own stories
and began thinking with their stories; providing the stories that were evoked during conversations in both the participant and me. The following stories are intended to provide the reader with a clear path to follow how the co-construction of the stories emerged within the dimensions of temporality, sociality, and place.

I am sensitive to my relational responsibility to participants and the importance of engaging in ethical research practices throughout the course of writing and presenting the research. I want to honour the voices of those participants who have chosen to share their experiences in this inquiry. We begin this inquiry in the midst of lives lived. Mary, Alex, Roy, Mark, and Nigel came to the study with pasts and aspirations for their futures. They all live within multiple work, personal, and learning narratives, continuously being negotiated and shaping their lives. The following stories are the accounting of working together (Clandinin, 2013) with the participants to understand their individual experiences within the context of learning to practice.

Mary

Mary began her journey in paramedicine by chance when she provided a friend attending an emergency medical responder (EMR) program with moral support by also attending the program. At the time, the tuition was cheap and promised access to jobs that paid well enough to help her pay her own way through university if she chose to attend; Mary also recalls thinking that it might be “fun” at the same time. After completing the EMR program, some of her instructors convinced her that her previous home schooling study habits and motivation to learn would help her to achieve success in the next level of certification. Mary accepted an invitation from the EMT program manager to attend a pilot EMT program designed to be delivered via distance learning. In Alberta, progression in paramedicine includes entry to practice, which
begins with the EMR certificate; the mid-level EMT certificate and finally the paramedic diploma follow this. This progression is seen in Mary’s story:

One of my friends was lost and didn’t know what to do next for her education. So my dad had suggested to her to try an EMR course and I went along just to keep her company. I was looking into my education options and the EMR program was only $400 at the time so I said whatever, I can go do this. So my dad says, “Well then you could do some rodeo standbys and stuff while you are going to school and make some money.” They wanted to pilot an outreach EMT program so you could learn from home, so because they knew I had been home schooled they wanted me to become part of the pilot program; they wanted a student who would be successful at distance learning and we lived in a small town east of Knoxville.

As I inquire further into Mary’s story, I see that there are key influences that affected her choices about career and education. Mary made many choices on her career path. She was considering her options and interests in different university programs such as anthropology and medicine at the same time she was considering her paramedicine education program opportunities. That she chose to take her father’s advice to take the EMT program indicates the influence of her relationship with her dad. In our discussion, Mary pondered if she would have chosen the same next step if her father wanted her to complete a university level program. Mary relates her choice to the fact her father was working as an EMT at the time. Because she witnessed first-hand the satisfaction he got in providing patient care, Mary realized this was something she could do to help others and feel satisfied with her job. When I consider my own beginnings they are not dissimilar to Mary’s in that I was unsure what path my career would take. When I was young and people asked about my career intentions, I would say nursing. I
have often thought that paramedicine chose me given that working with Robert provided me with exposure to paramedicine, which I had not until then considered.

Mary chose distance-learning options for both her EMT and paramedic programs because she was familiar with and liked being able to direct her time and approach to the learning. She is comfortable with finding her own answers to questions and to look inward first for understanding before she asks, or relies, on someone else. This mindset is clearly demonstrated in her stories about clinical practice. The experiences she shared often reflect a similar process when she comes upon an unknown in practice. It is a process of self-directed discovery of the answer to the self-identified problem. This approach is part of her learning style and part of her character as the majority of Mary’s formal learning narrative, including paramedicine, has been outside of the bricks and mortar of a classroom. She creates her own classroom when needed such as at the station where she worked and at her home. Mary understands her own learning style and seems to enjoy the practical aspects of applying knowledge:

I enjoyed the distance learning, because I am very much the “yeah, yeah, just tell me the basics of what you want me to learn and I will go do it.” And even when I home schooled I would be up and at it by 0800 and make my breakfast, and be ready to learn. So I was very self-motivated, you know, I would pick my own schedule and topics for school, and even one year I was fast enough to complete two math programs in the same year, so I could pick it up real quick, I was done the first math class by Christmas and then Mom and Dad ordered me the next one and I just kept going. Yeah, like if you don’t know then go look it up, right? You can’t just tell me Adenosine is for slowing the heart, you know that’s not good enough, I want to know the [sic] ‘why’ it works that way, what it does, so I question everything.
Mary’s childhood experiences of learning carried forward into how she sees herself in her world and how her experiences affect her learning. Mary learned to trust her inquiring approach and had confidence in her ability to learn. She positioned herself as an adult learner looking for the relevancy and applicability behind the theories presented as supporting practice in her education program. Her statement regarding the pharmacokinetics of Adenosine demonstrates that she sees herself as a learner looking to develop clinical judgement for practice not simply as someone memorizing a medication dosage. Mary wants to understand the rationale and intuitively understands the need for cognitive depth as well as technical skill in order to practice effectively.

As a student paramedic, Mary found that her experience from working as an EMT did not help her as much as she hoped, she said, “and a lot of it was new.”(Mary, Interview #3) In Mary’s stories of living as a student paramedic, she focuses on the interactions she has to negotiate with the people and patients she encounters in her program. When I was listening to these stories, I began to wonder about these experiences of having to manage new situations in practice and how paramedics learn to manage them. Thinking with Mary’s story of managing a homeless person, I brought my own story to bear, of the first homeless person I attended to as a paramedic student. I recall my preceptors telling me to make sure to “cancel on the call; he just wants a cheese sandwich” and wondering what that actually meant and what I was supposed to do with that information. I told my preceptors that as a student I thought it was in my best interest to have as many patient interactions as possible and so I wanted to transport this patient. I remember watching my preceptors roll their eyes at my response, but eventually they agreed. Arriving at the hospital I experienced for the first time a triage nurse telling me I should know better and not to transport a homeless person who was not sick to simply take up space in the
emergency department. Thinking with this story, and with Mary’s story of everything being new, helps me to see where I have learned over time how to advocate for a patient with social and mental health needs. Presenting the clinical aspects of the patient situation without commentary does validate the patient as having needs, which ensures a different response and interaction with a triage nurse.

Mary and I spoke about the fact that not everyone we come into contact with will necessarily end up being a patient. This is a difficult aspect of practice as it takes time and experience to understand that not all people see themselves as sick; although they may need our care, they may refuse to accept it. At that point, the paramedic has a legal and moral obligation only to ensure that the person is capable and able to make an informed decision.

Choosing to work in paramedicine means working in a field where control over practice settings is limited. Practice is mobile and typically bounded only by geography and deployment requirements. Each day the settings vary, from schoolyards to local nursing homes, and every encounter is different. Mary’s practicum story evokes recall of my own practicum experiences and how easy it was to become familiar and comfortable in some practice settings but not others. Smaller rural locations were simpler because everyone knew one another and were familiar with the role. This local knowledge is lost in larger urban practice settings. Everything and everyone is new and strange, and without a familiar rhythm. Mary and I both had to find a new ways to manage. It takes time to gain familiarity and comfort in the practice setting and to find common ground with fellow employees.

In the practice, paramedics typically work with another partner; adding a student means there is a team of three practitioners on each crew. The implications of this crew configuration are that decisions are negotiated, from how to treat a patient to when to stop for coffee, where to
pick up lunch, or when to take bathroom breaks. Mary and I discussed how work can be a great experience when you have a good partner, but it is difficult when we do not jive with your partner. Learning how to manage as a crew of two is not included as part of paramedic curricula.

Paramedics spend a significant portion of work time as a team of two, moving around in an ambulance for coverage of areas when not responding to emergency calls. The team has to stay close together in order to be ready to respond when needed. This leads to significant time for discussion and development of friendships or can lead to the opposite, where each moment is adversarial and negative. We talked about how beneficial it would be if we learned how to deal with both the positive and negative interactions with partners.

Listening to Mary’s stories about her practicum, I was sensitive to her language of struggling as a student. Our talk of struggling as students helped me to think about the feelings of fear students have in moving from the familiar places and people to a larger urban center during their practicum placements. Mary identified the practicum sequencing in her program as a contributing factor to her lack of comfort and confidence in managing change and new events.

Mary shares that the timing of the practicum was not optimal for her learning. As Mary and I talked about her sense of herself as a practitioner, I thought of how Mary related these experiences and feelings to how she would like to see herself—as a confident practitioner with capacity for clinical judgement. She related a particular event with her preceptors on practicum:

Part of the problem with the first part of my final practicum was that the paramedic that was supposed to be my preceptor kept passing me off to casual paramedics who were in to cover the shift. Then out of the blue, my preceptor decided that I [sic] not a good student and that I should never have been an EMT, never mind a paramedic, so he wanted to fail me at the final practicum midway point. It all came out of left field for me
because I was getting post-call talk that suggested I was doing well, you know, “When you do this, or, do that, maybe tweak your vitals to be taken here versus then.” Just minor things I thought generic talks. But Knoxville took me in and did a five-shift evaluation and then decided there wasn’t anything wrong with me. In fact I was a fairly strong student.

In this part of the conversation, Mary’s voice changed; her voice became quieter, and I felt like we were moving towards an uncomfortable topic. This evoked my own memory of experiences with a preceptor. As we talked, I found myself reacting to Mary’s story and wanting to protect her from having to talk about her experience. I found myself transported back many years to a moment when I first met my paramedic preceptor. I had walked into the ambulance station and started to introduce myself to the two paramedics that I was assigned to. They were washing the ambulance; one paramedic walked away, and the other would not shake my offered hand. He said that my name was not important, that he did not want a student, and as he had no intention of passing me I would not be around long enough for him to have to learn my name. The feelings I had during that experience—anger, embarrassment, and surprise—rose up as I listened to Mary, heard her voice change, and watched her eyes change to tears. As I move back and forth in thinking within my own story of fear and humiliation as a student I tell myself I am putting on my paramedic hat and suppressing the emotions that arise. I find comfort in my ability to manage this situation with what I hope is an appearance of calmness. But I feel frustration when I realize Mary had to deal with similar issues as I did as a student. This type of experience is part of what motivates me to study how education can support both the student and preceptor to navigate these types of situations. Freire (1972) called this kind of conflict horizontal violence,
a type of non-physical conflict that can be manifested in behaviours of both overt and covert hostility.

Mary’s story, expectations about how the practicum should go, did not match her preceptor’s expectations. I wonder how Mary then lives her story of learning to practice and how the preceptors live their story of providing learning opportunities for their students. The influence of preceptor is significant with direct implications for the student’s success or failure in the program. Preceptors are not provided training or supports nor are they evaluated in order to become or continue as a preceptor. The wonder in this experience of Mary’s is why one preceptor was intent on evaluating her as not meeting a standard in the practicum setting when the very next preceptor provided the opposite response.

Reflecting on her time as a student, Mary thought about having to develop understanding of her own competence and criteria to meet certain standards of practice. Mary was not able to develop a relationship with her assigned preceptors during the final practicum. This may be because the preceptors were constantly changing due to alternate work placements, vacation, and sickness coverage. Every time a preceptor change occurred, it would mean Mary would need to learn a different way of communicating about how the preceptor wanted a call or situation to proceed. The inconsistencies students experience due to constantly changing preceptors is significant, and the implications are unknown. What does it mean when one preceptor thinks a student is ready to practice or has achieved a competency, and the very next day, or even the very next situation, another preceptor will say “no not ready at all”? Mary’s experiences with her preceptors have influenced how she approaches her students when they are assigned to her on practicum placements:
I always think back to my experience on [my] final practicum every time I hear that phrase “we eat our young,” and think yeah, we really do. For sure it influenced how I am as a preceptor and not only that, but it influences my practice, like when I see new people or other students or like when I find myself getting a little stressed out. You know, for the longest time it was really a blow to my self-esteem, like I found it hard to work after that, because it was so out of left field. It shredded my self-esteem, and it was hard to come back from that. And I still see it, I mean its five years later and I will still do a call or something and it will just twinge. It took one call for [interacting with preceptors] me to look at myself as weak or poor, something I relate to my experiences with my preceptors. I don’t think they realize the impact they have on us. I try to help my students think this way now—I am trying to explain this to my current student—that is, you don’t have to jump in and do a BP or vitals in the first two minutes like they make you do in school scenarios; sometimes you might want to talk to the patient a little bit and listen to their answers.

Mary shares some of her practice experiences, and she relates her classroom sessions to some of the skills and procedures she has now had to perform in the field. She considers there to be significant distance between the lo-fidelity simulations practiced in the classroom with the actual practice on a real patient. Looking inward, Mary is still frustrated that she was not made aware, that she did not know until afterwards how different the situation was when comparing the classroom simulation to the actual procedure when applying to a patient. This frustration is linked to Mary’s sense of competence and her perspective of professional identity, as she continued to troubleshoot the situation until a solution was found. It would have been acceptable by others for her to say, “Well I tried to decompress the chest to improve the respiratory distress
but my equipment failed,” but she continued to find a way to insert this needle to relieve the pressure of the tension pneumothorax.

You know, the first time I decompressed, I mean I had done it in school, where we went through it so fast, the procedure of “that’s where you landmark, you swab here, and insert the catheter this way.” But the first time I needle decompressed a real patient, I bent the catheter! Now they don’t tell you that in school, so there I was, standing in the back of my ambulance with a police officer doing CPR because now my patient has coded and I am staring at this bent 12 gauge catheter and saying “What?” Then I was into the trouble shooting with my supervisor who was up front driving. We decided the next step would be to just make an incision with the sharp end of another catheter and then pass it through, which did work.

I was frustrated because during school they teach us that the catheter just goes into the dummy with no issue, all you have to do is landmark. Well the real world application is different. I wasn’t taught that in school; even the land-marking was different on a real person; it is not the same as what they showed us in school. So I had this bent catheter, a sick patient and look what I did. Usually when this happens we look at ourselves, first thinking we screwed that up instead of asking whether that was a deficient product. For me I think that probably goes back to practicum experiences when your preceptor says, “What did you do? Why did you do that?” I was never really sure if I did something wrong or not. No one ever teaches us how to manage all this in school.

Looking forward Mary thinks about how she can continue to improve her practice. She is more comfortable with her abilities now and sees the importance of critical thinking and judgement and how this played out while learning to practice. Looking back, Mary can bring
forward some experiential knowledge in order to practice. It may be that Mary is a better communicator and has learned through her experiences how to manage the variability of calls and different partners.

*Practice for me now is a lot more thinking, definitely more than what medic school prepared me for. I used to think that when I was in medic school that was knowledge we were learning, but I see now that it was just skills-based and doing, you know? I felt like we just were shown that this is decompressing a chest, this is how you perform cricothyrotomy, “this is cardiac pacing and this is intravenous therapy.” I know there were a lot of skills I needed to know and to be competent at them. But now as I settle into my job, I am moving into using what I like I call my investigator brain. I have a very analytical way of thinking and this is more useful to me now in my practice. Now I go home and muddle through and over the calls and I wonder about what could have been better or faster. I know that I ask more questions and get better answers now and that I can pay better attention to the overall call, not just the patient, and I don’t take everything at face value now. A very small part of the time might include the skills like shocking, intubation, and cardiac pacing.*

*In school what we focus on is whether you can take a BP or take a P but we largely don’t teach enough about critical thinking and patient interaction. When you consider how a call actually plays out, the majority of what you do is talk to the patient. You will take a blood pressure and then some of the time you might start an intravenous or administer oxygen, and maybe give some minor medications like D50W or something. But mostly what you do is use your paramedic thinking about where this is going, what should happen next and what am I planning for in the next ten minutes of transport.*
Mary has learned that paramedic practice is complex and that what was a significant
focus as a student, comprises only part of what she uses in practice. She recognizes that practice
is made up of social events and interactions that require more of her than technical skills. She has
learned to value her ability to recall patient presentations and to reflect on those experiences in
practice and bring those thoughts forward to her current practice. There is a continuity of
experiences and it constitutes is paramedic knowledge.

Roy

Roy works as part of two-person crew providing advanced life support patient care to
residents in rural Alberta. He has been practicing as a paramedic for almost 5 years. Roy became
a paramedic after a career in municipal planning, so he was older than most of his classmates.
Roy recalls how he first became interested in becoming a paramedic:

You wouldn’t believe me if I told you! When I was young I used to enjoy watching the
adventures of Johnny and Roy in the show Emergency. I saw the first one and I pretty
much was interested. I started looking into it and the more I thought about it, I thought it
might be a good way to go. How they were able to respond to emergency calls driving the
old rigs, lights and siren down the highway. They were always teaming up with nurse
Dixie and Dr. Blakely to overcome some technical or social issue to show the difference
paramedics can make for patients. Johnny and Roy were great; they could walk into
chaos while appearing calm and cool, they could make people feel better and they could
always overcome so many obstacles to do the right thing for the patient. What I liked
about the how [sic] they portrayed the job was how it seemed to be that paramedics were
part of a family that lived together in the stationhouse, at 51 station. I wanted to work in
a place like that where the crew was always able to get along, they would be making jokes while cooking lunch or dinner together or while cleaning the station.

After the first conversation when Roy recalled his love of the show as a young adult, I watched the reruns of the show. Aspects of it resonated with me as well, especially the collegial, family gathering atmosphere that I enjoy as part of the workplace culture of paramedicine. Reporting to work at a station or hall where shift change happens and colleagues make contact and experience the camaraderie is a large part of paramedic practice today. There is typically more than partner interactions during a workday. There is always a second crew to ensure a 24/7 coverage provision, which means the first up and back up crews are at the hall. Becoming a paramedic then it is about becoming a special part of a unique and special team.

Roy’s story is about returning to school as an older adult: “I was older than the rest of the class and found myself teaming up with another older student so we could study and not party like the rest of them did.” In Roy’s experience, age matters, because depending on the age of your preceptor you may be treated differently. Roy experienced this firsthand:

I know when I did my final practicum, my preceptor was happy that I wasn’t a twenty-something-year-old kid, so age made a difference. Because we are about the same age, we could see that there was a relationship right there just based on life experience. I know he told me the first day I was there that “yeah this is nice because you are not a kid.” So in that respect during my practicum, age made a difference. I could see that being an issue with some people, because I think we have all met them in past few years, the younger twenty-something, they have a different work ethic and that applies to everything they do. I did take my coursework pretty seriously and I didn’t really have an option of failing.
How Roy’s preceptors and patients consider him is, in part, based on his age and stereotypes held by the practice community. In the case of his preceptor, his age seems to have been advantageous for his learning opportunities.

When Roy was considering enrolling in an educational program, he saw himself as limited to distance learning options because “I could still work and be onsite for two weeks every three months” (Roy, Interview #3). Roy is a father and husband who, at the time, had two children in high school. The distance program facilitated his full time work, as he was able to keep working as an EMT while going to school, which ensured continued stability and security for his family. Sharing the reasons he chose this type of education program delivery model suggests that Roy feels responsible for his actions and takes his family accountability seriously.

When Roy considers his learning to become a paramedic, he includes his experiences as a practicing EMT for 10 years and values his ability to understand how to incorporate his experience as an EMT in his paramedic education. Roy identifies becoming a paramedic with an aspect of heroism where he seems to be aware of the downsides of practice but is willing to provide care anyhow. In this conversation, his voice took on a quality of what I interpreted to be confidence or reverence, and his posture changed to a more upright and forward-sitting stance.

Well it’s still a huge leap of faith, there is such a huge difference between what you can do as an EMT and what you can do as a paramedic. I mean it helps you with the basic stuff but unless you have an open mind, and are ready to absorb and that technically it’s a huge step from what you were doing before, then you will probably flounder at it. The medics who soak up all they can from the experience as an EMT have a pretty good idea about the job, they know that at some point soon they will get pissed on, puked on, and
have to lift heavy people, so that they have their eyes wide open, they know some of the huge downside of this job.

Roy identifies the role of a paramedic as one of being present for the vulnerable patient in their time of need. I wonder if his feelings of satisfaction at doing a good job are linked to his interpretation of the social contract in place between paramedics and society, that we are there for others, the patient, no matter what, or for how long.

I have had a few thirty-six hour stretches; I mean you do get tired and sometimes a little frustrated. But at the end of it all you know you sit back and say “Yeah well, we got our asses handed to us, but it was fun.” We say, “Well you know, we had one of those tours,” but at the end of it, that was cool. You know, you get tired and all that stuff when it is happening but when you sit back and you look at it, when I drive home I think that was fun, it was [a] busy tour but it was fun. You have to have the ability to do more than two things at once, and keep it straight in your head. You have to have the ability to size up a scene really quickly, and determine what needs to be done and not done. You have to be able to look at a crisis situation without getting panicky yourself. When your eyes start getting big you have to be able to calmly walk into it and do what you do. Sometimes in those calls my brain feels like it’s a hamster on a wheel.

Roy believes that the drills and scenario practices from his paramedic education program have enabled him to practice competently today. In the next story, he is referring to the repetitive and procedural learning that occurs in the classroom setting where individual skills are practiced multiple times and peers reviewed. The paramedic skills are reduced to procedure steps outlined in a skills checklist, and students are expected to follow the steps in the order provided.
I am glad we did so many drills. We spent so much time practicing scenarios with each other—I mean, you had to or you wouldn’t be successful. I know that all the times I spent practicing and doing scenarios helped, I don’t know how many times I practiced putting on the ECG pacing pads and leads, it must have been drilled into my head because the first time I had a patient that needed pacing I just grabbed the monitor and applied the leads and pads. I knew which buttons to push to start the pacing and it was like I had done this my whole life, even though it was the first time and it had been such a long time since I had practiced or even thought about pacing a bradycardia patient. We just hadn’t seen one until then, not even on my practicum. It was the same thing when I first did an RSI in the field. You know we practiced this procedure so many times in school, even when I wasn’t sure if we should do an RSI I was clear about how to manage the steps and what the dosages were without looking at a chart or something. All the little tidbits and advice other paramedics gave me about RSI was helpful, I can rely on that because it’s coming from their experience and not just a textbook.

Roy’s story emphasizes that education is more than just learning skills. Roy considers the knowledge, those “tidbits” shared by other paramedics and preceptors to have affected his learning in a more pragmatic way. He values the advice that he receives from colleagues about their similar practice experiences and links this with his ability to practice well. There is significant value placed on the practice knowledge that is shared by other paramedics, the “pearls of wisdom” that are not made available in the classroom.

When Roy considers some of the learning moments that came from watching and doing with others, he recognizes how he values learning in that way:
Like the first time I actually gave Narcan to a narcotic overdose, I remembered to give small dosages so that I don’t wake them up too fast and they get violent on me. I remember being told that often these patients will have severe shivering afterwards, and sure enough that’s what I saw. I was pretty happy that I could remember all those tidbits of information and compare that with the pharmacology information I learned in school and have such a positive outcome. It is our instructor’s experience that helps us, because they are still working in the field, so having their knowledge available well that teaches us these subtle nuances of patient care. I checked, and nothing in our textbooks or schoolwork said anything about this type of patient shivering as a symptom in this specific situation. I felt good about this call. It’s this type of thing that I make sure I share with my students so they know too.

When Roy imagines his future practice, he is able to see himself as the embodiment of a calm, knowledgeable, and professional paramedic who can demonstrate leadership and expertise to those around him. Portraying a calm and controlled demeanour is linked to what paramedics consider part of their role. Respect from colleagues and action from co-workers comes to those who can take charge and manage the environment with a calm and clear voice. Those paramedics who present with a waver in their voice, with a quiet voice, or with a shaky hand when starting an intravenous are taken less seriously. It is not intentionally taught in the education programs; there is no competency or criteria for assessing this aspect of becoming a paramedic. But ask all paramedics, and they will define the moment or the call when thereafter they became confident because they were able to appear calm and in control. Roy notices how he has changed over time as a result of his practice experiences:
My new partners sometimes ask me about this, I mean I have experienced a lot now. I have now done many RSIs and intubations in the field. I have experienced so much both professionally and personally, and maybe that’s part of it. I know when I am not sure of things in a call I just revert to the basics and start from the beginning again. I feel that my clinical knowledge and judgement is improving over time. Being a paramedic feels just as natural as waking up to me now. There are times when, you know, I am screaming in terror on the inside but appearing calm on the outside. Partners, patients, and bystanders rely on me to be able to be calm no matter what is happening.

How others view and appreciate his wisdom and knowledge, even if sometimes he is not completely sure how to proceed with patient care, is important to Roy. He sees where he can positively influence the next generation. This is something he takes seriously and feels he is worthy of doing. Roy has a clear image of what a professional portrayal of himself looks like; how his uniform looks, what his office looks like—with all of it he wants to meet the expectations he thinks both the public and his co-workers have of him. His identity as a paramedic is very important to him and represents a particular social standing and significance in the paramedic community.

I don’t think I was taught that in school but it seems obvious to me that this is part of a professional approach. I mean I know we can’t expect to have a sterile truck and uniform [all the time] but we should keep as clean as possible, especially with what goes on in there. And we spend so much of our time in there. I think of it as my mobile office. I think it is important to have a clean truck, a clean uniform that is neat and tidy, clean fingernails and hair. I know I make sure that my truck is always clean, and not just superficially clean, but I take it apart and empty the cupboards and kits, remove the
stretcher bars and actually scrub the floor with a brush. I do get laughed at sometimes, but how we keep our environment clean is important. You know the last thing I want to do is contaminate another patient or my partner with body fluids from someone else, that’s just wrong to me. I know not everyone sees it the same as I do, and that’s okay because not everyone has the same vision of professionalism as I do. Certainly practicing as a paramedic is not for everyone. It’s unique, and people always tell me that “Oh, I couldn’t do that job,” and to me that is kind of neat—that I can do something that’s helpful to others that no one else can. I can make a difference to the patient. To me managing an airway in the pre-hospital field for someone is bringing them the next level of care they wouldn’t get if I wasn’t there. It means that the patient gets quicker care and the ER team can move on to the next treatment even faster if I have done my job. We can actually prevent further damage from occurring sometimes, like in the care of a Rapid Sequence Induction (RSI). I like that.

Roy presents a story about the place where practice happens, in the ambulance. This place in the ambulance is unique; paramedics call it “the office” where the work happens. This mobile office is unique in that the space is limited, equipment is finite, temperature and lighting matters, and this entire place is an extension of the paramedic, the tools to complete the job of patient care. Roy views the ambulance as an extension of him and therefore wants to ensure it is clean and presentable.

**Nigel**

Nigel was born in South Africa and came to Canada when he was 13. He graduated from his paramedic program in 2013 and works in rural Alberta with a service that provides advanced life support. We met several times over the summer. During our conversations, we followed
what Nigel wanted to discuss at the time. We discussed the topic of preceptors very early on and returned to it many times:

The preceptor thing, it drives me nuts. The whole preceptor model that we have, or, really, we don’t have a model [sic] and it drives me nuts, frustrates the hell out of me.
You know we don’t have a teaching model, and I am fully well aware of that. My experience was that I had two preceptors on the same shift and I would get different stories from them. One preceptor would say “I really think you should know this.” The other one would say “This is what I want to see,” and it was completely different. It wasn’t objective. So one of them was wrong and I really had to bite my tongue in these cases. I don’t care, that’s crap, that’s not fair, that’s not right at all; it’s indecent.
When I was a student my preceptors were also my friends and colleagues. I found it was a constant struggle because they were precepting to their own individual standards and not to an accepted standard. I really think if they understood teaching or learning they would be able to objectively understand and evaluate my performance consistently. I really felt it was not that way and I couldn’t say “Well no, that isn’t what you want to see, what you want to see is what the school wants me to do.” I should be able to follow a skill or do something to the expectations and standards identified by the school, not what the preceptor thinks, not the exact way they might do it in practice. A preceptor should know what the school defines as a standard and how it is to be evaluated.
I am still not sure if I have total belief in the practicum placements and what we are trying to accomplish in those settings. What we evaluate in practicum can be done during class more consistently and fairly. It should be black and white, what the school thinks; there should be no room for preceptor interpretation. I mean, there is so much more to
preceptorship than what you can really write about, it is really a soft process. You have to have some training in how to be a good educator in practice. I think teaching is teaching, I mean it’s a skill and if I understand the fundamentals of teaching then I can use that. And being a paramedic is another skill. So I can use those skills in collaboration to teach about paramedicine.

Nigel goes on to compare his first practicum experiences where he was placed as a student with his friends and colleagues with the experiences he had during his second practicum where he was not familiar with the setting or preceptors. The inconsistencies are significant in terms of preceptor expectations and learning in the different settings. For the second practicum placement, he was placed in a different rural setting with preceptors he had not met before. The service operated to provide care specifically to a First Nations community. He found this very different than his previous experiences, in terms of his relationship with the preceptors, the types of calls, and his experiences with patients:

When I was on practicum, initially I was forced to run a call the way my preceptor wanted, which always had to be in a linear fashion. I had to verbalize everything before, or while I was doing this or that. But then I went to this other practicum placement location and I didn’t have to do that. In fact the preceptors wouldn’t know how to run a linear call and didn’t need me to verbalize anything except when I was engaging with the patient. It was amazing; I had such a good time. You know if that place wasn’t so far away I would want to work there full-time instead of where I am now. I was allowed to run the call the way it occurred, maybe because of the clientele there. It was so bizarre and different, and so much fun.
As a student it gave me a lot more confidence because I was able to approach things the way I saw them. My approach was being validated directly and indirectly because what I was doing was working. I achieved my end goal of communication, assessment, and treatment and to have permission to find my own way instead of the preceptor’s way, which I would then have to relearn. My preceptors were never sure how things were going to work out. You know, they were great, they told me to run the call however I want, that they would be ok with that. You know as a professional I was glad to hear that finally. I think learning in this way makes you become a better paramedic.

Nigel’s story of the inconsistencies in the expectations preceptors have and how preceptors evaluate their students evokes my story of realizing the relational space when my preceptor used a talk-out-loud technique with me, to help me learn how to think and act during a pediatric emergency. We discussed both of our stories and considered how different our experiences were. This led us to a conversation about what makes a good paramedic or bad paramedic. Nigel believes that a good paramedic does not necessarily make a good preceptor. His relationships with preceptors were frequently complicated, as illustrated in the next story:

I cringe at telling this story now because I know better. I know about the evidence that indicates paramedics can have a significant impact on pain management for patients and that it is possible to make patients pain decrease if we “care” for them, so we can have a significant impact. It is about pain management for some of the patients who call us for their chronic pain. I have [sic] had this patient who called us at 0200 hours for pain management. I found myself telling my preceptor that this patient was “seeking” and perhaps no medications are required. You know I am not sure what I would have done if I was by myself, not a student with a preceptor. I remember almost wanting to impress my
preceptor by making an informed decision by evaluating this patient and I think I wanted to be seen as having superior knowledge so I said, “This patient is a seeker and we should withhold narcotics.” I felt like I had to negotiate every action as a student. I was looking to pass my practicum so I needed to be sure the preceptor knows or thinks that I fit their standards and values. But I know [now] that I am not qualified to say “No, you are seeker.” If you tell me you have pain then you have pain.

I see pain management as the same as any other type of conditions that should be treated. Like if a patient is bradycardic, we would treat that without much issue, but when it [sic] 7/10 pain, for some reason we wonder if it’s true pain or not, and then make a judgement. I don’t know why that is, I don’t do that now in practice, but I had to do that when I was a student. I think it’s all about ego that a paramedic will judge whether the patient is seeking pain medications or is considered to be authentically in pain. Maybe it is because it is in our control to provide narcotics or not, and if the patient is deemed to be seeking then we say “no,” they don’t get pain medications.

Current curricula include communications; however, Nigel feels the topic was not given enough attention in the program he attended. This discussion makes me wonder about the other experiences and education paramedics bring to their education and practice. His background in counselling young adults allowed him greater insight into the topic and perhaps greater ability to appreciate the creation of a relational space with this patient and his preceptors. His next story suggests his developing concept of being in relation to others in practice,

_This thought just jumped into my head as we were talking. I hadn’t really thought about bringing any counseling skills into our program but Christ, doesn’t that make a lot of sense? Communications is such a big part of our job, why don’t we learn it from the_
experts and bring in some counsellors and teach us how to listen to someone? Soft skills are very important to what we do. I learned the counselling part during my post-grad degree, where I had to complete the online and in-class work and then practice as a counsellor. It’s just about talking to people. It’s a very powerful thing.

On practicum my preceptor and I had a psych patient, and she was a lady who had a duck, and she wanted to take this duck with her to the hospital. It was a stuffy duck. While I was evaluating her—I had already evaluated her from a safety aspect and I was safe—I would ask her a question, and there would be silence, she would not answer right away. I would use the silence and just wait. But my preceptor told me it was a bad assessment that I did because I should know the questions to ask and should be able to ask them faster. He said, “We see them’ all the time and you should know what to ask her.” I said I was using silence as the perfect assessment skill and he replied that no, we don’t have time for that. He said I need[ed] to complete the assessment faster and get other assessments like a 12-lead done. I said, “Well, she is a psych so we need to talk to her, let’s talk to her before we do an assessment, let’s spend some with this patient.” I said, “You are right, she needs an assessment and needs to go to the hospital but, we need to talk to her first.”

I had never run into that kind of philosophy before, you know we need to practice the art of paramedicine. But maybe we don’t have the art of communication. It’s something we need to improve. I really try to listen and try to build rapport with the patient. My counselling education taught me an amazing amount of listening skills and I think it’s the biggest skill we can cultivate. I mean we just sit in a room and talk to a patient, ask a question, and wait for the answer. Wait and wait—eventually they will answer.
Nigel’s story as a preceptor indicates he has a different way of approaching this role based on his own experiences as a student. He wants students to think, to form their own approaches to dealing with situations. When he considers his own progression as a preceptor and he imagines himself as more of a facilitator for the student to develop critical thinking and learning processes on his or her own.

As a preceptor now, I tell the student that they can run the call however they want. I tell them that you have to run the call the way you need to run the call and that it’s up to them, but you have to pass [the practicum]. I don’t want to influence how the student might run the call. If they really feel the need to touch the chest first and it makes sense, it’s logical, then I am okay with that approach. Students have to use some thought processes that seem right, to think about what they are doing, and do what is right. Not necessarily because it is listed as the next step in the protocol or alphabet. Some students are certainly relieved when I say that.

Now I have developed my own way of running a call and I cannot do it the way my preceptors and school taught me. I really struggle with running the calls in a school scenario-type way where my preceptor would insist I have to start with the ABCs, and then check the head, and then the breathing. I had to verbalize the scene assessment out loud and I had to be really good at verbalizing this out loud to the preceptor in front of the patient while I am assessing the patient. This was always embarrassing. You know sometimes I didn’t need to check the mouth because the patient was speaking to me, I could see nothing was in there that the patient was breathing, so why would I talk out loud about how I am checking the mouth for foreign objects? I felt stupid when this happened. I know by the time I have taken four steps towards the patient that I can see
her mouth was clear and she was speaking to me, but my preceptor needed me to say her mouth was clear, so I did.

I had already thought about it and confirmed for my own assessment that the patient did not have an airway problem, so even if I didn’t think about it, she was still speaking and I would have recognized if she had an airway obstruction, or issue with airway, because she would have looked different. So you know part of my overview of the patient takes that into account upon first look, so I had already completed the assessment and didn’t need to say it out loud. But that’s how we are all taught to do this job—verbalize your way through a scenario. It’s more like we are doing this approach to make easy for the evaluator or preceptor because you know the saying, “if you don’t say it you didn’t do it.” This drives me crazy, because I can always just look at the patient and I know to look at the patient to see if they are sick or not sick.

During one of our conversations, we began discussing the ways in which Nigel views himself differently now because he is a paramedic.

I know that research says that working in EMS changes our personalities. That it changes the way that we deal with situations and I certainly agree with that. I know that practice in EMS has changed who I am and has impacted me as an individual. I am different because I am a paramedic now. I mean a lot of us say that paramedics are aggressive and even arrogant to a degree, I haven’t used the A-type personality title but maybe we are a different breed. We train in a very particular way when we learn to make decisions; we learn that we have to fix things, to lead, to control, to be aggressive. That does stay with us—we take that into the rest of our lives and our work ethics. I wonder
about myself as a paramedic, and how I might be different if we changed our education and approached it differently.

Nigel suggests he has developed a command and control approach in order to manage paramedic situations that now spill over into his personal character. In the discussion, I sense he is conflicted, that perhaps his morals and values are sometimes challenged during practice between what he should do and what he wants to do.

In many ways my courses, the education experiences in the paramedic program, are only about “doing”; they are about skills and specific knowledge. I really struggle to think of something from the education program that helped me to deal with different cultures and approaches. We did a course where we did some public speaking, but nothing really that provided any information about how to deal with people or understand another culture. We did some module work and had to deliver a presentation about communication. I mean these are identified in our competency profile and they get signed off on every call so I am not sure preceptors, educators and students even understand what this means.

I think about some of my experiences in rural areas where the patient presentation and reason we get called there are [sic] just so random, their stories are so different. You know the reason they call might be for a dog bite, but the home will be full of people who might all be drinking, they will drink right in front of you. Someone may decide to tell you about their nephew bitten by a dog last week but is fine now. Family members and bystanders will just butt in and talk about something else. It’s very different; you can’t run these calls using a regimented framework or have an attitude about when they should answer your questions. I think we are forced to adapt our approach because of who these folks are and the system in which we all find ourselves out there, it’s all fluid. School
doesn’t help with this because it is very much about procedural tasks, and that “this is the equipment, this is the truck.” If we are truly about listening to patients, then why don’t we?

Nigel considers his story of living as a paramedic delivering a patient to the emergency department where other members of the health care team are waiting to receive patients. We have a little chuckle together, recounting our dealings when interacting with the triage nurse and we slip into the common lament amongst paramedics: “It goes like this: One paramedic who is pretending to be the triage nurse will say to other, sooo . . . why’d ya bring ‘im here? And the other paramedic will answer with: Well that big fuckin’ ‘H’ on your door made me do it!” This is a story often heard in the hospital hallway between paramedics having to wait to transfer patient care to the hospital staff. We then move on to discuss how it feels to hand over patients to emergency department nurses:

One thing that still makes me wonder is the patient handover. You know, I am never sure how this should go because I am not really sure what they want to hear. Some want to know everything, and some don’t want to hear from me, or to know anything about what I know about the patient. They don’t give a shit about what I am saying. It feels like I am talking for the sake of talking. You know I hate calling information patches in to the hospital, if we pick a patient up and need to let them know, I will give them less than 10 seconds of information. I know this is different than my partners who will give them a full-on two minute information patch. But then when we get there I am saying the same thing over again, and they don’t want to hear it, and really don’t need to because nothing has changed in the last two minutes.
Alex

Alex shares his story of practice within an urban integrated fire and emergency medical services agency. There are a number of such services in Alberta, requiring paramedics to be proficient in structural firefighting and rescue, as well as providing advanced life support. Alex does patient care and is also able to operate any of the fire apparatuses as well as the ambulance. While he has different roles for firefighting, rescue, and patient care and transport, on any given call, his role can change depending on the nature of the emergency and the available resources. Working in this type of agency meant that Alex was a new paramedic and a new firefighter. He has to know how to set up a hydrant, take a charged line up the stairs, or complete a primary search, and know how to provide care for patients.

*That’s one of my critiques of the combined services. There needs to be a clear distinction between roles when both fire and EMS are on-scene. It seems quite bizarre to me that when I am on-scene, and I am ready to intubate or start an IV, I can have a captain with his helmet on, stick his head in the car and say that we needed to have left five minutes ago. “Hurry up. Go, Go.” They have no idea what our treatment plan is, they have no knowledge of the patient, but they are still my commanding officer. So do I follow what they say? Or do I sacrifice patient care to follow their orders? There is no clear definition. It’s all based on what the fire service have done in the past and depends on my officer and who my partner is that day. I don’t think I have compromised patient care to follow an order, but there have been numerous times where I have altered my treatment plan on a commanding officers direct order to “hurry up and leave the scene.” And nine times out of ten that order is to leave now, as opposed to wait 30 seconds to secure the
airway, or wait 30 seconds to get access or things like that, that’s the number one order we receive.

Having a dual role as a paramedic and firefighter lends an additional dimension to the learning process. The hierarchal chain of command in combined services creates tensions for paramedic practice in a medical emergency. Alex’s story of learning in his education program focuses primarily on the social interactions he experienced with preceptors and educators—technical knowledge and skills do not seem to be as important a part of his story. Achieving academic success in school was easy, and he considers himself a good learner, and a hard worker, so he expects that if he puts in the work, he’ll get good results. The conversation returns often to the experiences he had with his preceptors in the practical portions of his program:

It was difficult, not so much with the material or the knowledge, but in no way shape or form do I want to toot my own horn. Learning new material in the classroom was not a big struggle, but dealing with preceptors and dealing with their different attitudes was the most difficult issue I had during school—dealing with the negative preceptors when there are issues on practicum. You know, as a student you kind of have to have the mentality of keeping your mouth shut, to just get through it. Often when I would approach practicum coordinators, you know, or who I would see as mentors, with my issues, that’s the exact advice I would get is to: keep your mouth shut, get through it, and then when you are your own medic you can do and say more or less whatever you want. That was the carrot that was dangled in front of me through practicum.

We discussed Alex’s interactions with preceptors during school and the positioning of the student within the hierarchal structures of the EMS, firefighting, and the broader health care system.
I find I am still challenged with the same things as when I was a student. But now that I am my own practitioner I have a leg to stand on if I want to stand up and confront those issues. This can cause some difficulties down the road, but if I need to deal with that situation as a necessary evil then fine.

Yeah, after my rookie year at a service that did roughly 200,000 calls a year, to rural Alberta where there were 13 calls every 24–48 hours. It was a big adjustment. The long transport times, well, we never had to do any of that in the city, as well dealing with a much smaller privately owned service. I mean, the urban service was a privately-owned service but it was big enough that I never really knew any of the managers or owners or dealt with them on a regular basis. Whereas in rural Alberta the owner of the service and it was a small enough service and town that I would see them often and do calls with them on a daily basis. Any complaints or issues were taken directly to the manager or owner by text, or swinging by their place after work, and so that was a little bit of an adjustment too.

Alex also had to figure out a way to manage his approach to particular populations or call types when not in agreement with how his preceptors would manage similar calls. He found it very difficult to navigate the differences he had with his own values compared to his preceptors,

Dealing with preceptors with different attitudes or different views towards certain patient populations, the managerial conflicts, the constant staffing conflicts, and poor attitudes towards students was difficult in school. There’s lots of burnout and stress. You know, people who maybe should not be in a leadership or preceptorship role and yet they found themselves in that role whether they wanted it or not. That was most difficult navigating, that made the practicum much more difficult than actually doing the calls.
The experiences during his practicum placement shaped how Alex concerns himself with continued learning activities and making sure he stays current:

*Getting the hands-on experience was great. Because of my experiences on practicum, it influenced the way I practice now. I am five years into my career and without being presumptuous—this is typically the time that paramedics get a little lazy. Maybe that’s to be expected with a certain number of years on the job, but I find after five years that my professionalism and attitude hasn’t suffered one ounce, that’s something I am proud of. I have managed to avoid that common slip I see other paramedics experiencing. I don’t think that’s because I am any more of a professional, or diligent, or more competent than anyone else, I just think it’s my practicum experience that showed me what I don’t want to turn into in my career.*

**Mark**

Mark has been practicing as a paramedic for 3 years and prior to that he worked as an EMT for 6 years rounding out a decade of practice. Mark speaks passionately about improving his practice and links learning to helping him achieve improved practice. Specifically, he views education as being critical to improving practice.

*Some of what I learned in my paramedic education program is flat out wrong and I learned that the hard way in the field. Maybe it’s because of the lag time [between research and curricula changes] or that by the time we learn it the textbook information is more than five years old, and usually out of date. [But] we have no way of knowing that until we compare in the field, our system is so slow and inefficient when it comes to transferring knowledge or new evidence into practice. We don’t even know what research is being looked at until some doctor in ER tells us about it. Like when it comes to trauma*
information, it was drilled into me that the patient who looks stable, is stable. But in the case of major trauma we know now that’s not necessarily true as much as it is true. They don’t see the patients when we see them out in the field and so it is different in this respect to what they teach us and tell us in school about trauma. I don’t want to be wrong because this has implications for my patient and my practice, so what I want to do is reinforce the fact that what I do know is correct.

Alongside Mark’s story I bring my story of being frustrated with what teachings from the classroom being very different and irrelevant to practice. Together we recollect how the education program Mark attended did not have a current and relevant curriculum regarding the interpretation of evidence surrounding trauma treatment. His experience was that in order to be successful in the program he had to treat patients according to the interpretation his preceptors had about trauma care, when in fact new evidence was available to indicate alternate and improved treatment. Now he is able to review the evidence for himself with the benefit of practice experience and implement treatment according to his interpretation.

Mark shares that he is going to complete an undergraduate degree in health sciences to improve his knowledge for practice. He has mapped out his program and is completing his prerequisites via distance learning at Open University. He plans to apply to the Bachelors of Health Science program at Sienna College. He continues with his story of choosing paramedic education:

I thought I would give wild-land firefighting a try, and I did, but I needed something to do in the winter. So I completed the advanced wilderness first aid program and enjoyed the program, I found all of this was oddly intertwined and interesting to me. I stayed busy in the summer with the firefighting, and then did ski patrol at the ski hill during the winter.
It was at the ski hill where I really encountered experiences truly like paramedicine. I found I was able to be objective and manage other people’s emergencies, like trauma management. When the patients were sick or injured, I found I was just good at managing their care; it just seemed to go well. So with the money from firefighting I applied it to the cost of the EMR program and then was able to work in the industrial sector at this level. I found that the EMR program was interesting, my marks throughout were really high, which reflected my interest; I really enjoyed the learning. Taking the EMT program seemed to be the next natural step and I did really well at that too.

When Mark considers his understanding of the correlation between his good or average marks and his level of interest in the subject matter, he sees the value in pursuing interests and passion over extra credentials. This allowed him to try out other career options in firefighting and ski patrol, which eventually led him to paramedicine. Wild-land firefighters or smoke-jumpers are seasonal workers who wander the province looking for high fire hazard areas, and protect them if fire breaks out by dropping teams from helicopters and dousing flames on the ground. Wild-land firefighting is a team-oriented, risky business. And while Mark found he was good at the job, it was not a solid career option.

Mark sees himself as an adult learner who is internally motivated. Inherent motivation and self-directed learning are considered to be key aspects of a humanistic education paradigm (Elias & Merriam, 2005) that also includes development of the whole person not just the behaviours they enact. By the time Mark completed the EMT program, he was married and considering his long-term career plans. He began a full-time job as an EMT with a rural ground ambulance service providing care to a First Nations community. Mark links his practice experiences in this job with furthering his education as a paramedic. He describes how
encounters with squalor, ignorance and illiteracy, abusive family situations, and a culture of violence made him realize that instead of just managing the illness and injuries he encountered, he had to manage the social and cultural issues as well.

You know when I was an EMT and trying to decide what my next career move was I went to South America for a few months to take a break. When I came back I was offered a job with the tribe and decided to work on a reserve as they are constantly looking for people — that was where I really started working emergency services. It was a very different. I think it is actually mildly entertaining and also a little sad that it was my travels in South America that actually prepared me for working on the reserve. Quite a statement, but it really is the truth. All of the characterization of the squalor and the indigenous culture I experienced in South America, it was very similar to experiencing work on the reserve. I saw a lot of violence, a lot of ignorance, a lot of, I won’t say illiteracy, but ah yeah but ignorance, poor education and abusive family situations – rural South America and foothills of the Rockies are very similar. It was there that I first learned instead of just managing the illness and injury of patients, that managing the social issues is also part of EMS. I was not taught that in school. I had lots of good calls, but there became many moral and ethical issues that became harder for me to manage there. I thought the answer was to learn more, so I was really immersed in the work that I was doing so I applied for the paramedic program.

Mark attributes these experiences as the motivation for him to continue learning. He enrolled in a paramedic program to be better prepared to provide appropriate care and manage the difficult moral and ethical issues in these practice environments. Taking the advice of a close friend and colleague, he began a distance education program.
I was starting to get really unhappy with working on the reserve, so I applied and got a job with the city of Boxtown, which for me was quite a step up. I thought the quality of mentorship and supervision as well as the opportunity to learn would be greater for me as a paramedic student. I wanted consistent mentorship and good practicum opportunities, and the ability to grow as a paramedic at work and during school. There were some very good practitioners I could have accessed at my job at the reserve, but there were also some less diligent individuals too, and I didn’t want to take a chance on turning out like the less diligent paramedics. I knew a place that had more paramedics would improve my own odds of learning from a good paramedic.

Becoming more aware of his expectations as a learner during his paramedic education program, Mark began to realize that other practice settings could be beneficial to his learning. He decided to leave the rural job and obtained employment as an EMT in a large urban emergency medical service. This led to a discussion about the moment when you graduate and become a paramedic. We agreed that this moment can be one of the most intimidating moments in your career; you cannot appear to be weak or unable to manage the situations that come your way. It is often the moment when you know that you may be weak in some areas but that as long as you can leave the impression you know what you are doing, then you are generally safe. If you behave in the expected manner, using the language of paramedicine, then the impression other practitioners have is that you are a good paramedic. He emphasizes the importance of sounding like other paramedics:

*I am not suggesting that I slacked off on the knowledge, because I do have a good knowledge base, but I do think forming an early impression is important, but it can also mask some deficiencies. I learned this during my practicum placements; that you*
definitely apply the core knowledge [from school] but you learn an entirely different set of skills and ways of managing things. It's not what I thought would be important when I was on practicum; practice is less clinical knowledge and application to just [call] management. Managing your environment, managing your patient, and managing your crew, and managing the exterior factors like the hospital you are going to. I found it's about the juggling act of keeping things moving to get your patient from one place to the next place without bad things happening.

Preceptors have an expectation of you and if you are able to exceed that expectation early then they have already built that. If they built that impression of you as a practitioner it makes it easier because you already have that momentum. I find a lot of what people expect from students is not doing the skills or even having the knowledge as such, but what they expect to see is call management, delegation, and assertiveness, which is what preceptors expected of me throughout my practicum placements.

Mark recognizes the point where he felt truly confident in his practice. It happened well after graduation and the completion of his licensure examination. He was not as confident or sure until he experienced this particular call:

I can tell you the actual call I did that made me realize, that made me a confident practitioner. It was basically that before this call it was round-eyed fear of being—doing—the wrong thing. So one call was basically that flipping point, where I have the knowledge to do what I need to do and you know it’s not all going to disappear when things get stressful. I knew that I wasn’t going to freeze and I knew I wasn’t going to do the wrong thing. I mean that was my personal tipping point in terms of going from an entry-level practitioner to a competent, confident practitioner. It was one of those calls
where I was the only paramedic on the ambulance. We get called to a chest pain call (we
don’t have the vital heart on the ambulance and we have been told that if we need it then
call for back-up, it was stressing me. So we get there and we have a 35-year-old big guy
who has obvious chest pain, he is clearly in pain, and he has that classic agitation. We
get him out to the ambulance, I am thinking he’s probably having a jammer, he looks
bad. I call for back-up with the vital heart kit. I get him on the monitor and I see it’s V-
tach, so I think, well okay, I have got a couple of good EMTs [partner and backup]. You
know, you think V-tach, cardiac arrest rhythm; I have already got the pads on. By then
back-up shows up with the other medics. They jump in my truck with the box of lytics and
he asks me about what’s going on with the patient and I say “Well, we have V-tach so I
am going to shock” and the medic says he looks sleepy, like he is altered consciousness,
and I say “Well yeah! I have just sedated him.” So I am preparing to shock, and then I
see it’s not working and I think Oh yeah I have to hit the button to charge the machine!
Then you know, boom, I do it and wait a couple of seconds, and ok good he’s in a sinus
rhythm now. He’s really sleepy, and that’s ok. That’s the kind of big call where I was like
“mhmm,” I think I can do this.

I recall my own experiences of graduating and completing the licensure examination and
then immediately moving into practice without any supports or transition time. I remember being
very unprepared for practice. The dominant story in paramedic education in Alberta is that the
significant time spent in practicum is provided for this very point, to learn how to practice
competently. However the scant literature indicates experiences are very different for each
student, and achieving prescribed competencies in practical settings does not ensure overall
competence.
Conclusion

The participants lived and told in stories are presented in Chapter Five. My voice is present in the weaving of their experiences together with my stories as we thought together with our stories, analyzing what it means to learn and to be a paramedic within the three dimensions of temporality, sociality, and place. These stories form the basis for further interpretive thinking presented in Chapter Five. As we exchanged our lived and told stories, aspects of paramedic narratives emerged, creating tensions and possibilities for paramedic teaching and learning. In Chapter Five, I explore relational ethics, tacit knowledge, and paramedic identity to reveal the converging aspects that shape paramedic learning.
Chapter Five: Living and Learning in the Midst of becoming a Paramedic

“Thinking with stories is a process in which we as thinkers do not so much work on narrative as take the radical step back, almost a return to childhood experience, of allowing narrative to work on us” (Morris, 2001, p. 200). In this chapter, I present a further analysis of thinking with the participant stories, where their stories converse in ways that illuminate further the meaning for the participants when they are learning to become a paramedic. My research puzzle focused on the concern of how learning experiences within the education programs in Alberta shape and prepare paramedics for their practice. Some of the original guiding questions contained within the puzzle included whether the curricula objectives in paramedic education programs differ across Alberta, if paramedics work to their full scope of practice, and if paramedics endeavour to become lifelong learners. These initial guiding questions are not directly answered in this dissertation because the participants’ stories focused on what was important to navigate their current practice context. When they reflected on their experiences of learning to become a paramedic, they focused on their experiences of managing the situation and the people, developing processes for thinking and acting through new and unique patient presentations and environments, and what their role as a paramedic entails.

In the course of this inquiry, certain stories resonate with the participants and me; they are what we live by; “they’re what give sense to our lives” (Bruner, 2002, p. 3). They are about the relational space that opens up when two paramedics interact to do care for the patient. These are the narratives by which meaning is given and that which shapes learning and practice experiences.

Previously in this dissertation I discussed the context that constitutes paramedic practice and related this to the current landscape of education program curricula. I have previously related
learning to practice as limited to the gap between the theory that is provided in the education program and the practice of paramedicine. The narratives in this section provide an opportunity to think differently about what knowledge for practice entails and therefore a shift to consider curriculum and pedagogy that better supports practice. In this chapter, I contend that learning to practice as a paramedic is to learn to do patient care, together, always with others, in relation to others.

**Resisting the Dominant Education Story in Paramedicine**

Dominant stories are those found in paramedic education and practice culture that serve as socially shared understanding about what people do in teaching and learning; the dominant story helps make sense of and justifies what educators, preceptors, and learners do (Macintyre, 1984). These stories that pervade as the normal way of doing things, the dominant way, can become so ingrained and accepted within teaching and learning experiences as to appear to represent reality.

The dominant education story is based on the notion that the outcomes-based education prepares the student for the complexities of judgement-based practice of paramedicine. The story is premised on developing knowing as a paramedic that is limited to objective and atomized learning opportunities with checkbox-driven assessments that lead teaching and learning activities to achieving minimum standards otherwise known as “striving for mediocrity” (Brawer 2009). Furthermore, this approach relies on paramedic preceptors to lead the routine and procedural learning of skills within the practicum placement components of the program, tasking the preceptor with the difficulty of managing what they themselves may not understand.

Counterstories undermine dominant stories. They are a subset of stories that are purposefully designed to resist the dominant story in order that the story can be re-told. This
re-telling of the dominant story allows the teller to include the details and moral aspects that are missing or are underplayed in the dominant story. The point of counterstories is to break up the pattern and resist being complicit in “the system of knowing others but never being known in return, [to] use the story to elicit recognition from the community” (Lindeman-Nelson, 1995, p. 35). Counterstories can be told anywhere and when this occurs it is possible to develop new understandings about the topic (Lindeman-Nelson, 1995).

The technical education program provided the participants in this study with the ability to do practice when practice is considered within the context of completing a particular assessment or application of a technical skill. While the knowledge and technical skill paramedics achieve is important, Alex, Mary, Roy, Nigel, and Mark counter the dominant education story with a different story that considers the relational aspects of learning and practice as most important to shaping their understanding as paramedics. The stories shared in this dissertation by the participants provide insight into the complex and relational aspects of practice that paramedics experience and provide the basis for this further analysis.

The participant stories in this inquiry pull apart the dominant story and reconstruct it with relational space as what shapes their learning. The learning narrative that features ethical action and being in relation to others challenges the notion that learning a technical skill solely constitutes becoming a paramedic. In this way, the participants develop stories of self-expression and self-definition that enable them to live and tell their stories of practice. These are what Lindeman-Nelson (1995) called “narrative acts of insubordination” (p. 8) that can create a space for new understandings about the topic. In this way, a counterstory can reconfigure a dominant story.
Paramedic education counterstories can reconfigure, or at least speak back to, a dominant story. The participant stories foreground the relational spaces where paramedics learn and practice. In this chapter, I present a counterstory to the current paramedic education program design and shift thinking about what it means to become a paramedic. This counterstory opens the opportunity to think about how paramedic practice may require multiple ways of knowing that are not addressed in an outcomes-based education design.

**Relational Ethics Narrative**

What emerges in this chapter is the counterstory to current education program design that shifts thinking about what it means to become a paramedic. This opens the opportunity to think about how practice may require multiple ways of knowing that is not addressed in an outcomes-based education design. In the participant stories, as well as my own, the idea arises that knowledge is contextual, practice is relational and much more than solely skills based.

Furthermore, this idea challenges the discussion regarding the theory–practice gap that traditionally has been “think then do” (Schon, 1983, p.47). Higgs (2010) said, “Thinking in doing,” (p. 1) suggests an improved approach to learning and integrating skills with thinking.

Thinking with participants’ stories within a three-dimensional narrative inquiry space challenges attempts to frame the discussion within the dominant story of the theory–practice gap. Understanding participants’ stories in this way would mean adding more competencies to the occupational profile that claims readiness for the complexities of practice. The lived and told stories of the participants in this narrative inquiry called for a different focus. Their stories foreground the relational spaces and places where paramedics learn and practice, and they suggest that the wisdom needed for practice rests in these places (Basso, 1996).
As the participants and I worked with these stories, we came to think about how becoming a paramedic encompasses much more than achievement of outcomes-based paramedic competencies or accumulation of abstract knowledge. Thinking with participants’ stories leads to a different understanding of paramedic education that learning to practice is to learn about doing patient care, together, always with and in relation to others. This different understanding of paramedic education is explicated below through the following narratives: relational ethics, tacit knowledge, and paramedic identity. These narratives are the alternative plotlines, or the counterstories, to dominant notions of how paramedics learn and I contend need to learn in order to practice paramedicine in their respective contexts. What emerges are multiple ways to think about relational ethics in paramedic education and the learning to practice and becoming a paramedic.

The participants focussed on the implications of interactions between themselves and others, such as the patient, the preceptors, and their co-workers within each of their stories and framed each interaction within an ethical relationship. Being in relation is further illuminated by the participants as they recalled how they became involved in the discipline and planned careers, how they chose education programs, what they experienced with their preceptors, and what they experienced during clinical practice with patients. It is within these spaces, they initially learn and continue to learn about who they are, what they know, and how to practice.

The nature of the educator and learner relationship has implications for the learner’s ability to construct knowledge, and it shapes understanding of what counts as knowledge (Thayer-Bacon, 1997). Paramedic knowledge is partially dependent on the strength of the relational space. This is important to patient safety as Wyatt’s (2012) small case study of three Australian paramedic students linked the importance of relational experiences when attempting
to gather and share information from multiple sources to make judgments in order to do patient care. Therefore how students experience their learning in relation to others shapes how they construct their knowledge and how they come to practice, which has direct implications to patient safety.

Bergum and Dossetor (2005) considered that educator/student relationships require both objective and subjective awareness where participants are aware of their thinking mind and their feeling body at the same time; that this embodied knowledge is fundamental to the experience of relating. Relational ethics are defined as “the flow that is made possible by a focus on the space between us” (Bergum & Dossetor, 2005, p. 4). Bergum (2003) considered the quality of relationships connected to “how we ought to treat each other in particular circumstances” (p. 8), as does Noddings (1984) who defined being ethical in relation to others as “actually honoring the social context of our actions” (p.15). These moments of relating to others in an ethical manner happen in concrete ways across the continuum of learning to practice as a student and later as a paramedic practitioner.

Being ethical then is acting out of concern for the other in the relationship, being generous in thinking, and being a receptive and active listener. Both unethical and ethical relational situations have had implications for Mark, Alex, Mary, Roy, and Nigel in their education and practice settings. Experiencing healthy relationships within teaching and learning is about ensuring the focus of each personal interaction on being ethical, acknowledging and honouring each other’s actions within the social context of learning. Gilligan’s (1982) and Noddings’s (1984) ethics of care inform this stance, where priority and privilege is given to the relationship(s) with others. Further, that connectedness, respect, and dignity are integral to relational ethics where caring is “rooted in receptivity, relatedness, and responsiveness”
In this, Bergum (2003) informed that our engagement with others must include a process of self-reflection, contemplation, openness, and comfortableness with uncertainty. The ethical actions undertaken by paramedics and students, then, can be generative, responsive, and instructive or inhibiting to teaching and learning.

In the following section, I present the converging narratives that emerged from thinking across the individual participant stories. I show how I have linked the converging points. The discussion includes the implications of relational ethics on teaching and learning experiences, and how paramedic identity and knowledge development is borne or delayed/destroyed by healthy and unhealthy relational actions. I theorize on the experience of participants from the lens of education and practice literature (Billett, 2010; Clandinin, 2006; Dewey, 1938; Higgs, 2010). In the final section, I present the paramedic narratives that feature paramedic identity and importance of tacit knowledge for practice.

**Implications of Relational Ethics for Participants**

Being in relation was and is, for Roy, somewhat different from that of Alex, Mary, and Nigel. Roy relates his ability to practice competently and with confidence directly to his relationship with his preceptors and colleagues when he was a student. Roy summarized his learning experiences with,

> You know I have had so many ‘wow’ moments doing patient care, where I have said a silent thank-you in my head to my preceptors, my co-workers and even other students, for the stuff they have shared that comes up when I am doing patient care. In my practicums I worked with some great people, who definitely had great attitudes and were patient when they needed to be, and gave guidance and instruction when you needed it. Just seeing how they did it—I have a lot of respect for it because taking on a student is not
easy. It changes the day-to-day stuff, you can’t do some of the stuff, you can’t do the hands on stuff that you can do when [you do not have a student] but seeing how I was treated, it was great. I have heard horror stories from others about preceptors but I never experienced that, so I consider myself fortunate. Just the way they handled themselves and how they dealt with me, I took a lot from that—to me I am saying this is the attitude I should project, whether I am precepting or just talking about a call with one of my students, there is a right approach and a wrong approach obviously, um, I you know saw what the right approach is.

Roy’s stories indicate positive outcomes resulting from well-developed relationships with his preceptors. He was able to find personal satisfaction and alignment of moral expectations with a preceptor he sees worthy of emulating. When Roy and I discussed this story, I was able to bring my own story of a preceptor exemplar alongside. The story of how my preceptor acted and talked out loud with a sick child helped me learn how to do practice. In these moments of convergence, it becomes apparent that these interactions have implications that are relevant to practice today. Roy went on to say,

During my final practicum I worked with a great paramedic who had a great attitude. He was very patient with me when I needed him to be and he was able to give me guidance and instruction when I asked. I have a lot of respect for my preceptor because taking on a student is not easy it changes all the day-to-day stuff. With a student, the preceptor can’t do some of the fun stuff; they have to let me do it so I learn. The preceptor has to let me do the hands on stuff when I am able and the patient needs it. Or my preceptor would just let me watch how they approached it to see their way too. I have heard the horror stories from other students and preceptors about their bad experiences but I never experienced
that. I was treated well, so I consider myself fortunate. I took a lot from how I was

treated, how my preceptors handled themselves in some situations.

Roy and his preceptor developed a respectful relationship that enabled a collaborative
approach to how they managed in the practicum setting. Heidegger (1977) offered insight into
the difficulties that educators may have and in particular those educators such as preceptors in
clinical settings. He said that

teaching is more difficult than learning because teaching calls for this: to let learn. . . .

The teacher is ahead of his apprentices in this alone, that he still has far more to learn
than they – he has to learn to let them learn . . . . We must keep our eyes fixed firmly on
the true relation between teacher and taught. (p. 356)

Roy’s preceptor was able to facilitate teaching based on having a healthy relationship
with Roy already in place; it seems they were able to develop a mutually acceptable space for
teaching and learning. Perhaps the preceptor was already aware of the aspects of relational
ethical actions within the relational space. It is unknown to both Roy and I whether the
preceptors in these stories had other education or if they understood the relational space or were
experienced in practice. We decided it was interesting that neither Roy nor I had asked our
preceptors what education, training, or qualifications they had; in both circumstances, we
accepted that they must be qualified because they were preceptors in the education system. The
notion that preceptors are experts in clinical practice and therefore can provide the practice
teaching for student paramedics is an entrenched approach in the current Alberta paramedic
education system. Students are placed with preceptors based on number of students and
availability of preceptors. There is no process for students to select or evaluate their preceptors in
particular settings or ask for specific qualifications.
Roy’s age was a factor in how his relationships and experiences developed with his preceptors as a student. Being closer to his preceptor’s age could be related to what Illeris (2009) considered to be gender or life age parameters that are important to learning opportunities. The common ground of life experience, gender, and work ethic that both Roy and his preceptor possessed were helpful in establishing their relationship quickly and perhaps more deeply, upon common ground. Furthermore, Roy thinks about how he is a part of the student–preceptor relationship with responsibilities to make the relationship work; therefore, he is able to navigate this aspect by learning about who his preceptor is and what is important to his preceptor. Roy relates how his age was important to his experience in developing a relationship with his preceptor, how Roy sees himself in relation to others, and how he thought this was a positive opportunity for him.

*I was older than the rest of the class when I went to paramedic school. You know, I am responsible and accountable, I don’t make foolish decisions, I am not lazy and I work hard to listen to what others say, including my preceptors and co-workers. So I worry about the kids who come into this profession and don’t even know about the day to day stuff. I have to supervise a few crews now and do calls, and I see a serious lack of knowledge with the young kids about how to get along in our business. I work hard to make good decisions to determine what is best for the patient. I worked hard to know my preceptor and understand where he was coming from.*

Social worlds are ordered, to some degree, around age, in that they can be constraining or enabling (Blaber, 2008). There are three ways age can be classified: chronological, biological, and social. Blaber (2008) identified that all age classifications are socially constructed and therefore are social divisions. These age divisions can be further associated with such dimensions
as gender and ethnicity. It may be that paramedic preceptors are better able to find common
ground with students depending on their respective age and gender. Roy’s story reveals how he
has changed as a practitioner of almost 5 years and how his experience helps him to manage the
difficult and scared patient who needs respiratory support and how this matters to both Roy and
the patient. Roy recognized his coming into relation with a patient is his practice, and how this
had direct implications on the care he was able to provide to the patient.

*Like this last respiratory distress call I had. It was hard to convince my patient, even
though he was gasping for air to allow me to cover his face with a CPAP mask. I happen
to know this was the first time he complied. Three other paramedics in previous calls
were not able to convince him, but I was able to and maybe it was just the right time. It
was the 3rd time we’d seen him in 3 weeks, so maybe he thought about that. So I got him
to take it and got him to relax and it started working.*

Roy is aware of the value in his ability to relate to others and the effect on patient care
during a critical event. His next story is about the patient from a motor vehicle collision who is
initially thought to be dead on arrival by the first responders who checked him and found no
pulse and critical injuries. But Roy is able to work with his partner to change the situation. He
presents the challenge of developing relations with colleagues and the emergency team.
Managing the people in the environment, making a space for the relational, to speak, listen, and
act together, sometimes in unison, and sometimes independently, is complex during an event
such as this. Often a paramedic will not know the other team members such as the police, first
responders, the air medical crew, and sometimes will have only met their partner that morning at
shift start.
I am thinking of that one stabbing we had, I mean we arrived and the cops had already pronounced this guy and I said well he’s not dead yet. Give us a couple of minutes. You know we almost turned the helicopter back before we arrived because the police had said this guy was a 32, well when we pulled him out of the car to actually take a look. I saw his finger twitch and said we have some work to do here. I mean I could have put my fist into the hole in his chest and abdomen; it was just wide open, right into his chest cavity. When I saw that I got on the radio and made sure the helicopter was coming. When the air-medical crew got there they said they had thought they were cancelled. So when I assessed this patient, he was a GCS 3 with a couple huge holes in him, his pressure was 60/40 by palpation. So by the time the other crew got on-scene with us, I had this guy’s pressure up to 110/80, by starting fluids and closing the holes. The patient started talking and he went from dead to not dead because of our care. I was talking with my partner afterwards and like he said, all this stuff is happening and we just go through it. So we got to work, my partner and I managed his airway with high flow oxygen and OPA, sealed the sucking chest wounds, started LB IVs and initiated a fluid bolus, got him on a backboard and applied a c-collar, elevated is legs, warmed him up, completed a secondary assessment. By the time the helicopter arrived we had our patient extricated and packaged for transport with a stable blood pressure, maintaining his own airway and started to respond verbally to commands. The patient went from dead to not dead. You know I am pretty sure I had a smile on my face while I am awash in this guy’s blood and guts, maybe that’s a quirk in paramedic genetic code, and I just dig it when I start to see the change in the patient blood pressure and LOC. It gets even better when the helicopter crew comes into my truck and says we were told this guy was a black so we
almost turned the helicopter back before we arrived and I say well clearly no, and he says well nice work—and I say here you go. These are the calls that I love, especially if there is a bunch of things I am looking to get done, you know you have to plan the steps and delegate the tasks. It still surprises me when it all works out like that.

Roy experiences professional satisfaction from engaging positively with co-workers during clinical interactions with patients. The implications of relational ethical action is shown as directly related to the quality of patient care and safety in Roy’s story. His ability to relate to the others had a positive effect on the patient’s entry into the health care continuum. I wonder what this experience does for Roy in terms of practice knowledge development. Bergum and Dossetor (2005) suggested, “being in relation and managing the relational space with mutual respect, engagement, embodiment and environment are key to knowledge development when in practice” (p. xxiii). When I think across the stories, the implications of relationships converge with Mary’s story of her experiences with preceptors.

Mary’s experiences with some of her preceptors may have interrupted her positive learning self-concept. Elias and Merriam (2005) suggested the impact of those who have previous negative learning experiences as a “delicate matter” (p.133) because they may develop a negative self-concept about their ability to learn and link this negative self-concept to future learning opportunities. Mary’s story reveals her self-concept of being a self-directed and motivated learner during secondary school where she was successful in home study and public school. But her positive self-concept story is in tension with her living as a paramedic student through her practicum placements. I looked to nursing scholarship in absence of paramedic literature to locate implications of nursing students who experience a negative relationship with their preceptor and subsequently find they have increased levels of stress during the practicum
placement. These negative experiences and increased stress impede their ability to learn and engage in the clinical environment. Yonge, Myrick, and Hasse (2002) found that negative relationships between nursing students and their preceptors affect how the students perceive their own roles as nurses and creates a sense of disillusionment related to the role. I wonder how Mary manages to reconcile the positive and negative self-concept concerns that arise as she shares in the next story what it means to her practice.

You know, for the longest time it was really a blow to my self-esteem, like I found it hard to work after that, because it was so out of left field. It shredded my self-esteem, and it was hard to come back from that. And I still see it, I mean its five years later and I will still do a call or something and it will just twinge. It took one call for me to look at myself as weak or poor, something I relate to my experiences with my preceptors. I don’t think they realize the impact they have on us.

The role of relational knowing is not found in current paramedic education scholarship. The nursing literature provides some insight regarding the influences of the relational interactions between preceptor–student roles when the teaching–learning process is limited to defining the preceptor as the teacher and the student as the learner (Cohen, 1994; Dracup & Bryan-Brown, 2004; Yonge, Myrick & Haase, 2002. Teaching and learning can be a reciprocal relationship where both participants can take on the role of teacher or learner, depending on the situation. This unidirectional approach to teaching and learning is similar in paramedicine with the paramedic having no requirement to negotiate with the student.

There is no available data to understand if paramedic students in Alberta experience having the same preceptor for the entire placement, how many times they change preceptors, and for what rationale. For example, Mary was not able to remain with her assigned preceptor as he
was often away from work, and therefore she was constantly meeting new preceptors. It was
difficult to form any lasting relationships during her second practicum placement due to the
multiple preceptors she was working with. In Mary’s case, she was unable to continue in the
placement with the same preceptor and found herself questioning her knowledge and ability to
practice. She managed to change and extend her practicum placement, which she describes in the
next story:

   But then Northtown Emergency Services took me in, and we did a five shift evaluation
   where they decided there wasn’t anything wrong with me. In fact my preceptors thought I
   was a strong student. I stayed there with those preceptors for another eight weeks to
   finish out my practicum to the point where they were comfortable passing me.

Relational ethics requires that both participants allow for the spaces where they can be
surprised, or disappointed, interrupted, or frightened and retain the questioning as a “way to
understand” (Bergum, 2003, p. 126) and “not as a way to doubt” (Caine, 2007, p. 94). I think the
participant stories and particularly Mark might have been lived differently if he had not had a
healthy relationship with his mentor. Mark shares his story of becoming a paramedic where he
includes his relationship with his mentor as influential in his deciding to pursue education and as
his resource now in practice. He and I discussed the aspect of becoming a paramedic and how in
our experience the education program does not prepare the student to do this, but does prepare a
paramedic to follow a procedure or routinized care plan. Our stories align here, as I shared with
him that I too had a mentor who initially helped me to understand why I wanted to pursue
paramedicine and whom I still turn to for help to understand my practice. Together we wondered
about alternate outcomes and what they might have been if we had not had this opportunity with
mentors. We wonder if we would have taken a different career path or whom we would have turned to for help in practice. Mark said,

*A friend of mine who’s been sort of a mentor, he is two years ahead of me in his career and he has been a shoulder to bounce things off of. I go to him for advice about everything, and in particular about paramedicine.*

Mark shares his expectations of his preceptor in that it is more than signing off of his competencies that he needs from the preceptor. That he could find the right conditions for being able to fully disclose his knowledge gaps, worries, and fears about learning the practice of paramedicine. He wished for more of a relationship that could help him learn who he needs to become as a paramedic while picking up the technical skills. He found his levels of participation in patient care during practicum were variable. He relates this directly to being dependent on the level or structure of his relationship with his preceptor (Michau et al., 2009). In Mark’s story, it is the relational space between him and his preceptor that requires as much care and development as the more abstract and theoretical knowledge, and the practical development of skills and techniques (Bergum, 2003). Mark said,

*Because it’s not simply about teaching paramedics, it’s about getting the best out of us and that rarely is about telling them what to do, and when to do it. I wish my preceptor was more about being a leader that focused on enabling me to do the best I can. That’s my sense of it. But then there is also the fact that practicums are not mentorships, in most paramedic’s eyes they are meant [as] evaluations. So for a student, for me the stress that comes along with constantly being evaluated and measured was intense. And I had a lot of cases where my preceptor was not giving good feedback about how I was doing. It’s extremely deflating and it is very stressful, not at all as productive as it could be.*
Mark’s learning experiences during paramedic education focus on the positive and negative interactions he experienced with his preceptor. Mark determined these relationships are important to his success in the program. He had a specific way he wanted his preceptor to be in relation with him and to see him in a certain way. This distinction by Mark is answered in the difference between behaviour changes versus development of his thinking process and insight. He has determined that his preceptors will concern themselves only with his overt behaviour, sounding like a paramedic by using the appropriate language. He is aware that he will not be challenged to provide his interpretation or insight necessarily, which he would prefer in order to help him understand if his internal processes of thinking are appropriate to the situation. I do wonder if at any point Mark felt able to discuss with any of his preceptors his needs as a learner and how this impacts his approach to being in relation to his students or colleagues. Mark said,

*I do think forming an early impression is important, but it can also mask some deficiencies. I learned this during my practicum placements; that you definitely apply the core knowledge but you learn an entirely different set of skills and ways of managing things. It’s not what I thought would be important when I was on practicum, practice is just management. I think they [preceptors] need to be more engaged in the whole process of preceptorship. My practice has been impacted by the preceptors who have had the appearance of standing off not giving any feedback, without it you don’t have a direction to go. If I don’t know what I need to change or what more importantly I should keep the same then I am always unsure.*

It is a difficult interaction to navigate—the relational space needs to provide a safe learning opportunity for Mark. As he continues, he reveals how stressful the situation with preceptors was for him. Without the full participation of his preceptor, he knows his
understanding of his own competence was difficult to achieve. When he recalls these events, he can position himself as having met the requirements of the discipline, which means he is part of the paramedic community now, but identifies himself as different from how he views his preceptors. Mark said,

*I think that level of stress is crazy. On the one hand it engenders very confident, self-sufficient practitioners because they have come through that crucible of fire. But by that same token there is an arrogance that comes with that, an exclusionary fraternity that thinks if you haven’t gone through what I have gone through then you are not as good [as me]. And I disagree with that; I don’t think that that elitism is valuable.*

As one of the team now, Mark has a different relationship now with his peers. In his story about practice, he lives in tension with his colleagues whom he sees as different from himself. I wonder if Mark is able to develop a community of practice in what he refers to as an environment of elitism and arrogance and how this implicates his ongoing learning and development.

Nigel has a negative perspective recalling experiences with preceptors. He feels he was forced to endure in negative relationships with negative consequences in order to complete the program. Nigel said,

*I really struggle with running the calls in a school-scenario type way where my preceptor would insist I have to start with the ABCs, and then check the head, and then the breathing. I had to verbalize the scene assessment out loud and I had to be really good at verbalizing this out loud to the preceptor in front of the patient while I am assessing the patient. This was always embarrassing.*
The relationships with preceptors were complex and were significant for Nigel in terms of developing his own approach to practice. Nigel places value in making a connection with the patient in a clinical relationship and views this as being linked to providing good patient care. He is concerned about cultural implications in practice whereby he sees himself as needing to have better understanding of cultural norms and how to address these considerations when in emergency situations for the benefit of the patient.

When Nigel was a casual paramedic acting as a preceptor, he experienced living in tension with other preceptors, which provides insight into his understanding of the preceptor role and how to relate to other preceptors ethically. Nigel requires something different from the student than her regular preceptor, and he focuses on this aspect in his thinking within his story. It’s interesting that Nigel presents this story in this way, that is, the relationship with the student is important to him:

*She was a little nervous for me to become her preceptor because I am the casual paramedic coming on to these shifts and she is the EMT student. I remember her telling me that I am not really like the rest of the preceptors. I didn’t understand this statement until much later, after she was complete [sic] her practicum that I learned she had been told by her full-time preceptor not to leave the kitchen.*

*Now I remember asking her if she wanted to come watch a movie with us and she said “No, no, I can’t, I have to study” and I told her she didn’t have to study all day. And because we had no calls and it was quiet to come watch a movie with us. Turns out her main preceptor had told her that because he had to do his practicum in the same way, then she wasn’t allowed to be in the common room with the crew. She wasn’t allowed to watch TV at all and had to study all the time in the kitchen.*
The strength of these relations is important to paramedics who are learning to manage their clinical and professional experiences. Because each experience is different, paramedics must be able to develop their own understanding of clinical practice and also collaborative practice (Bergum, 2003). The variability in patient presentations and practice settings are a difficult aspect of practice.

One significant consideration concerns understanding what pedagogical knowing would ensure preceptors could provide as an opportunity for the student to find their own path and way of knowing “not the pedagogues’ way” (Aoki, 1991, p. 45 cited in Bergum, 2003). It might be difficult for students and preceptors alike to manage this variability with the preceptor reliant upon their own tried and true approach, which becomes the easier path to take when an alternative way is unknown. Nigel lives this in his story of being a paramedic student:

Initially my preceptors were also my friends and colleagues and it was a constant struggle because they were using their own standards, right, not an accepted standard from the school or even industry. I really think if they understood teaching or learning they would be able to objectively evaluate my performance and help me understand where I was at. I really felt that was not that way, because I had two preceptors on the same shift and I would get different stories from them.

Slade (2007) found similar issues in that paramedic students were frustrated with the lack of teacher–trainer insight their preceptors had, because they have no requirement to have any education background or skill. These findings included the recommendation for preceptors to receive appropriate training in adult educational methods of teaching.

Behaving ethically in relation to others requires acting out of concern and consideration of and for them. This is not what Alex has experienced as he shares in his story of being in
relation with preceptors. Alex finds himself with unwilling preceptors who are unable to consider learning opportunities during the practicum setting. This does not support Alex’s learning needs and could be considered a mis-educative experience (Dewey, 1938). In this experience, Alex finds himself being socialized into a culture that is sanctioned by tradition and precedent. Perhaps these preceptors are portraying the role of paramedic preceptor as they understand it, which might be based on how they perceived their experiences as students with their preceptors.

*I have done time with preceptors, who within ten minutes of meeting [you] will tell how they hate students that they want nothing to do with students. They say, “You know, I went through it, so now you are going to go through it too, keep your mouth shut, do what I tell you and maybe I will sign you off.” I mean the fact that we are just giving students, year after year, to these preceptors, to me that is just unacceptable.*

During our conversation, Alex became quite agitated, his voice changed and he sat forward in his chair, wringing his hands. I respond to his emotion with images in my mind of living through my own anxiety and tension with the unethical actions I witnessed when I was a student. In bringing my story forward, together we talk through the similar events I experienced where my preceptor refused to acknowledge my name and told me that I was not going to make it as a paramedic anyhow, so knowing my name was a waste of time. I shared with Alex that at the time I was so shocked to be told that my name was unimportant. I recall exactly what my preceptor’s voice sounded like and what I felt when he told me I was just a student that would not make it through anyhow.

Alex shares his negative experiences in relation to preceptors and how this memory influences how he sees himself as a paramedic today. He was unable to develop a level of mutual
respect with his preceptors and this changes how he relates to other paramedics in practice now. Alex said,

*There’s lots of burnout and stress. You know, people who maybe should not be in a leadership or preceptorship role and yet they found themselves in that role whether they wanted it or not. That was most difficult navigating, that made the practicum much more difficult than actually doing the calls. I think I learned how not to be a preceptor in many cases. And you know, dealing with negative preceptors when there are issues on practicum as a student.*

*You have to develop the mentality of just keeping your mouth shut, to just getting through it. Even when I would approach my practicum co-ordinators, you know, or those who I would see as my mentors with my practicum problems, that’s the exact advice I would get. Just keep my mouth shut, get through it and then when I am the medic I can do and say more or less whatever I want. I find it confusing, especially when working on an ambulance paired with an EMT. I get told all the time it’s my show, it’s my ambulance, my call, I am 100% in charge and can do things 100% the way I want. That was kind of talk was the carrot that was dangled in front of me throughout practicum and now in practice. I have definitely had to implement that mentality many, many times throughout my career in practice.*

The role and relationship of the preceptor is something all paramedics will experience as a student learning to practice and then once in practice as a preceptor. Students and preceptors spend almost half of the education program length together in clinical settings. In Alberta, this is typically between 800 to 1,000 hours together that follows a regular work-shift pattern and is involved in providing direct patient care.
The relational space is the space that occurs between people during their interactions, where both the paramedic and the other meet to act. This is where “personal meaning is awakened and inherent knowledge is developed” (Gadow, 1980, p.181). However, paramedic students have a variety of experiences and relationships with preceptors that precipitate varied learning and evaluation outcomes during their practicum placements, which could have significant impact on the discipline (Boyle, Williams, Cooper, Adams, & Alford 2008).

When paramedic students are placed on practicum, they must learn to directly engage with patients to provide care, and therefore have the opportunity to learn and subsequently implement relational ethics within their practice. Trobec, Herbst, and Zvanut (2009) told us that these clinical relationships, between the practitioner and patient, must premise the assumptions of ethical relations where influence is inherent in the clinical relationship, the relevant factors are continuous, and all decisions are subjective.

**Learning to Embody Ethical Relations**

In order for practitioners to use a relational ethics approach, they must be able to recognize what is encompassed within this approach and be educated with the skills and competencies to provide this approach. Trobec et al. (2009) found that registered nurses with bachelor’s degrees who received formal education in ethics and legislation topics were much better at using relational ethics in clinical decision-making. Bergum (2003) explained that relational ethics requires careful teaching and learning with an eye to the ongoing development of all relationships over time, not just the simple or easy ones that encompass the particularity of each of the individuals. Presently, the education programs include a 4-hr lecture on Alberta emergency health legislation but no coursework includes topics related to ethical practice or moral actions.
Learning to think and behave ethically means paramedics need to understand the relational spaces that feature in their education and practice settings. Paramedics involved within this inquiry are aware through their own experiences of the value of the relational space and found what other researchers (Howes & Ritchie, 2002; Mercer & Littleton, 2010) provide as evidence:

That relational closeness is associated with the sharing of ideas, exchanging points of view, and a collective approach to challenging tasks. It seems that the development of close relationships, characterized by a sense of trust and mutuality, enhances learning.

(Mercer & Littleton, 2007, p. 28)

The relational space brings forth responsibilities for all those people living and acting in the space (Caine & Estefan, 2011). The responsibilities are based on being attentive to the other in the space by being present in the moment or situation and to offer a response that is pertinent and relevant to the interaction. In particular, preceptors and students often live within positional power imbalances because the preceptor holds the ability for facilitating learning opportunities and final competence evaluation. How the preceptor manages this positioning is dependent on his or her understanding of relational ethics and teaching ability, which is absent from the present curricula.

**Paramedic Identity**

The narrative that arose during further analysis of thinking across the stories features the concern of identity. Participant stories reveal the experiences of the multiple identities that entail being a paramedic student, becoming a paramedic, and taking on the role of a preceptor. Learning to become a paramedic means developing identity as a paramedic. Paramedics develop their identities in part during their education programs and as their careers progress in their
practice settings. They come to the role with different personal and professional identities that may influence how they develop; these varying identities are dependent on their other roles in society, which might include parent, neighbour, student or paramedic (Cohen, 1994; Goffman, 1963).

The sense of identity that a paramedic develops includes an idea about competent practice in that becoming a professional means “being in the world” (Schon, 1983, p.54) in a particular way. The definition of competence is therefore socially defined and leads to being identified as a professional. This is supported by Thayer-Bacon (1997) who says, “We develop a sense of self through our relationships with others, and we need a sense of self in order to become potential knowers” (p. 257). Therefore, paramedic identity is formed by and through students’ experiences and consists of a set of values, attitudes, ideas, knowledge, and skills (Hutchison & Shakespeare, 2010) that influences actions in practice. Specifically, how Alex, Roy, Mary, Nigel, and Mark identify themselves establishes their view of what they can do and how they know (Lindeman-Nelson, 1995). How they understand their own competence is therefore linked to their paramedic identity. The implications of this construct of self-conception are tied to trusting their own clinical capabilities, which can directly affect safe practice.

Wenger (2000) helped with understanding that when students are learning to practice, they must engage in complex negotiations and observations within their environment spending much of their time “developing and orchestrating their own professional identity” (p. 76). Furthermore, the three modes in which professionals identify with their landscapes are engagement, alignment, and imagining. These three modes reflect the processes of learning and identity formation as both a collective and individual interaction (Wenger, 2000). Included is a narrative of heroism that pervades the paramedic identity. Regardless of how Alex, Mark, Mary,
Roy, and Nigel arrived at becoming paramedics, the identity they embody is to be noble and help the vulnerable, to make an individual and specific difference to the patient in their time of need, and to advocate for the vulnerable patient within the health care system gaps.

They want to help people but are aware that there is a nasty side to this and they will be exposed to this and are still willing to do it. I mean we know that there is a downside to every call we go and that this is part and parcel of the job, yet we do it anyway. (Roy, Interview # 2)

Reid (2005) provided some insight in health care practitioners’ special commitment to altruism, beneficence, and duty to care regardless of risk. She called this heroism and defined it as a social contract between the professions in health and society at large. The health professions, including paramedics, face a common set of risks and psychological distress in the face of moral dilemmas. A dominant story is one of a supererogatory role where they consider that they have to go above and beyond the call of their duty to provide patient care. Storylines do not include the narrative of collaboration or system work, which is in fact what happens as paramedics need to be deployed and have a hospital or receiving facility in order to care for patients; therefore, they do not act alone but within a system of health or emergency response.

Alex provides his insight into how he recognizes his self-doubt and is able to progress through some stages to further develop his identity as a paramedic in the first few years of practice:

*My experience that first year you know, I had a lot of self-doubt, you know. I don’t know, you know how they say most people need to be type A, aggressive or assertive. I don’t think I need to be that way or am that way, so maybe that’s why it took a few years to find my footing, you know to be comfortable with myself. To become comfortable with*
asserting my voice, comfortable running a scene, giving orders if need be, dealing with co-workers, as far as that’s all concerned, it took me a few years to find my stride. As far as my knowledge and skill and competence on-car is concerned I think that has increased steadily and maybe that will plateau at some point. I don’t know.

Presently, Alex sees himself as more assertive and able be a patient advocate even when it is difficult. Alex can align himself in the patient advocate role and now understands what those boundaries entail. He is better able to understand what kind of patient care is relevant for the situations in which he finds himself in practice. Alex has a better understanding of relevant policy and procedure and is able to work along the boundaries of policy for the sake of the patient:

*I think the biggest part of that is assertiveness. With every single shift that goes by I get a little more comfortable with, a little more at ease with telling superior officers to stand down [laughs]. I hear what you are telling me sir, but we are going to intubate this patient on-scene. Come on, we are not ripping this patient to the hospital with no airway or no access just because. I know that a lot of that comes from the managers being off-car for a while and have not been active in patient care for maybe 20 years and they are older. So when a supervisor or commanding officer says things like “load and go,” I get a little weary now. I hear what you are saying, but I am doing patient care, it’s my PCR so the legal side is all on me. You know. I cannot write down that my captain said to go, so then I have to protect myself and protect the patient. At the end of the day if being a patient advocate gets me in trouble, well they aren’t going to fire me. I might get my hands slapped, that’s ok.*
Mark shares his experiences with collaborative learning when he participated in a course to learn to manage pediatric emergencies when helping in the emergency department. He was able to see how other health care team members develop and learn their roles on the team and how this appears different than his paramedic learning experience. He links his learning in this course with a different kind of identity that includes a more team-oriented and collaborative perspective. Mark is able to link his learning experience that focused on team approach and collaborative practice as changing his identity from autonomous practitioner to someone who utilizes the entire team to provide care to a sick child.

*It was interesting and a different experience altogether, a much kinder, gentler learning where we had some nurses in there as educators, there were flight medics and doctors, it was a very different learning environment where we all had to work together to learn how to treat pediatric emergencies. And as it goes in EMS, within two weeks I had a very sick 3yr old with Respiratory Syncytial Virus (RSV). My confidence was very much there, I was a calmer person during the call, inside for sure, I definitely felt that projected into the scene. And I was able to get the team that was on-scene to do more for me, so that things went very well for the patient. That’s just one example.*

A dominant story in paramedic identity includes the autonomous, aggressive, independent, and all-knowing caregiver who is in control of all aspects of patient care and what happens within these interactions. In my experience, sharing control of the scene or patient care can be a sensitive issue for paramedics, in particular in emergencies. Often paramedics believe they “require total control so that the environment in which they attempt to save lives be maximally efficient and predictable” (Larkin & Fowler, 2002, p. 900). Yet every paramedic
works with at least one other practitioner, usually an EMT, and has at their disposal other agencies for backup and help.

Larkin and Fowler (2002) have shown that many health care teams lack training that encompasses team-based learning and evaluation. They suggested that problems related to role delineation, leadership, conflict resolution, negotiation, and goal setting on behalf of the patient needs are due mostly to the lack of training. This is true in paramedicine as education focuses on individual evaluation, independent decision-making, and individual actions. However, paramedics find themselves having to manage within a team environment together with their partners and the patient and family members in some cases, or supporting agency. Paramedics are deployed in teams and often need the help of extended caregivers or mutual aid agencies and so work is typically completed interdependently. They are not taught how to manage within these interactive episodes or how to deal with hierarchal and power politics as a patient advocate.

Curricula do not focus on how to consider collaborative practice approaches or utilization of the team, or to consider their paramedic role in relation to the patient. However, paramedics practice in a health care system that privileges the patient as central to the decision-making process for their care. Billett (2010) described that development of personal, professional, and learner identity is critical in developing resilience, which is directly linked to the individual’s capacity for collaborative practice and tolerance for understanding all aspects of new situations. Being engaged with the health care team in practice, as well as achieving a level of tolerance of ongoing changes in health care has implications for safe practice (Blaber, 2008; Farr, 2007; Jensen, 2010. This is what Mark shares in his story above, his awakening to the notion that his learning on a team with expectations based on collaborative practice principles helps his own practice; he can see himself as a paramedic within a team instead of a paramedic alone.
Roy is able to align himself with the traits of a paramedic described as aggressive and commanding, which he sees as the foundation for being able to manage what others might see as impossible.

So afterwards when my partner and I are talking about this call, she says she has never seen anything like this call even with many years of experience. She said she was jittery through the whole call. She asked me how I stayed so calm through the call, how was I able to just plow through everything, don’t [sic] get frazzled. My partner was impressed with the fact that when she looked in to the car at the patient she thought he was dead. She could not believe that I was already moving to get the patient out and get him into the truck so I could work on him. When I have these discussions I am always amazed because in my mind I am certainly not seeing it that way.

Nigel also can sees himself as aggressive, heroic even, and relates this identity development to how he was trained in his education program.

We are a different breed, I haven’t used the word ‘type A personality’ but maybe we are. We train in a very particular way. We train to make decisions, to lead others, to take control of people and situations. That does stay with us; we take that into the rest of our lives and our work ethic. I know that the research says that working as a paramedic changes our personalities, changes the way that we deal with situations and I would certainly agree with that. I know that becoming a paramedic has changed who I am. It has impacted me as an individual. I am different now because I am a paramedic, because of the education as well as the exposure and the experiences we have. The training program trains us to think in this particular way, that we have to fix things, it teaches us to be aggressive. The question that I kind of never answered in my head is if we change
our training programs and we said we are not running a scenario in this way anymore that we are going to take all that away and run it in a softer fashion, or something. I wonder if this would change me as a paramedic. I don’t know the answer to that; I mean a lot of us say that paramedics are aggressive and even arrogant to a degree. If we changed our training and approached it differently then I wonder if we would be a different breed. I wonder about myself and how I might be different or if it would even matter. The nature of the work that we do does have an impact on us and this is our natural personality which draws our type into the profession and that’s who we are anyhow.

It is the paramedic learning environment that brings the student and preceptor together in practice and Mark tells us how he must bridge the language gap he perceives to meet the specific competencies his preceptors demonstrate. Mark develops and orchestrates his identity by changing his language to align with his preceptors. It is in this way that Mark learns to play the role of a paramedic, to look like a paramedic, and to act like a paramedic. But as Jarvis (2006) found, it requires more than looking and acting like one; paramedics must embody becoming a paramedic. This is what Mark thinks as well when he shares that “vocabulary says a lot, if you can use the terminology, even if the knowledge is not there if you can speak properly, then that tends to leave an impression that you do have it as a paramedic.”

Roy is able to develop his paramedic identity by imagining himself as the same as his preceptor when doing calls. By aligning his outward behaviours with what he observed with his preceptor, he is able to better understand how to become a paramedic. Roy said that,
I learned a lot from him. I work hard at portraying the same attitude and professionalism when I am a preceptor now, or just doing a call. I think there is a right approach and a wrong approach obviously and I saw what the right approach can be.

As Wenger (2000) found, learners should be able to integrate their learner identity with their practitioner identity in the workplace. This means paramedics must be able to understand their individual fit within the collective group and understand how they have taken on the values and beliefs of the paramedic culture.

I reflect on Mary’s experience with a preceptor who did not believe she was capable of becoming a paramedic and questioned her ability as an EMT, which she had been working as for a number of years by time she experienced this event:

*The one casual medic preceptor had seen me for several shifts and had some sort of personal vendetta against stuff and at one point took a big red pen and wrote across my entire PCR that there wasn’t enough room to write all the bad things about me. That was kind of the first I had heard about it and I said “what do you mean I am not doing well”, it was a very odd situation. They decided I was insufficient their exact words were that I “shouldn’t even have been an EMT.”*

In addition to managing her experiences with a preceptor who did not believe Mary was capable, she was living in her story of everything is new. Each patient interaction was new, something she had never seen before. The practicum experience she describes was a difficult time for Mary to negotiate her own development through learning opportunities and learn how to manage her internal emotions and thoughts with her external self through her actions—to bring together her emotional intelligence, communication, and technical abilities to be able to treat the patients she is now attending. Mary said,
I had never had to interact with people in police cells before, or drug addicts or a lot of mental health issues. The place I had worked before had a lot of older people, farmers who are seniors, so a few cardiac or diabetic patients who generally control well, the odd gunshot wound; like that kind of stuff is what I was used to. But coming to the city and doing my intermediate practicum I struggled and that was 10 weeks.

Mary compares her previous experiences of dealing with her identity as a technician with particular skills such as treating a patient with a gunshot wound in comparison to an elderly diabetic patient. These are different situations than the events she experiences with the patients with mental health concerns or addiction issues. Mary has identified some of the different roles that she must play, which constitute paramedic practice:

I think we are part of the health care system but are not as integrated as we might want. We still fall under the emergency services group; we typically only go to the hospital to drop patients off and then go away again. We just bring them the business and don’t stick around to help. We just disappear. I think being part of the emergency team is more appealing than being part of the health care team. I know for me the appeal is that there are not a lot of us, not too many paramedics; it does set us apart from others. Looking at paramedics, I think it’s a unique profession and I hear time and again that only some special people can do this job and to me that’s kind of neat. It’s not a feeling of superiority, but I do feel I can do something no one else can, something that’s helpful to others.

I have listened to Mary, Nigel, Mark, Alex, and Roy when they share their perspectives of how as paramedic students and preceptors they are sensitive to the phrase “we eat our young” and how they work to resist this dominant story. Each of these participants is able to develop
another way for their own actions in practice and as preceptors, to intentionally not identify with the preceptors and colleagues, in order to support their own and others’ learning. Mary links her experiences with some of her preceptors when on her practicum directly to how she intends to act with her students. Almost 5 years after graduation, Mary is still able to relate her previous learning experiences to how she develops her role as a preceptor:

*It’s something I think about every time I hear that phrase ‘we eat our young’. I always think back to my experience on my final practicum and think “yeah we really do”. And I worked hard and it didn’t matter to my preceptors then. You know I work really hard as a preceptor now to ensure the experiences for others. Like if my student is having a problem on a call in practicum, they will know it right away and we will talk about it and fix it. No surprises.*

Roy sees paramedic personalities as linked to the reason paramedics are not as supportive of their students or sometimes new graduates. He links a specific type of personality as part of the identity and labels it the type A personality. To be a paramedic means to have a certain approach to learning and practice that is inherent in the person. He says,

*I think this goes back to the type A personalities, that we eat our young. This goes to why we want to do our jobs, it’s the unknown, and it has got to be a strange thing in our DNA.*

(Roy, Interview #3)

Mark is also aware of the dominant story of eating our young and attributes this to paramedic students repeating their own experiences as the only way they know to manage.

*Because they have come through that crucible of fire, by that same token there is an arrogance that comes with that and an exclusionary fraternity that says that if you haven’t gone through what I have gone through then you are not as good. And I disagree*
with that I don’t think that that elitism is valuable, this is how we do what we hear that we eat our young.

I have heard this saying as well, and I too have experienced bullying from preceptors and colleagues. Duffy (1995) explained this as hostile and aggressive behaviours by an individual or group towards another individual or group. These behaviours can manifest in overt and covert ways (Freire, 1972). Typically these situations arise when unequal power relations exist and are symptomatic of oppression and a sense of powerlessness. This is more of a system concern as horizontal violence is a cultural issue, a dynamic that arises from those who feel oppressed. Preceptors are socialized into these types of behaviours as part of their identity and fit within the culture of paramedicine. Moreover, the quality of paramedic relationships or in some cases the unhealthy relationships can directly affect our ability to learn. Our ability to become knowers, then, is linked to development of identity and is based on the quality of our relationships (Thayer-Bacon, 1997). This narrative has significant implications when considering how much time preceptors and students live their learning together.

**The Value of Tacit Knowledge**

The third narrative that arises from the paramedic stories is the value placed on development of tacit knowledge. Understanding tacit development illuminates a gap in the technical rational outcomes-based approach in educational programming in that the program does not address this way of knowing. This inquiry allows the reader to see the value each of the participants place on this type of knowledge and how these participants have experienced the lack of tacit knowledge and the development of tacit knowledge. By using the three-dimensional inquiry as method, the reader is provided the window into each of the events provided by the participants in order see how this narrative links across the stories.
Tacit knowledge is considered to be the practical knowledge of paramedicine. It is those things that practitioners attribute to the wisdom of practice. It is thought to encompass what the practitioner would take for granted in how to practice “their 6th sense- gut feeling- or intuition” (Wyatt, 2012, p. 1). Wyatt (2012) furthered the specific conversation of this phenomenon in her study of paramedic tacit knowledge development. The findings of this case study indicate that while tacit knowledge development remains elusive, it can be thought as the underpinnings of sound clinical judgement. It is this clinical judgement of experienced paramedics that Wyatt (2012) linked to constructing new knowledge in new situations; however no understanding is gained about how experienced preceptors or students might manage the development of judgement that underpins tacit knowledge.

Tacit knowledge is thought to be the knowledge that allows the paramedic to become comfortable with practice and able to know the particular information that is specific and sensitive to the particulars of the situation. Because of the setting, this type of knowledge is shared locally within the web of the specific group of employees on a particular platoon or shift schedule. Thus while tacit knowledge can include in-depth and context specific knowledge, it can also limited to include fragmented or inaccurate knowledge.

The participants recognize the value of knowing in action and how this is different than the technical knowledge they gained in their education programs. Reading across the stories provides insight into the value of this knowledge to the participants, and while they do not name it as a separate type of knowledge, they relate the need for knowing in action and doing in their stories. Roy values the role he plays in discussing the call after completion and reviewing how it went. This is a common approach between paramedics where the conversation in ambulance on the way back to the station or while completing paperwork at the hospital will include a review
of the call. This post-mortem approach to reviewing events together is a way to develop tacit knowledge. A discussion between participants where identification of what actually happened and why it worked is what Polyan (1967) suggested is a good way to codify and understand tacit knowledge. Roy shares,

_I have four brand-new green EMTs at work now, and what is great about them is they have a real thirst for knowledge, a really good attitude, and once they get over their initial jitters of actually being in this job they like that I will discuss what we did after the call. Because there is always something that we can learn from, all of us, and I know they appreciate it. It’s great for me when I am with the new people you know there is all this experience I have, and stuff that I have done before. When they haven’t seen it before, it is neat when I can get them saying “wow I haven’t seen that done before.”_

In Roy’s experiences, he is able to see the value of being able to show the student how and when to do what they are doing while they are doing, even though they learned it in school. He thinks he should be able to understand himself what would be beneficial to the student for the preceptor to be able to teach it in terms the learner can apply. Roy said,

_I was with a really brand new EMT last spring and she was on her second tour and she says I have experienced a few things so far (because we have had a busy stretch up there) but you know I have never done a code yet! I said well crap, you jinxed us! What do you know, the next call, we get a SOB (shortness of breath) call. Well when we walk in the door we see this guy, who is slumped over the chair, no pulse and not breathing. So now there’s is just the two of us and we have to run a code. I helped her through the steps, even though they learn that in school, it’s different when you actually have to do it in the street. I like passing on the stories and the little things, about what to expect when you do_
this, or what not to expect in certain cases, or what could happen if they do certain things in a certain way, it’s all important knowledge.

Mary shares her lived experiences about her development of tacit knowledge. Her stories come from her practice after she completed her education program and is preceptor to another paramedic student. She is using her tacit knowledge as defined by Polyani (1967) to guide her teaching of her student, in that she has learned to attend to what she finds on assessment and from this to judge how to approach a treatment plan. In this way, she has internalized much of her way of knowing as something she does automatically, without thinking. Mary said,

*I think we don’t teach enough thinking or problem solving in school, the focus is on whether you can take a BP (blood pressure) or take a pulse in the first five minutes of arriving at the patient. I am working with my current student to teach that you don’t have to jump in and do that right away. Sometimes you might want to talk to the patient a little bit, think about the talking and the timing of care for the patient’s sake not a scenario. The real world application is different and now I have learned to sometimes not to get vitals for 20 minutes depending on the call. Those kinds of calls remind me that I have this hands-on experience and wisdom now about practice that it’s not all just brain knowledge.*

The value Mark places on his own tacit knowledge, of just knowing, is shown in this next story. He can see the risks and benefits of the knowledge and makes this judgement for the benefit of the patient. He recognized how tacit knowledge could be more beneficial when it is properly collected, codified, validated, and shared alongside research (Shulman, 1986) in order for the discipline to truly benefit. Mark said,
We tend to rely on anecdotal information when we are treating something new, because we don’t know that we have ever been hurt by this before. In my experience if you have odds of hurting one in a thousand people then I think that’s worth risking. We are struggling in our profession to get people to the ALS [advanced life support] level as fast as possible instead of recognizing the occupational education needed that might include what people who have diverse backgrounds either in the field or associated fields. Being able to take that knowledge and experience and apply that to our profession. I think that’s it also takes being a mature student. What helps me to be a really good practitioner is being able to apply different knowledge and different fields of knowledge when I need it.

Schon (1983) argued that many practice professionals rely on tacit knowing but are not able to describe it well. Further, Schon said that this knowledge or as he calls it “knowing in action” (1983, p. 49) is spontaneous and intuitive. Some of the know-how in managing situations of uncertainty and uniqueness in paramedic practice is found demonstrated in the stories. They know more than they can say (Polyani, 1967). Skillful action is seen in Mary’s experience of teaching students to consider waiting sometimes before they take vitals, not like they were shown in school, but more related to their specific patient presentation. Likewise, Mark cannot describe his ability to use anecdotal information or exactly when and what criteria he would apply; he is not able to describe it but is using it. Roy is able to help his partner manage a serious call even though she has learned all of this in school; he is able to understand the value of helping her understand and learn the reality or practical knowledge he has come to know over time.
The knowing-in-action argument is extended to include reflecting in action as a practice of artistry and intuition that can be learned by those in professional practice (Schon, 1983). By the process of acting, the paramedic is making choices, intentional or as part of a tacit knowledge base during his or her actions and for this reason must to some degree reflect on why other choices are not taken. Roy is able to share how he learned to reflect on his past practice experiences and link the difference from implicit knowledge he acquired as a student and how this has changed for him because of his experience in practice. Roy links his past experience as an EMT directly to his tacit knowledge and ability to understand how to do the job:

You know on calls I keep going back and reviewing the stuff that I missed – experience is the only thing that is going to turn the light on for us, a lot of stuff of what we do um, the light doesn’t come on until you experience it, like all the stuff we learn in school if you never do any of it, theoretically you know how to do it, but it really doesn’t make sense until you perform it for real. I think some of this stuff is experiential, I mean certainly we can be better at telling people that we have to, sometimes it’s easier said than done. I think it makes perfect sense, the type of work that we do, unless you have some experience at it, you will fail paramedic school. I don’t think you will understand the concept at all you may have some good health knowledge but you wouldn’t understand the concept of field paramedicine, of how to really do this. I remember my paramedic instructor telling the class on our first day that if we had previous on-car experience, if you have seen this stuff happen and know how it really goes, well then you will be alright. And he was right, because inside of there months we lost three students, they couldn’t make the leap from EMT to paramedic because they had no idea or experience, they had never seen what happens.
Inquiring into this story of Roy’s while bringing forth my stories of frustration with knowing how in practice, I see the development of my tacit knowledge, my coming to understand the definition and value of this aspect of professional knowledge and practice as significant. I recall my experiences in reconciling what was provided in my education program with what happened in practice and the gap was related to the depth and content of tacit knowledge in paramedicine. Roy is able to see how his experiences with some preceptors and in his practice helped him to develop his tacit knowledge and how important it is to pass on to his students. It is the inquiring within the dimensions of temporality, sociality, and place that allows me to see this within the stories. By thinking with the stories, I have come to understand more about how tacit knowledge is developed and valued by the participants, and how they live in and with this knowledge of experience. Clandinin and Connelly (2000) described that the technical rationalist approach to education typically ignores experience as a deterrent to the true education. This leads me to wonder how nurturing tacit knowledge development could improve paramedic education. Mary can recognize the tacit knowledge she uses in practice. She is able to distinguish between the curricula within the education program as separate from the knowledge she needs in order to practice.

I think in school we largely don’t teach enough thinking or patient interaction, our job is 90% talking and listening. We do the scenario thing so well, that I think that what gets missed, is the talking and the timing of the patient interaction. When I went through school it was do this, do this, do this, and then you are at the hospital. But in the real world it doesn’t work that way. I mean I have done calls where you don’t get vitals for 20 minutes because of the way the call needs to flow. That is not taught, it is developed on
the fly, we don’t have any formal instruction about it or guidance about the finesse of the patient interaction and call sequence.

Further, Mary distinguishes between the knowing that she needs to have a blood pressure as part of vital signs for each patient prior to providing medications or treatment is different than knowing when and how to acquire a patient blood pressure. This is significant difference between what Schwandt (2007) defined as propositional knowledge of “knowing that” (p. 246) in comparison to her tacit understanding of knowing when and given the particular circumstances, the how, and just doing it when needed without really thinking about it. She identifies that practice would benefit from better understanding of the finesse or the art and intuition of paramedicine practice (Schon, 1983). Mark’s experiences are similar when he is trying to explain to another paramedic the application of a Continuous Positive Airway Pressure (CPAP) for a patient experiencing respiratory distress. He is able to understand that it is more difficult to try to explain to another paramedic about how and when to apply the CPAP to support ventilation than what CPAP actually does. But he has been able to perform this many times and feels confident he knows how to do it even if he cannot explain it completely, because he does it often with good patient outcomes. Mark said,

*So while I wasn’t able to explain CPAP to the other paramedic I certainly understand how it works and I find this is the case where I can actually understand the concept and how it works so I know I have the knowledge about this. In fact I know it’s true because I can make the theory practical by performing this action.*

Shulman (1986) introduced us to the term *pedagogical content knowledge*, which he defines as the educator’s tacit knowledge. It includes the educator’s interpretation and transformations of the specific subject matter knowledge in the context of facilitating student
learning, which something that Mark considers to be important. In this case, it would encompass the paramedic educator’s accumulated wisdom of clinical practice, pedagogy, learners, subject matter, and curriculum. Shulman (1986) argues that educators must have both relevant pedagogical skill and specific content knowledge of the subject matter for practice; in this case it would be paramedicine. This need for the ability of the preceptor to be able to share pertinent and timely information for practice in a way the learner needs is reflected in the paramedic stories. Mark is able to see how he has improved his own knowledge and acquired tacit understanding of practice. He is beginning to understand how he might help students with development of this knowledge. Mark said,

*We do make a difference because of our ability to provide critical care, but I find these are actually the easy calls, you know they require good clinical judgement and good technical skills and use of efficient resources. The ones where they are really sick and it’s obvious are easier than the middle of the road calls where you think they are sick but don’t have enough information or they won’t give all their cooperation – or we don’t have the diagnostics tools to help figure out the issue but yet they are just sick, these more complex calls are where I am getting to the point where signs and symptoms, pathophysiology, and further progression of a chronic disease process, well now I can recognize more of the differential diagnosis even without the diagnostics and project what the possibilities are and treat accordingly. It’s great to follow-up later at the hospital and find out I was spot on with my suspicions and following the right treatment path. I learned to do this through accumulation of experience, further reading and after you see a thousand patients you start to get better. So as I learn about more about the body systems by seeing real patients I am better at the fine details and nuances about*
disease and its impact on people and I can see that I am better narrowing down the
issues quicker and more precisely, I could do some of that as a student but I think you
can’t make a 10 year medic without spending 10 years out in the field,
I would say there is a lot of continued reading to help me understand what I am seeing in
the patients, it’s different than when I graduated school because I flushed so much of the
information and content that I thought I didn’t need in order to practice. I can find
what’s important now in the most immediate timeframe, you know it’s good to have the
ability to be a problem solver, to adapt and be able to recall the protocols or available
evidence to practice, even when you are at a loss, the memorized elements and content
that keeps you moving while caring for patients, which I learned in school. But it’s the
continued learning that really makes a difference to help you focus on the patient, refine
your practice and that helps me to become able to help students with learning this
information too.

Mark’s story is an example of a progression from technical knowledge to tacit
knowledge, where he is able to consider many aspects of a patient presentation at one time,
without having to think about completing an assessment or thinking through differential
diagnosis; it just happens by doing. Mark said,

I can feel the difference between my comfort levels with recognizing the important things
is so much better as a paramedic than it was when I was an EMT. I am so much better at
understanding how and why patients present the way they do and how my treatment will
impact the outcomes. I have much better understanding now as a paramedic with more
knowledge but in my case I have now seen thousands of patients and I have an
understanding of what my job entails. In terms of my technical skills I know that I don’t
even have to think about them now, they are just there. After so many times I have started IV’s and intubated patients I can rely on my technical skills without actually thinking about what I am doing. It seems natural now that I can do these and be very comfortable with my skills. I can see the difference between how I can do you know three skills at once while I am still assessing the patient. When a paramedic is just new and having to start an IV and they have to stop talking and concentrate on only that skill, I do the see difference because I don’t have to even think about it. I sure advise my students to try to do more things at a time, like doing a 12 lead [electrocardiogram] while they are assessing the chest. It’s just one of the things I have learned over time as a preceptor that I can help my student learn to incorporate skills with assessment and treatment to the patient care.

Polyani (1967) defined tacit knowledge as comprising a range of conceptual and sensory information that can be brought to bear in an attempt to make sense of something: “We can know more than we can tell” (p. 4.). The sharing of this type of knowledge requires significant personal contact, interaction in context, and trust between the participants. Thus, this knowledge is shared through social networks, of being in relation to each other, and can be captured within communities of practice.

To conclude this narrative of tacit knowing, I return to Wyatt’s (2012) case study of how experienced paramedics develop tacit knowledge. Thinking with the participants’ stories I have shared and my study findings provides an opportunity to shift thinking about the role of learning in education and practice and how these experiences support knowledge generation for the new and complex situations paramedics must manage. What Wyatt (2012) described and the participants’ stories reveal is a knowing that “calls into question the relationship between theory
and experience [and] the fundamental basis of what constitutes valid knowledge” (Wyatt, 2012, p.2). This narrative about tacit knowing supports the notion that knowledge is “held to be partial and contingent upon the specific factors and contexts within which it is constructed and presented” (Edwards, 1997, p. 17) and therefore experiential and practical in nature.

Conclusion

In this chapter, I discussed the three narratives that arise from thinking across the participant stories. The relational ethics narrative features the relational way in which students learn and come to practice as paramedics. This narrative represents the multiple ways of knowing and how this shapes the participants, which is not addressed in an outcomes-based education design. While each of the participants has lived their learning and practice stories differently, the converging points are the value placed on relationships and the ethical actions of the participants in the relationship. The identity narrative is encompassed within the relational ethics narrative but links the paramedic learning and practice experiences directly to development of their professional identity and value placed on tacit knowledge. In Chapter Six, I share the personal, practical, and social implications of thinking across the participant stories and I suggest considerations for further research opportunities as a forward-looking story of understanding paramedic education for practice.
Chapter Six: Imagining Paramedic Education in the Future

“Perhaps the greatest of all pedagogical fallacies is the notion that a person learns only the particular thing he is studying at the time” (Dewey, 1938, p. 48). My purpose in this inquiry was to gain better understanding of the aspects of paramedic education that have meaning for the participants’ practice. Exploring their experiences of learning within their education programs and further from practice considers what their particular stories can say about learning and practice as a paramedic. I hoped through this inquiry to gain insight into the complexities of judgement-based practice and the implications of a technical education program grounded in competency-based curricula and pedagogical approaches designed to support technical skill and procedural knowledge.

I turn to a brief discussion of the strengths and limitations of narrative inquiry in order that recommendations can be viewed in the context of the knowledge that can be claimed from this method of research. The ontological and epistemology that underpins narrative inquiry is derived from viewing experience as story and therefore story as knowledge. This view of knowing means the issue of knowing is gained from focus on the particulars of experience and in this way then this study cannot make statements of generalizability. This study can provide a glimpse into the details of life as lived by the participants and from this can be gained a new way to consider the topic of paramedic education.

What Alex, Roy, Mary, Nigel, and Mark’s stories provide is their view from living in current practice as paramedics. It is from this view they embed meaning and shape their stories of their learning experiences. How the participants experienced their learning and how they bring forward those particular meaningful experiences in order to practice today can open a new way of thinking about what is important to learning for practice. Therefore it is possible to think with
the particulars of each story to consider what each of their lives lived can tell about learning to become a paramedic. Understanding what has meaning in their experiences can provide insight to improving the framing of paramedic education.

The strength of narrative inquiry rests in attending to individual lives and experiences over time and in relation to others in particular places (Clandinin, 2013). Narrative inquiry is not a reductionist approach that searches for themes or confirmations of hypothesis but a way to think with individual experiences and wonder what they can tell about the phenomena under study.

I return to Roy’s statement to position this concluding chapter as a forward-looking approach to imagining other ways of considering paramedic curriculum and pedagogy. Narrative inquiry begins and ends with a respect for ordinary lived experience (Clandinin, 2013). Roy reminds us of the complexity of paramedic practice in his perspective and why he practices the way he does:

*I always say that if you just want to follow the boxes on the protocol pages and just drive everyone to the hospital without thinking about what you are doing, well you might as well be handing out fries as MacDonald’s because that’s all you are accomplishing for the patient.*

Roy’s statement resonates with educators at many levels. On the one hand it is a statement about the necessity of thinking through the complexities of practice as it happens on complex landscapes of patients, locations of calls, in hospitals, and in relation with families of patients, other professionals, and each other. It is also a rallying cry for educators to think about what is needed to help paramedics like Roy, Mary, Alex, Mark, and Nigel to take their place on a demanding and shifting professional landscape. To better understand what changes could shape a
curriculum and pedagogy to meet the complexities of relational practice, I return to the issues that form the basis for this inquiry and what I have learned in the undertaking of the study by looking at the findings with a personal, practical, and social lens. By looking at the research texts within these perspectives, it allows me to answer the “so what” and “who cares” in ways that help the reader to understand how paramedic experiences in learning and practice have social and theoretical significance in curriculum development and pedagogical understanding.

**Personal Implications**

In the prologue of this study, I shared a story of my experience in attempting to live a story of learning to become a paramedic within a behaviourist-grounded education. My initial experiences in learning led me to understand that my construction of knowledge occurred more often in the intersubjective spaces, and the knowing that I needed for practice was more than remembering a procedure. I have learned that propositional and procedural ways of knowing are only part of the knowing needed for practice.

Experiencing this study, collaborating with participants, has allowed me to think deeper with the stories lived—my own and the participants’—and to consider these in relation to paramedic program evaluation and practitioner competence assessment. I can see that my professional paramedic knowledge is based on an integration of propositional knowledge, research-based evidence learned in the classroom, and professional tacit knowledge derived from practice.

I better understand how my ontological position allows me to see the participants and myself as each becoming a whole person through their learning and practice experiences and lives lived. I am aware that learning is not something that happens separately from the person, whereby the acquisition of some certain amount of canonical knowledge can be achieved and
applied in specific situations. This is not how learning happens, and, not how paramedic practice happens. The participant stories present the complexities of becoming a paramedic in their experiences as found in each story shared. This is also true for me, as my own personal knowledge, experience, and professional knowledge become my curriculum for life. I am able to understand that experience is continuous and education is life. Schwab (1954) considered that the theories of knowledge are significantly supplemented by life experiences.

I am aware that the participants in this study have also been affected at a personal level through their participation in this study. I know that two of the participants have shared their experiences with others in order to continue the conversation of their education and practice experiences. I too continue to have dialogue with my response community about thinking with the stories of learning and practice in order to inform my understanding of the paramedic teaching and learning puzzle. Three of the participants are considering how they can continue to open spaces for the conversation of education in relation to practice, and they look forward with optimism and hope in their contribution to better education for paramedics.

As I continue to work within the program evaluation and curriculum development areas of paramedic education, I am increasingly aware of how other paramedics experience their learning and practice. I consider the tensions I felt within those stories shared in the prologue and can see how “world travelling” (Clandinin, 2013, p. 59) across my world and preceptors’ worlds can help me to understand how to be in relation to these stories and colleagues.

**Practical Implications**

This inquiry opens up a space for dialogue about paramedic education for practice to further explore the puzzle of curriculum and pedagogy from the perspective of the learners in order to better question how to improve education for practice. Schon (1983) helped to identify
the current concerns regarding education of paramedics as the profession arriving at a place and time where the “niche no longer fits the education and the education no longer fits the niche” (p. 15). He implied that without the ability for paramedics to be able to reflect in action as an “art” (Schon, 1983, p.50) to deal with the uncertainty, instability, uniqueness, and values conflicts found in paramedicine, professional knowledge may always run behind new demands in practice.

What was explored in this study may be informative for those developing curriculum for paramedic education programs and looking to understand paramedicine pedagogy. Signature pedagogies develop as the fundamental way practitioners are educated, and directly influence paramedic personalities, what is valued as knowledge, and the culture of teaching and learning. Signature pedagogies encompass three dimensions that are required for professional practice: to think, to perform, and to act with integrity, and as such are considered a significant qualifier of a profession (Shulman, 1986). Part of the development of a discipline is defining the unique characteristics of the education required to support the practice and then focusing the supporting education model towards those defined attributes, characteristics, and unique concerns (Willis, E. Williams, Brightwell, O’Meara & Pointon, 2010). I imagine a curriculum that encompasses all of the required body of paramedic knowledge and attends to the relational ethics and social interactions that make up the practice of paramedicine.

This study opens the possibility for paramedics to continue the conversation about their practice experiences and to reflect on these in order to improve their practice. Blaber (2008) indicated the ability of paramedics to reflect-in-action and reflect-on-action, while personal and occasionally uncomfortable, is the basis for professional development and life-long learning. Moreover, that in order for experiences to become knowledge, reflection requires structure, intention, and organization (Blaber, 2008). For learning to occur, there must be an iterative
process between experiences and re-framing of knowledge. This requires an intentional approach within the curriculum planning and pedagogy.

By thinking with this research story, other paramedics and educators may be able to better understand how to critically re-examine their own beliefs and assumptions about teaching and learning and “facilitate” (Brookfield, 1986, p. 24) the others’ learning opportunity. Developing awareness around the concepts of knowledge construction and clarity of program goals and the roles of the educators, preceptors, and students may improve learning to practice experiences. Considering the participant stories of living and learning now as paramedics—Alex no longer participates as a preceptor; Nigel is not sure what the role of the preceptor should be in evaluation of student competence in the practice setting; Roy is more comfortable as a mentor than as a preceptor evaluating competence; and both Mark and Mary have developed strategies to manage different kinds of students—may shape how others story their experiences. The stories shared can provide a way for paramedics to think with other paramedics’ lived experiences and to situate their own perspectives in relation to others’ experiences.

This study creates space to consider and examine the role of preceptors and their education as well as the students and their education in a new way that considers being in relation to each other and not within hierarchal positions. Paramedics must recognize the role of the preceptor and the value of the preceptor–student relationships that support learning. Understanding that learning is a social event and paramedic practice is a social event allows preceptors and students to frame the nature of their relationship in a different way. Education for preceptors can improve their ability to understand aspects of relational ethics, situated peripheral learning, and adult learning theory and provide them with more confidence and ability as a preceptor of paramedic students.
Recommendations for Further Inquiry

- Research that explores the different ways of knowing in paramedic practice could help to improve curricula development that supports multiple ways of knowing. Narrative inquiry as methodology in this study provides an opening to consider knowing in action as professional knowledge and shifts thinking of the education frame from a theory–practice gap to practice education. This ontological and epistemological stance allows other researchers to consider Dewey’s (1938) transactionalism as the frame from which to view curriculum and pedagogy for education. This may have significant implications for paramedicine, where experience in practice is valorized and respected; perhaps intuitively paramedics understand the value of experience as knowledge.

- Exploration of paramedic pedagogy for paramedic practice. This study has provided some insight into the conditions of teaching and learning; however, there is very little understanding about best practices in methodology of paramedic education. Studies that develop understanding for educators to become better pedagogues are warranted.

- Further study of what constitutes relevant curriculum for paramedic practice, including exploration of appropriate competency frameworks, is warranted.

- Study of the theories in use in paramedic practice and how these are developed from experiences to build professional knowledge. This narrative inquiry calls into question how paramedics come to know, the social constructions of knowledge are visible in this study. Further exploration of the implications of relational ethics and paramedic learning would be beneficial to improving education. While this study provided insight into relational ethics featuring significantly in paramedic learning,
the sparse and unfocused evidence about this topic leaves room for generation of new knowledge about paramedic education for practice. From this study further research about paramedic education is highlighted.

• This study provided insight into the important role of the paramedic preceptor. Further understanding about how to educate and support preceptors is needed. The findings from this inquiry help us to know preceptors are important to paramedic learning. Exploring how to develop standardized approaches, preceptor education, and a guiding philosophy would improve the experiences of preceptors and subsequently students.

• Study about the implications of healthy or unhealthy relational ethics in the moment of patient care and the implications on patient safety. Paramedics need to learn and practice in a healthy environment based in a professional practice model. Achieving entry to practice learning and enabling life-long learning is dependent on in being in relation to others, the preceptors, other students, the patient, and other health care workers, which can be in part sabotaged with bullying and horizontal violence.

• Research that explores how tacit knowledge is developed and utilized and what is the importance of this way of knowing patient care. Understanding how the art of paramedicine taught would be beneficial to curriculum developers and paramedics in practice.

• Further inquiry into the implications of narrative knowing in paramedicine could support better learning opportunities for future paramedics. Narrative is a significant part of the paramedic culture and clinical experiences are often shared between
paramedics in the hospital hallways and at the ambulance stations. Exploring how this supports learning over time would be of benefit.

**Social Implications**

The social justifications of this narrative inquiry are provided to show the link between this study and the potential improvements to understanding paramedic discipline knowledge and how policy changes could be considered based on these narratives. I hope that the ontological commitments in this narrative inquiry can help shift thinking to other ways of knowing for practice that moves well past the limits of procedural knowing. Thinking with the paramedic stories enables me to consider the social implications of inquiring into paramedic education and practice to the profession and to the public who utilizes the paramedic to care for them.

Better understanding of the role of the paramedic by paramedics, those in the health care system, and society may help to improve utilization of paramedics across the spectrum of patient care. Understanding the way in which paramedics view themselves and develop their identity helps educators with understanding the role of the paramedic. The voluntary professional organization of paramedics, the Paramedic Association of Canada (PAC) was formed in 1988 as a national body with provincial chapters. Public awareness of the role of the paramedic and the paramedics’ capacity for competent, professional practice would be of benefit to society.

This study allows for a different way of thinking about how to improve the AOCP to be robust enough to underpin education program curriculum development. There are multiple moments in the participants’ stories that indicate their need to “look something up” (Mark, # 3) when they did not have the appropriate knowledge during an event of patient care. The AOCP is the responsibility of the Alberta College of Paramedics and should be revised to better support education to reflect current practice.
The implications for development of standards for preceptor qualifications and expectations are apparent when considering the participant narratives. There can be no educational changes without first educating those who will teach it (Stenhouse, 1975). Education must contribute to the development of critical thinking and development of clinical judgement so the profession contributes to the health care system in effective and efficient ways. Thinking with the research texts from this study may enable insight into the significance of relational ethics across paramedic practice.

**Conclusion**

In this chapter, I have presented the personal, practical, and social implications of this study. I have included for further research that arose from the narratives in this study. Following is an epilogue, which provides the ending to this study. The end of this study is a point in time, a place in the midst of living, as both participants and I, as the researcher, will continue to experience learning and practice.
Epilogue

I arrive at this part of my journey as a novice researcher, paramedic, and educator. The rich narratives shared in this study have shaped my telling of the story of what is important to participants when constructing their knowledge for practice. This inquiry has created an opportunity to think with the participant stories about what is important when they are becoming a paramedic and how this shapes their practice. Through the narrative inquiry process, I have come to better understand the importance and complexity of paramedic education, the influence of hidden curriculum and unintended learning or mis-educative experiences. I hope the findings in this research can extend the understanding that knowledge for practice is a complex integration of different ways of knowing, such as propositional knowledge, tacit knowledge, and relational knowledge that is interpreted through individual experiences in practice. The integration of knowledge in practice is a social construction, which is then dependent on the relationships developed or available in the practice setting.

I hope this study challenges the notion of the traditional technical and vocational models of paramedic education; there are many ways of knowing in paramedic practice, which may better meet practice needs. I have come to understand that learning and practice experiences have a continuous aspect where each experience has influenced how participation and therefore the experience may happen in the next event, and how learning occurs from these experiences. I understand that this is the same for Mark, Alex, Mary, Nigel, and Roy, and it is also different for each of them.

No one leaves a narrative inquiry unchanged (Clandinin, 2013). I have entered into this research in the midst of being a student and educator with the participants who continue to have lives in motion. The story of what is important when learning to practice as a paramedic is not
over. I was privileged to enter into relationships with participants and together open a space for us to think narratively about paramedic education and paramedic practice. Co-composing research texts allows for participants’ narrative voices to be honoured as the authority in their own experiences; no matter what is intended in curriculum and pedagogy, the meanings revealed in these paramedic stories are real.

The stories and narratives shared in this study are gathering places for looking forward and considering paramedic education in a different way. The journey to this inquiry began with my experience in learning and practice and, for the moment, ends with the completion of this dissertation. However, I will continue with paramedic education research. Stories become a way to look at paramedic learning to practice within a three-dimensional space that incorporates temporality, sociality, and place, and with this lens it is possible to begin to understand the complexities of learning to do in the practice of paramedicine.
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doi:10.1111/j.1365-2923.2009.03548.x


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Appendix A: Participant Consent Form

Stories from an Urban Perspective: The Influence of Paramedic Education on Current Practice

PRINCIPAL INVESTIGATOR:
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CO-RESEARCHER:
Becky Donelon, Doctorate of Education, Educational Leadership – Candidate
Graduate Division of Education Research, Faculty of Education
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SPONSOR: non-funded study

This consent form is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, please ask. Take the time to read this carefully and to understand any accompanying information. You will receive a copy of this form. The University of Calgary Conjoint Health Research Ethics board has approved this study.

PURPOSE OF THIS STUDY:

The role of the paramedic in Alberta continues to evolve. The standards of practice and the practice environments have changed drastically for paramedics over the last 10 years. Paramedics now require a high level of professionalism, the ability to perform complex clinical decision-making determinants within an expanding scope of practice, apply knowledge and
understanding of specialized population awareness, and, ongoing development of inter-
professional competencies in order to meet current practice needs.

Paramedic education programs are focused on behaviourist methods of teaching,
learning, and evaluation, this is different than other health care discipline’s approach medical
education. The focus of other medical education programs is typically on areas such as levels of
processing, learning narratives, development of reflective and reflexive capacity, and attending
to the adult learner as whole person. Currently, there is little understanding about how paramedic
students integrate and synthesize the knowledge and skills throughout the program components
in order to achieve competency in practice.

The purpose of this qualitative exploratory narrative case study is to gather field stories
about your paramedic practice experiences in order to explore how you make meaning of your
formal education program learning experiences. I am most interested in understanding how your
educational experiences may inform your current practice. It is hoped that the findings of this
study will help to better understand how you perceive any gaps in your paramedic education in
relation to your current practice and inform how to improve the education programs. Currently,
there is little understanding about how paramedic students integrate and synthesize the
knowledge and skills throughout the program components in order to achieve competency in
practice.

You have been chosen as a participant because you are a paramedic graduate from an
Alberta education program within the past two years and less than the last five years. You were
also chosen because you are currently employed full time as a paramedic in a large urban
emergency medical services agency.

WHAT WOULD I HAVE TO DO?
If you choose to participate in this study you will be asked to participate in dialogues with me about your experiences as a practicing paramedic. This means we will meet face-to-face for up to two hours at a mutually agreeable time and location during your off-work hours. The sessions will be conducted using semi-structured interview questions to help guide us through the conversation. You are being asked to participate in a minimum of two sessions (to a maximum of three sessions); each session will be approximately two hours long to which the time and location will be mutually agreed upon.

You will be asked to share your paramedic practice experiences and your paramedic educational experiences. All discussions will be audio-taped using a voice activated tape recorder. These recordings will be transcribed by me into text-based interview dialogue documents and used for analysis of the topic. You will be asked to review transcriptions of our interview dialogues for accuracy. The transcriptions will be sent to you via registered mail for review and given a two week timeline for response, a lack of response in this case will indicate that you approve of the material as shown.

You will be asked not to reveal any names, dates, places, events or agencies when sharing stories. If you inadvertently reveal identification of a person, dates, place, event or agency, the recorder will be stopped and the information will be deleted before continuing with the interview. At this point you will be reminded to refrain from sharing self-identifying information.

Your participation in any or all parts of this study is voluntary. You may choose not to participate in this study with no fear of reprisal or penalty. You may withdraw from the study at any time. All data collected until the point of withdrawal will be retained and used. When the
study is complete you will be sent a letter of gratitude to ensure your awareness of the status of the study and to ensure you have researcher contact information.

**WHAT KIND OF PERSONAL INFORMATION WILL BE COLLECTED?**

Should you agree to participate, you will be asked to confirm the following:

- **a)** that you completed your education in an Alberta paramedic education program

- **b)** that you have worked in an urban emergency services agency for more than two years and less than five years.

- **c)** You will be asked to share your experiences as a paramedic student and your experiences as a paramedic.

- **d)** personal information collected will include email, telephone, and personal mailing address. Personal information will be collected for the purposes of contacting participants only and not reported within this study. All participant information collected shall remain confidential.

All information about paramedic education programs, institution program instructors or preceptors, and any identifying information connected to specific events, dates, places, organizations or persons will be held in confidence. All participants and education programs will be assigned pseudonyms. Specifically, please consider the statement below and check mark on the corresponding line that indicates your preference your permission to:

I grant permission to be audio taped:  Yes: ___ No: ___

**WHAT ARE THE RISKS?**

There is a minimal risk that during your participation in this study you may experience anxiety or distressing emotions, or self-identify knowledge gaps. If this occurs you may choose
to access support from the Alberta Health Services EMS Peer Support Team, the Employee Assistance Program (EAP) or Pastoral support via 1-403-888-5181, or contact the Alberta Health Services EMS Learning and Development Field Trainer in your specific zone.

**WILL I BENEFIT IF I TAKE PART?**

You will not be paid to participate in this study.

**WILL MY RECORDS BE KEPT PRIVATE?**

The information you provide will be gathered exclusively through face-to-face dialogue sessions. The sessions will be audio-recorded and transcribed by me using transcription software on my password protected personal computer.

The information collected will be available to me and my University of Calgary, Faculty of Education supervisor. The transcriptions and audio files are kept in a locked cabinet accessible by me. The confidential data will be stored on my password protected personal computer until all requirements of this study are met, at which time, it will be permanently erased. Pseudonyms will be assigned by me and used for all participants and paramedic education programs.

You will be asked to review the transcribed data after each individual session for accuracy and completeness. The transcriptions will be sent to you via registered mail for review and given a two week timeline for response; a lack of response in this case will indicate the participant approves of the material as shown. All information about paramedic education programs, institution program instructors or preceptors, and any identifying information connected to specific events, dates, places, organizations or persons will be held in confidence. The information collected will be used for the purpose of informing the research needed to complete my educational doctorate degree at the University of Calgary. Once this degree is completed I may use the study findings for journal articles and conference presentations.
Your participation in any or all parts of this study is voluntary. You may choose not to participate in this study with no fear of reprisal or penalty. You may withdraw from the study at any time. All data collected until the point of withdrawal will be retained and used.

REQUIRED SIGNATURES

Your signature on this form indicates that you have understood to your satisfaction the information regarding your participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the investigators or involved institutions from their legal and professional responsibilities.

Your signature on this form indicates that you 1) are a registered paramedic in Alberta currently practicing primarily in an urban service for more than the last 2 years but not more than 5 years, and 2) were educated in an Alberta paramedic program.

In no way does this waive your legal rights nor release the investigators, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from this research project at any time.

You should feel free to ask for clarification or new information throughout your participation contacting either of the researchers below:

Becky Donelon, MA, EMT-P, Student
Doctorate of Education
Graduate Division of Education Research
Faculty of Education
[ email address ] [ telephone number ]

Dr. Cynthia Mannion, Associate Professor
Faculty of Nursing
2500 University Drive NW
Calgary, AB
Canada T2N 1N4
[ telephone number ]
If you have any questions concerning your rights as a possible participant in this research, please contact The Chair, Conjoint Health Research Ethics Board, University of Calgary, at 403-220-7990.

______________________________________________________________________________
Participant’s Name __________________________ Signature and Date ____________________

______________________________________________________________________________
Investigator/Delegate’s Name __________________________ Signature and Date ____________________

______________________________________________________________________________
Witness’ Name __________________________ Signature and Date ____________________

The University of Calgary Conjoint Health Research Ethics Board has approved this research study.

A signed copy of this consent form has been given to you to keep for your records and reference.
Appendix B: Semistructured Interview Guide

Stories from an Urban Perspective: The Influence of Paramedic Education on Current Practice

Experience is a hard teacher because she gives the test first, the lesson afterward

Vernon Law

Introduction:

Thank you for participating in my research study. I am interested in your paramedic educational experiences, and the influence that they may have on your practice today.

I believe that learning and practice in paramedicine is complex and that little is understood about how educational experiences impact paramedic practice. I agree with Connelly & Clandinin (1990) that the main claim for the use of narrative inquiry in educational research is that humans (and thus paramedics) are storytelling organisms who lead storied lives.

While this session is considered an interview, it will be more like a conversation than an interview led by me. Your participation in any or all parts of this study is voluntary. You may choose not to participate in this study with no fear of reprisal or penalty. You may withdraw from the study at any time. All data collected until the point of withdrawal will be retained and used.

You will be asked to not reveal any names, dates, places, events or agencies when sharing stories. If you inadvertently reveal identification of a person, dates, place, event or agency, the recorder will be stopped and the information will be deleted before continuing with the interview. At this point you will be reminded to refrain from any specific identification prior to continuing.
Within this exploratory study about paramedic experiences the following are to be considered the guiding questions for the interview.

1. Can you tell me about how you became interested in paramedicine?
2. Can you share your journey to the paramedic education program?
3. Can you confirm where and when you attended paramedic school?
4. Can you tell me about your experiences as a practicing paramedic?
5. I would like to hear a story you are able to share about your paramedic education experiences?