GRADUATE INTERPROFESSIONAL EDUCATION AND COLLABORATIVE

PRACTICE EXPERIENCES: A PHENOMENOLOGICAL INQUIRY

by

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ABSTRACT

Healthcare reform and the complexities of the healthcare system and chronic disease conditions call for collaborative interdisciplinary team-based care. To enhance these collaborative efforts, universities and facilities are promoting the need for students and professionals to learn and work with others from different healthcare disciplines in an interprofessional manner. Four graduates of undergraduate programs in health sciences, nursing, radiologic sciences, and respiratory care sat for multi-series interviews using a phenomenological approach to share their experiences in interprofessional education and collaborative practice. Participant responses were grouped into themes around the development of a professional identity through personal, educational, and professional healthcare experiences; their role within the larger healthcare team and the dynamics of those relationships; and their focus on the patient at the center of care. The results indicate a need for interprofessional education at the undergraduate level in order to set an expectation of collaboration and provide opportunities for students to practice interpersonal skills with a variety of personalities through applied learning experiences that continue into the work setting through professional development. These participants recognized the need for many of the identified interprofessional collaborative practice competencies, particularly those concerning roles and responsibilities, communication, and teams and teamwork, and saw the benefit of collaboration on patient outcomes. This study also highlights the need for programs and institutions to consider the inclusion and role of non-clinical disciplines within the healthcare team. Sharing these experiences may

contribute to interprofessional education and collaborative practice initiatives and future

research efforts, providing insight into the graduate perspective.

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LIST OF ABBREVIATIONS

BSU   Boise State University

GC   Graduate College

TDC   Thesis and Dissertation Coordinator

IOM   Institute of Medicine

IPE   Interprofessional education

IPCP   Interprofessional collaborative practice

IPLC   Interprofessional learning continuum

WHO   World Health Organization

CHAPTER ONE: INTRODUCTION

Healthcare reform and the complexities of the healthcare system and chronic disease conditions call for collaborative interdisciplinary team-based care. To enhance these collaborative efforts, universities are promoting the need for interprofessional education and the opportunity for students in healthcare connected programs to learn with and about all healthcare disciplines. This initiative requires intentional effort to bring students together in a meaningful way, to enhance communication and teamwork skills and to promote interprofessional learning, interaction, and relationships. As institutions continue to highlight this effort, dedicating resources and integrating it into strategic planning initiatives, it is important to learn more about the student perceptions of such interactions and those of their future collaborative efforts. This study describes healthcare graduates' perceptions of interprofessional education and interprofessional collaborative practice experiences, and the commonalities between them.

Statement of the Problem

According to a recent study, as many as 210,000-400,000 deaths occur per year due to preventable harm in hospitals (James, 2013). Communication failure has been identified as a leading cause of sentinel events, specifically medication errors, delays in treatment, and wrong-site surgeries. It also plays a large part in operative and postoperative events and fatal falls. Communication, or the lack thereof, occurs between several healthcare professionals throughout the hospital and other facilities involved in a patient's care; one patient may interact with 50 different employees during a relatively

short stay. The numerous interfaces and patient handoffs require sharing of critical information, a process that demands efficient and accurate communication. Ineffective communication can result in missing information, misinformation or misinterpretation of information, unclear orders, and overlooked critical elements. An effective, collaborative healthcare team is essential to addressing these too-common communication failures (Barton, 2009).

The healthcare industry indicates that interprofessional collaborative practice can improve access to and coordination of health-services, appropriate use of specialist clinical resources, health outcomes for people with chronic diseases, and patient care and safety (World Health Organization [WHO], 2010). Such collaboration assists in decreasing total patient complications, length of hospital stay, tension and conflict among caregivers, staff turnover, hospital admissions, clinical error rates, and mortality rates (WHO, 2010). In addition, collaborative practice has added benefits for those in mental health settings, for terminally and chronically ill patients, and for health systems. These include increased satisfaction and compliance with treatment, a reduction in the length and cost of treatment as well as frequency of visits, and an improvement in overall health (WHO, 2010). This initiative is further promoted in the Institute of Medicine's 2003 report, *Health Professions Education: A Bridge to Quality*, which emphasizes the need for patient-centered care delivered by interdisciplinary teams (Greiner & Knebel, 2004). As the Assistant Deputy Minister for Health and Education states:

> We know that interprofessional collaboration is key to providing the best in patient care. That means we need to ensure our health and human services students gain the knowledge and skills they need through interprofessional

education that begins at the earliest stages of their schooling. (WHO, 2010, pg.

36)

Such collaboration is essential in patient safety as poor communication can increase

patient risk and medical errors (Leape, Lawthers, Brennan, & Johnson, 1993). As

Bandali, Parker, Mummery, and Preece (2008) state, "Teamwork and communication,

therefore, are fundamental hallmarks of safe and reliable patient care" (p. 183-184).

To better prepare healthcare professionals for such collaboration, academic

leadership organizations are recommending this integration as part of the training and

education of these professionals. According to the Institute of Medicine, "all health

professionals should be educated to deliver patient-centered care as members of an

interdisciplinary team, emphasizing evidence-based practice, quality improvement

approaches, patient safety and informatics" (Greiner & Knebel, 2004, p. 45). Traditional

methods in which health professional students have minimal contact with each other and

few collaborative learning experiences result in graduates that are poorly prepared for a

collaborative team environment, lacking knowledge of different roles and teamwork

skills (Curran, Sharpe, Flynn, & Button, 2010; Page et al., 2009).

As the culture of healthcare in the United States is changing, so too must our

healthcare education. The culture of the current professions is rooted in their education,

most of which continues to remain individual, segregating students by their chosen

discipline (Grossmann, Institute of Medicine, & National Academy of Engineering,

2011). This traditional method of education for health professionals takes a "silo"

approach, maximizing the uniprofessional classroom to ensure each individual health

professional is an expert in one particular area and promoting autonomy within one's

own discipline (Grossmann et al., 2011; Karim & Ross, 2008). It is, in part, what has created the current U.S. system of competition, misaligned incentives, and distrust in the healthcare system (Grossmann et al., 2011). This siloed approach stems from individual systems of program accreditation, evaluation, faculty development, and tradition (Miller et al., 2013). Unfortunately, this works against the collaborative team approach needed in our healthcare system (Miller et al., 2013). To begin changing this long-standing approach to healthcare education, industry experts recommend interprofessional education.

The World Health Organization (2010) defines interprofessional education "when students from two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes" (p. 13). According to the Interprofessional Education Collaborative (IPEC) expert panel (2011), "The goal of this interprofessional learning is to prepare all health professions students for deliberatively working together with the common goal of building a safer and better patient-centered and community/population oriented U.S. health care system" (p. 3). The IPEC expert panel identified four practice competency domains: values/ethics for interprofessional practice, roles/responsibilities, interprofessional communication, and teams and teamwork. These represent a condensed version of the World Health Organization's six domains (WHO, 2010). These competencies address the dignity and privacy of patients, cultural diversity and individual differences, relationships amongst healthcare teams and their patients and families, standards of ethical conduct, honesty and integrity, respectful and effective communication and teamwork, limitations, and the roles and responsibilities of the healthcare team (IPEC, 2011). The collaborative efforts should not result in

independent goals and actions, but rather an interprofessional and collaborative plan (Casto, Julia, & Ohio State University, 1994). It requires an understanding of other professions and how each contributes to the plan (D'Amour & Oandasan, 2005; Drinka, 1996; Fitzpatrick, 1996; Hall, 2005). This shared perspective allows the healthcare team to acknowledge the contribution of each discipline and to recognize that the team as a whole can accomplish more than any one team member acting alone (Casto et al., 1994). The intent of interprofessional education is to assist healthcare students in fostering these skills, to be used effectively when they enter the workforce.

Although the professional world is asking for more collaboration, the current structure of education for the healthcare professions in post-secondary schools does not foster this skillset (Carlisle, Cooper & Watkins, 2004; Gilbert, 2005; McNair, 2005; Orchard, Curran & Kabene, 2005). Often these students have little contact with other disciplines and few shared learning experiences focused on developing a collaborative healthcare team (Baldwin, 2007; Freeth, Hammick, Reeves, Koppel, & Barr, 2005; Gilbert, 2005). This can cause a deficit in communication and teamwork skills, overall professionalism, and critical thinking skills (Barlett & Cox, 2002; Cruess & Cruess, 2006; Del Bueno, 2005; Elcin et al., 2006; McNair, 2005; Rodger, Mickan, Marinac & Woodyatt, 2005). Many current health care professionals lack an understanding of other health care professions and the contributions each makes to the patient-centered team (Mu, Chao, Jensen, & Royeen, 2004). It is easy for individuals to get caught in traditional roles, which can foster a territorial attitude and desire to maintain professional distance (Mu et al., 2004). Interprofessional education is a strategy to break down the silo approach to healthcare education and instead promote a team-based mentality (Hall,

2005; Hammick, 2000). In order to do this, the curriculum needs to provide opportunities for collaboration while fostering student ability to integrate interprofessional skills with the technical skills specific to each discipline (Bandali et al., 2008). It intends to foster mutual respect and an interest for learning about the other professions on the healthcare team, enhancing communication and teamwork skills (Hoffman & Harnish, 2007). It calls for initiatives and curriculum revisions at all institutions that provide healthcare education (Bandali et al., 2008).

As with many education initiatives, interprofessional education activities have been difficult to evaluate and are under researched (Glen & Reeves, 2004; Tunstall-Pedoe, Rink, & Hilton, 2003). To ensure it is accomplishing the stated goals, it is essential that universities, colleges, and healthcare institutions evaluate interprofessional initiatives (Whelan et al., 2005). Such investigation will not only verify or disprove the claimed benefits of interprofessional education, but will also direct institutions to best practices and the most effective allocation of resources (Hoffman & Harnish, 2007). It is necessary to identify the place and role of interprofessional education and confirm the stakeholders and their interest (Glen & Reeves, 2004). A number of studies have addressed the short-term effects of these activities, but few have investigated the longitudinal effects (Glen & Reeves, 2004). Furthermore, many studies have been quantitative, focused on standardized instruments and cumulative evaluation. It has been suggested that more multi-method studies are needed to capture the multi-faceted nature of interprofessional education (Glen & Reeves, 2004). The majority of studies are focused on the graduate student population, particularly medical students, with little evidence of support for interprofessional education at the undergraduate level (Hoffman

& Harnish, 2007; Tunstall-Pedoe et al., 2003). In addition, few studies have included the public or population health perspective, not only missing this as an essential discipline within the interprofessional team, but failing to assess the inclusion of the students majoring in this area (Brandt, 2014). Additional studies addressing other student populations and different types of programs, and utilizing qualitative or mixed methods are needed to further investigate the value of this trend in healthcare education.

Epistemological Framework

The push for interprofessional education in post-secondary institutions represents a current phenomenon both in the healthcare system and the education system. This initiative calls for an evaluation of long-standing traditional methods of educating healthcare professionals, impacting institutions, faculty, and students. It requires new teaching methods in the classroom, maximizing a particular skillset of instructors, and challenging students to think beyond a single discipline, integrating teamwork and problem-solving skills. Evaluating this initiative goes far beyond a simple assessment of mastering a competency statement; it seeks to change the culture of the current healthcare education system. Studying this trend requires a multifaceted approach focusing on the individuals involved in the implementation and experiences of interprofessional education. I used a phenomenological methodology to explore one university's graduates' perspectives of their interprofessional collaborative practice and education experiences.

Phenomenology studies a phenomenon from multiple angles, focusing on the descriptions and experiences of the participants, in an attempt to better understand those experiences (Husserl & Gibson, 1962). It focuses on how the participant experiences the

world, their perceived reality of the situation (Taylor & Bogdan, 1984).

Phenomenological philosophy assumes that human experience and thought are intentional, existing within a person's context, with our awareness of reaction revealing information about ourselves (Pollio, Henley, & Thompson, 1997). This suggests these experiences are understood within a sociolinguistic framework, with the inability to remove an experience from culture and language (Pollio et al., 1997). Husserl's "most basic philosophical assumption was that we can only know what we experience by attending to perceptions and meanings that awaken our conscious awareness" (Patton, 1990, p. 69). There is an assumption of an essence to the shared experience that participants can identify as common meanings and themes (Moustakas, 1994; Patton, 1990). A phenomenological study focuses on this shared experience, describing the what and how of the experience from the participant's perspective (Moustakas, 1994; Patton, 1990).

My use of the phenomenological perspective focused on what graduates experience and their interpretation of that experience (Patton, 1990). With this lens, I believe the human experience is best accessed through the complexities of first-person narrative. Part of interprofessional education and collaborative practice is to promote self-reflection, an assumption of phenomenological philosophy in which information is acquired about our own identities through reflections of our experiences (Pollio et al., 1997). In interprofessional education, students are able to experience themselves as an interprofessional collaborator within a social setting and in interprofessional collaborative practice, professionals are able to experience their role in the larger healthcare team. Listening to and observing the language used provided valuable insight into the

participants' experiences and each gave meaning to those experiences, challenging me to attend to the aspects of the experiences that are important to the graduates (Pollio et al., 1997). These narratives were broken down into themes, using a multi-angle approach and considering a variety of perspectives (Moustakas, 1994; Patton, 1990). This resulted in a rigorous description of the graduates' experiences. I considered both the experiences of the individual graduates as well as a reflection of their experiences as a whole, focusing on the deeper meaning of interprofessionalism, interprofessional education, and interprofessional collaborative practice (Patton, 1990). Specifically, the graduate narratives allowed a better understanding of the student experience of interprofessional education and of the professional experience of interprofessional collaborative practice. Although I identified a few differences between individual graduate's perceptions, I targeted the essence of being a graduate experiencing interprofessional collaborative practice after previous interprofessional education, and the meaning of those experiences. There was some assumed commonality within this experience for students, and I have identified these shared meanings and themes (Eichelberger, 1989).

Purpose of the Study

In response to healthcare reform and a growing emphasis on improving quality patient care, expanding population health, and reducing healthcare costs, further research is needed to investigate the efficacy and capacity of interprofessional education initiatives to teach interdisciplinary communication and teamwork skills, as well as the current status of interprofessional collaborative practice. This inquiry addresses the perceptions of undergraduate nursing, health science, radiologic science, and respiratory care graduates concerning their interprofessional collaborative practice experiences, and

previous interprofessional education experiences. Although the outcomes of interprofessional education are identified by several entities, there has been little investigation into graduate perceptions and experiences after entering the workforce. Interprofessional education is a complex initiative that has been studied and conceptualized in a variety of ways, and I see value in sharing the essence of the graduate experience through first-person narratives. The literature suggests that, while introduction to the interprofessional education competencies is desirable for new graduates, it is questionable whether students at an undergraduate level have sufficient time and content mastery to exhibit competence in all areas. Insight into the graduate interprofessional education and collaborative practice experience offers a better understanding of what is needed in continued interprofessional collaboration in the workforce. This informs faculty and educational leaders in designing more effective pedagogy and programming to achieve interprofessional education initiatives, and healthcare organizations in providing continued support for effective interprofessional collaborative practice.

Research Questions

The overall focus of this research centers around the question, "What is the essence of a graduate's interprofessional education and collaborative practice experiences?" The following questions have guided this inquiry:

- How do undergraduate Health Science Studies, Nursing, Radiologic Sciences, and Respiratory Care graduates describe their interprofessional *collaborative practice* experiences?

- How do undergraduate Health Science Studies, Nursing, Radiologic Sciences, and Respiratory Care graduates describe their interprofessional *education* experiences?

- How do undergraduate Health Science Studies, Nursing, Radiologic Sciences, and Respiratory Care graduates experience the relation of their interprofessional *education* and *collaborative practice* experiences?

I used Seidman's (2013) phenomenological interview methodology to guide the construction of interview questions and probes (See APPENDIX A). This semi-structured interview format was used to explore the perceived graduate experiences of interprofessional collaborative practice and education.

Significance of the Study

The university in this study has recently embarked on several key initiatives to integrate interprofessional education throughout the curriculum. This university is not associated with a medical school and includes only a few clinical programs (programs requiring direct-patient-care practicums) along with several other health-related programs, with a predominantly undergraduate student population. With the majority of nation-wide interprofessional initiatives focused on graduate and/or clinically-based students, this university is facing unique challenges in the integration of interprofessional education. A college-wide interprofessional curriculum is a lofty goal for a college with such diverse programs and unique student population.

An initial and ongoing effort includes an interprofessional capstone course for all undergraduate students pursuing a health-related degree. This capstone was integrated into the curriculum and an initial course template was created by an interdisciplinary

group of faculty. The course has been taught for several semesters, with a variety of modifications. As a college-wide capstone for graduating seniors, it is the intention that this course has a significant impact on students and their understanding of interprofessional collaboration.

In order to maximize the impact of this course and future interprofessional curricular efforts, it is important to explore the student experience and perceived barriers that may need to be overcome. This research sought to learn more about these experiences after the student has graduated and begun working in the field, focusing on their perceived experiences of interprofessional collaborative practice, and exploring the relationship of those experiences with their previous interprofessional education experiences.

Summary

As the healthcare industry continues to push for better patient care at a lower cost, it is essential that health care professionals develop skills in collaboration and teamwork. These skills should be practiced by students in post-secondary institutions, as they also learn to master content and technical skills, and continue to be practiced in the work setting. Many colleges and universities are embarking on interprofessional education initiatives to provide these opportunities for students, but the effectiveness of such initiatives is still being realized in the professional community. To better understand the graduate experience of an interprofessional education opportunity and interprofessional collaborative practice in the workplace, it is necessary to obtain first-person narratives from the graduate perspective.

A review of the literature follows in Chapter 2, further defining and exploring interprofessional education and collaborative practice, identifying the competencies, fundamentals, challenges, trends, and outcomes of both. This also includes a discussion of professional stereotypes in healthcare and the complexities of changing the longstanding culture of professional healthcare education and healthcare organizations. Following this literature review is Chapter 3, which identifies the research methods used, with a more comprehensive discussion of qualitative inquiry, the research design, the population and setting, recruitment procedures, data collection, anticipated methods of data analysis, and strategies for trustworthiness, as well as a brief summary of the participants and their interprofessional education and collaborative practice experiences.

CHAPTER TWO: LITERATURE REVIEW

Although the support for team-based care is substantive and interprofessional education is identified as a strategy to improve professional collaboration, there are not clearly identified learning theories or teaching methods that apply strictly to this type of education. This, in addition to the often substantial changes necessary to implement an integrated curriculum, leads to a number of challenges in implementing interprofessional education in university systems. Furthermore, the models of interprofessional education vary widely, with a number of initiatives originating in Europe and Canada, and a relatively new integration in the United States, primarily in clinical graduate education programs. In order to better understand newly offered interprofessional education activities in a variety of classes with undergraduate and graduate students in both clinical and nonclinical programs, it is important to further explore these issues. This literature review will address the learning theories and competencies that guide interprofessional education and collaborative practice, the barriers to implementation, and the global trends of interprofessional education and collaborative practice.

Interprofessional Education and Collaborative Practice Defined

As with many terms in education, the definition of *interprofessional* education can vary according to the organization and industry in which it is used. For some, the unique identification of interprofessional education is unclear (Tunstall-Pedoe et al., 2003). How does it differ from *interdisciplinary*, *transdisciplinary*, *multidisciplinary*, *transprofessional*, or *multiprofessional* learning? The World Health Organization

(WHO) (2010) defines interprofessional education as "students from two or more professions learn[ing] about, from and with each other to enable effective collaboration and improve health outcomes" (p. 13). This appears to be the most widely used and most current definition, with emphasis placed on the *about*, *from*, and *with* to differentiate this from traditional interdisciplinary learning. The Centre for the Advancement of Interprofessional Education (CAIPE) expands the WHO definition to include professionals, rather than just students, and identifies that the educational activities should be interactive (Glen & Reeves, 2004). Tunstall-Pedoe et al. (2003) clarify this as active learning and CAIPE supports this, stating that true interprofessional education is more than just passive learning in an interdisciplinary group, which it refers to as *multiprofessional* education (Glen & Reeves, 2004). This is in contrast to *uniprofessional* education, in which one profession is educated in isolation, and *multidisciplinary* learning, which involves members of different branches of a single profession (Karim & Ross, 2008; Parsell & Bligh, 1998). According to Hammick, Freeth, Koppel, Reeves, and Barr (2007), all understandings of interprofessional education are a subset of multiprofessional education. Zwarenstein et al. (2009) and Hale (2003) offer definitions that mirror the above, defining educational interventions or initiatives in which different professionals learn interactively together. Toner (2009) offers a slightly narrower definition, indicating the participants must be associated with health or social care. All definitions clarify the purpose of the learning activity to be the fostering of collaborative practice and *interprofessionality*, "the process by which professionals reflect on and develop ways of practicing that provides an integrated and cohesive answer to the needs of the client/family/population…" (D'Amour & Oandasan, 2005, p. 9).

Many identify interprofessional education as an intervention, whether it is implemented in an educational or workplace setting. Additional interprofessional interventions in the workplace are defined by Zwarenstein et al. (2009) beyond interprofessional education, to include interprofessional practice and interprofessional organization interventions. Interprofessional practice interventions includes tools or routines used in the workplace to improve collaboration, such as structured meetings or checklists, and interprofessional organization interventions include higher level changes, such as revisions to policy or modifications in staffing.

In addition to the variety of definitions of interprofessional education, there are similar definitions of interprofessional collaboration. This idea of collaboration implies sharing and collective action focused on a common goal, ideally in a synchronous and trusting manner (D'Amour, Ferrada-Videla, San, & Beaulieu, 2005). According to Sullivan (1998), collaboration is "a dynamic, transforming process of creating a power-sharing partnership" consisting of the process, partnerships, practice, and outcomes (p. 65). Attributes of collaboration were also identified by Henneman, Lee, & Cohen (1995) similarly, noting the partnership, cooperation between parties, participation and coordination of those involved, and shared planning, decision making, and power. Korner and Wirtz (2013) identify the core dimensions of this type of teamwork as communication, cooperation, coordination, respect, and work culture. The WHO defines *interprofessional collaborative practice*, "when multiple health workers from different professional backgrounds work together with patients, families, careers, and communities to deliver the highest quality of care" (IPEC, 2011, p. 2). This goes beyond a *multidisciplinary* approach where each team member is responsible for tasks related to

his or her own discipline, to create a comprehensive plan for the patient (Barton, 2009; D'Amour et al., 2005). These approaches vary in organization, leadership, communication, and decision-making (Korner, Wirtz, Bengel, & Gortiz, 2015). Orchard (2010) focuses on the role of the patient within the collaborative effort, specifically noting the patient as a partner that retains control over his or her own care by utilizing the knowledge and skills of the healthcare professionals to create a feasible care plan with the resources available through shared decision-making. Orchard (2010) also goes beyond the direct patient care setting to include coordinated approaches to social issues. Barton (2009) highlights complementary roles and cooperation for problem-solving and decision-making in the definition of interprofessional collaboration, similar to D'Amour et al. (2005) and Reeves et al. (2010). Drinka (1996) offers a similar definition that focuses on a group of health providers from different professions engaging in planned collaboration during patient care. Hoffman and Harnish's (2007) definition is also identified as "patient-centered", stating a team-based approach that maximizes the strengths of each member of the team (p. e235). In addition to maximizing these strengths, Zwarenstein et al. (2009) also mention the valuing of the expertise and contributions of each member, and the inclusion of negotiated agreement. Casto et al. (1994) include some attributes essential to effective interprofessional collaboration, such as mutual respect and commitment. This collaboration maximizes the use of each team member's knowledge and skills in an effort to improve outcomes (Barton, 2009).

Regardless of the definition, each aims at identifying purposeful educational activities or interactions that promote collaboration between members of different disciplines with a shared common goal. The intent is for students to have a better

understanding of healthcare roles and multidisciplinary teams (Tunstall-Pedoe et al., 2003). According to Epstein and Hundert (2002), professional competence is "the habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values, and reflection in daily practice for the benefit of the individual and the community being served" (p. 226). Interprofessional education attempts to broaden professional competence, focusing primarily on the shared competence of the team. In healthcare, this goal of interprofessional collaborative practice is centered on patient care, improved outcomes, and overall improvements in the healthcare system.

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Competencies

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In an effort to achieve this initiative, a variety of entities have created separate, but similar competency statements. The identification of clear learning outcomes is common in healthcare education, with many clinical programs undergoing an external accreditation that identifies required student outcomes in preparation for licensure and/or certification. The intention of defined competencies is to foster coordination across health professions, guide curricular development, contribute to evaluation and research efforts, highlight opportunities for integration, and inform accreditors and professional licensing and credentialing bodies (IPEC, 2011).

A set of core competencies for interprofessional collaborative practice were developed by an Interprofessional Education Collaborative expert panel, with representation from a variety of disciplines, including the areas of nursing, medicine, public health, pharmacy, and dentistry. This panel clarifies these competencies as integrated representations of knowledge, skills, and values/attitudes that enable

professionals to work together, along with patients, families, and communities, to improve health outcomes. These are meant to be general competencies that are common between multiple professions, but not necessarily all health professions. (IPEC, 2011)

The panel identified four practice competency domains, the first of which is around values/ethics for interprofessional practice. The general competency statement indicates that health professionals should be able to "work with individuals of other professions to maintain a climate of mutual respect and shared values" (IPEC, 2011, p. 19). To achieve this, students and professionals need to learn about patient/population-centered care, respecting the dignity, privacy, and confidentiality of the patient and embracing cultural diversity and individual differences in not only patients, but fellow health professionals and the community (IPEC, 2011; WHO, 2010). Professionals need to demonstrate the ability to work cooperatively, develop trusting relationships, and act with honesty and integrity with high standards of ethical conduct (IPEC, 2011; WHO, 2010). These competencies are shared amongst the individual healthcare disciplines and are commonly integrated into the curriculum, regardless of interprofessional education initiatives. However, professional, discipline-specific values are often internalized and may not be widely discussed or explicitly stated, developing through a subtle process of educational and practice experiences. If these differences are not addressed and discussed, they can become an "invisible" issue amongst caregivers (Hall, 2005).

The next domain identified focuses on roles and responsibilities, with the ability to "use the knowledge of one's own role and those of other professions to appropriately assess and address the healthcare needs of patients and to promote and advance the health of populations" (IPEC, 2016, p. 10). To do this, students and professionals must

understand their roles and responsibilities within their chosen profession, and be able to communicate those to other professionals, patients, and community members (IPEC, 2011; WHO, 2010). This also requires the acknowledgement of a profession's limits, understanding those skills and abilities that are outside of a particular discipline (IPEC, 2011). In addition to understanding one's own roles and responsibilities, interprofessional education calls for the understanding of other professions, to more effectively engage those healthcare professionals who complement one's own professional expertise and embrace interdisciplinary relationships to optimize team performance (IPEC, 2011; WHO, 2010). To achieve this competency, it is necessary that students and professionals from different disciplines are purposefully integrated into learning opportunities that encourage them to learn from, with, **and** about each other.

To build these relationships, it is necessary for healthcare professionals to engage in interprofessional communication, to be able to "communicate with patients, families, communities, and professionals in health and other fields in a responsive and responsible manner that supports a team approach to the promotion and maintenance of health and the prevention and treatment of disease" (IPEC, 2016, p. 10). This domain is primarily focused on effective communication skills, encouraging students and professionals to practice organizing and communicating information, expressing one's knowledge and opinions, listening actively, providing constructive feedback, and using respectful language (IPEC, 2011; WHO, 2010). In this day and age, it is also important for students and professionals to practice effective communication via emails, text messages, and other digital forms of communication (Barton, 2009). Many of these skills are taught in core university courses, but it is also important to provide opportunities for students to

practice engaging in discipline-specific communication, particularly using real-world scenarios. It is also necessary to encourage interprofessional communication, as vocabularies and terminologies can vary between the healthcare disciplines.

To truly embrace interprofessional collaborative practice, healthcare professionals need to be competent in teams and teamwork with the ability to "apply relationship-building values and the principles of team dynamics to perform effectively in different team roles to plan, deliver, and evaluation patient-/population-centered care and population health programs and policies that are safe, timely, efficient, effective, and equitable" (IPEC, 2016, p. 10). Teamwork and communication have been identified by health care workers as two of the most important factors in improving patient care and job satisfaction (Barton, 2009). Students and professionals need to learn and practice how to work in a team, integrating the knowledge and experience of the team members while constructively managing disagreements and eventually developing consensus (IPEC, 2011). This opportunity includes learning to overcome teamwork barriers, such as time, loss of autonomy and/or territorialism, trust issues, and misaligned personalities (Barton, 2009). Integral to a team is a leader; students and professionals also need opportunities to apply leadership practices and process improvement strategies (IPEC, 2011; WHO, 2010). Group assignments and team-based development activities help students and professionals share accountability and practice working in an effective team characterized by trust, respect, and collaboration (Barton, 2009; IPEC, 2011). Practicing this in a class affords the opportunity for self- and team-assessment, allowing students to reflect on their performance, the performance of their teammates, and their overall team performance (IPEC, 2011; WHO, 2010). Students are often afforded these opportunities

in a variety of classes, but integrating interprofessional groups adds a different dynamic for students to experience and reflects a more realistic professional situation. In the work setting, professionals should be encouraged to reflect on relationships with other professionals, using feedback to help strengthen those relationships and future collaborative experiences (Banfield & Lackie, 2009). Such reflection assists in developing a common vision and help with overcoming future barriers (Bareil et al., 2015).

The competencies identified by the expert panel align well with other association and organization-specific competencies that have been developed in a variety of settings. Overall, interprofessional education involves students learning to work effectively in healthcare teams, and to respect and appreciate what each team member contributes. Interprofessional collaborative practice involves the demonstration and application of these skills and attributes. Although many of these skills are integrated throughout the curriculum, including in university core courses, an interprofessional education initiative may be necessary for institutions and faculty to make a deliberative effort to provide opportunities for students to practice these skills in interdisciplinary groups.

<div align="center">**Theoretical Foundations**</div>

Pratt (1998) describes five perspectives on teaching, including transmission, apprenticeship, developmental, nurturing, and social reform models. Interprofessional education uses a variety of perspectives, focusing on applied experiences, emphasizing problem solving and critical thinking skills, and enhancing self-concept and self-efficacy. The social reform perspective views education as a way to better society by driving necessary cultural changes, a primary intention of interprofessional education. Each

perspective is based on a learning theory and how we, as humans, obtain and retain knowledge.

<u>Learning Theories</u>

Social-cultural learning theory addresses the role of social interaction and culturally organized activities in cognitive and psychological development (Driscoll, 2005). Situated cognition refers to the idea that thought is situated to the environment based on perception, conception, and activity. That is, incoming information varies based on how one perceives it, internalizes it, and acts on it. This theory is based on the concept that humans are social, knowledge is gained through active engagement, and humans seek to produce meaning (Driscoll, 2005; Siegler & Alibali, 2005). This social cognitivist lens acknowledges that humans learn in a social environment while observing others, building knowledge, beliefs, attitudes, and skills (Merriam, Caffarella, & Baumgartner, 2007). The learning focus is shifted from the individual to a societal level and obtained through participation in multiple communities of practice, allowing students to internalize the process of working collaboratively to acquire new strategies and knowledge (Driscoll, 2005; Siegler & Alibali, 2005). Interprofessional education should promote active learning, affording the opportunity for students to practice their skills in a collaborative environment, beyond the limitations of a single profession. Practicing these skills in the context of an interdisciplinary team allows students to perceive and internalize such a situation. It takes them from the peripheral of the interdisciplinary community to the center, an example of legitimate peripheral participation to establish a sense of belonging and comfort (Lave & Wenger, 1991).

In this sense, interprofessional education also draws on constructivism, addressing the student's ability to gain knowledge about relations within and between people and objects through experience (Piaget, 1955). Meaning is obtained actively through dialogue, utilizing cooperative and collaborative learning (Curran et al., 2010). This knowledge helps build identity and a pattern of practice within the discipline; students' educational experiences contribute to their identities, values and norms of their chosen profession, which can promote or reduce interprofessional collaboration (Curran et al., 2010; Hall, 2005). Practice-based learning experiences are essential in health education, and offer opportunities for students to socialize within their chosen discipline. Experiential learning allows students to interact, stimulating real-life problems and problem-solving methods (Curran et al., 2010). Interprofessional education affords the opportunity to continue this practice in interdisciplinary groups. It aligns with social constructivist theory, emphasizing the importance of learning about cultural commonalities using a shared language (Merriam et al., 2007).

Humans are constantly transformed through actions and relations in the world. Bruner focused on cognitive growth as a response to the environment through action, imagery, perception, language, and reasoning (Driscoll, 2005; Siegler & Alibali, 2005). The intention of interprofessional educational activities is to guide students through this process of internalizing information necessary for interprofessional collaboration. Using Vygotsky's zone of proximal development, it guides students from their independent ability to their potential in an interdisciplinary team (Driscoll, 2005; Siegler & Alibali, 2005). The instructor guides the participation and interaction through social group activities that support the individual student's understanding and skills as tools of the

larger healthcare culture (Rogoff, 1990). Learning occurs through interaction, negotiation, and collaboration, with attention to the group process (Driscoll, 2005). Such strategies incorporate the recommendations of both social-cultural learning and adult learning theories.

<u>Adult Learning</u>

Interprofessional education is targeted at adult students in post-secondary educational institutions, requiring methods suited for the adult learner. Hammick et al. (2007) found that principles of adult learning were a key mechanism of successful interprofessional education. Malcolm Knowles' (1973) andragogy describes the art and science of adult education and is based on several assumptions. As humans mature, they move from a dependent personality to being more self-directive (Knowles, 1973). Adulthood is marked by growth, change, and integration where a balance of energy is sought. The wide age range of adult learners in the nontraditional post-secondary classroom at various life stages requires anchoring and multiple methods of instruction (Merriam et al., 2007). This variety also means adult learners have a larger amount of previous experience, offering a great value to the classroom and sharing these should be promoted (Knowles, 1973; Merriam et al., 2007). These previous experiences are incredibly valuable in interprofessional education as these experiences should offer opportunities for each student to draw on these experiences, using them to contribute most effectively to the group.

According to Knowles (1973), an adult's readiness to learn is based on the social role. Unfortunately, this means adults tend to take fewer risks and do less trial-and-error, as errors can be taken personally (Merriam et al., 2007). In interprofessional education, it

is essential that a safe space is created for collaboration. Within the groups used in the interactive learning approaches, it is necessary to emphasize equality between participants, focusing on a neutral environment and equal representation from each profession in an effort to avoid dominance by one professional group (Parsell & Bligh, 1998).

Adult learners seek immediate application over future knowledge, with internal motivations more effective than external (Knowles, 1973). Adult learning is a constant balance of multiple responsibilities and time demands. Adult learners must typically balance multiple life responsibilities with their education, are typically goal-oriented with a purpose to their learning, and learning is often self-initiated and retained throughout the lifetime (Merriam et al., 2007). This time management challenge is common amongst most students involved in interprofessional education. These learning experiences offer them a new opportunity to share those challenges and experience how they can affect the overall group.

Finally, adults need meaning in what they are learning (Knowles, 1973). It is important for the adult learner to connect material presented in the classroom with their external roles. Adults need aspects of meaningful learning theory and situated cognition, where previous knowledge is bridged to new knowledge and skills are practiced through application and feedback (Merriam et al., 2007). When integrating interprofessional education experiences, it is essential that the student makes the connection of value to the real world. For interprofessional education to have an impact, students must be able to transfer their knowledge and skills to the real-world, and teaching case-based scenarios can help with this transition (D'Eon, 2005). Often adult learning takes a more non-

authoritarian, informal experience, where the teacher acts as a facilitator of learning, assisting the adult students in connecting new material to past experiences (Merriam et al., 2007). Facilitation is key in interprofessional education, requiring the faculty to guide students as they work through, process, and experience collaborative problem solving.

Fundamentals of Interprofessional Educational and Collaborative Practice Experiences

Interprofessional education involves addressing problems as a team, making joint decisions for collective action (Casto et al., 1994). Integrating this into a class requires careful planning to ensure students interact. This process is based on the assumption that there are common interests between disciplines and that this collaboration will increase student skills and knowledge (Casto et al., 1994). Simply placing them into a multidisciplinary class does not ensure collaboration and may even result in a lack of collegiality and perception of dilution in the content (Glen & Reeves, 2004). There must be an inclusion of interactive activities, such as small-group discussions and case-study activities (Barr, 1996; Glen & Reeves, 2004). These encourage an exchange of ideas and experiences, creating a shared learning environment (Barr, 1996). Similarly, placing different professionals together in a work environment will not necessarily lead to collaborative teams (D'Amour et al., 2005). Collaboration requires a synergy of professionals with a shared goal that integrates each member's perspective and fosters respect and trust (D'Amour et al., 2005).

To create shared learning activities, faculty must take the time to clearly plan an interprofessional experience before introducing it to the classroom (Russell & Hymans, 1999). The course objectives outlined in the syllabus should be relevant to all students

sharing the experience, and appropriate to the level of the course (Parsell & Bligh, 1998).
The experience needs to be customized to the disciplines and students involved in the
experience, lending a sense of authenticity (Hammick et al., 2007). Many
interprofessional experiences are created and implemented by a pair or team of
interdisciplinary faculty, which requires planned faculty meetings before, during, and
after the learning experience (Russell & Hymans, 1999).

Within the preparation for interprofessional learning experiences, flexibility is
also important, for the student, faculty, and institution. This type of learning requires
negotiation of differences, creative thinking and openness to new ideas, and flexibility at
the institutional level in scheduling, credit sharing, and faculty workload. Without this
flexibility it is challenging to find time for student and faculty interactions outside their
home department and to allocate the resources needed to support an interprofessional
initiative (Russell & Hymans, 1999).

Creating and facilitating interprofessional experiences requires an understanding
of group learning. In small-group learning, the instructor(s) must consider the group
balance, group mix, and group stability (Oandasan & Reeves, 2005). To enhance this
experience, it is recommended students have experience working as a group member and
understand the fundamentals of teamwork. These are the types of skills that can be
addressed early in a student's post-secondary career, even before they have decided on a
major. Students who do not have this instruction may need additional help. Instructors
creating interprofessional experiences in the classroom need to address group dynamics,
emphasizing the process and providing students opportunities to observe and practice
these skills. These may include decision making, clarifying roles and expectations,

conflict resolution, and group maintenance (Russell & Hymans, 1999). Activities such as case-based learning and problem-based learning are essential methods in interprofessional education, allowing students to discuss clinical problems together (D'Eon, 2005; Oandasan & Reeves, 2005; Tunstall-Pedoe et al., 2003). Students should be guided in the process of peer and team evaluation, setting clear expectations, assessment criteria, and addressing poor performance issues (Russell & Hymans, 1999). This ability to work in a group extends to interprofessional collaborative practice experiences in the workplace, with professionals engaging in communities of practice to share knowledge, experience, and skills in an effort to improve quality and general practice (Cameron, Rutherford, & Mountain, 2012).

Creating and conducting substantive group learning activities can be time consuming for both faculty and students. Both need more time for collaboration, and setting up a safe, shared environment takes more class preparation time. Student groups need time to learn about each other and the respective disciplines, to identify commonalities, to overcome any disagreements, and to address obstacles along the way. Providing sufficient time allows each group member to learn more about other disciplines, and to respect, value, and appreciate those disciplines. Group work comes with its challenges and will inevitably come with some obstacles; time must be allotted to deal with these hurdles, providing the collaborating group members time to overcome barriers (Russell & Hymans, 1999). Such shared learning experiences may help break down barriers of disciplinary silos, allowing team members to share different perspectives (Cameron et al., 2012).

Facilitation is key in this environment, which can be a challenge. It requires an understanding of group learning theories, practical skills, experience, and confidence (Glen & Reeves, 2004). This includes knowledge of the different disciplines and current issues in the industry, as well as the ability to facilitate collaboration (Holland, 2002). Students must learn good communication skills, respect, and an understanding of each team member's role (Tunstall-Pedoe et al., 2003). Casto et al. (1994) identify these as the subprocesses needed for teamwork, the task and maintenance functions. In the task functions, each member comes to the team with a set of knowledge and problem solving techniques that need to be recognized by the team, seeking out commonalities and strengths. This process promotes shared problem solving by collaboratively identifying the problem, creating a hypothesis, analyzing the issue, creating a plan, and implementing that plan. Maintenance continues within the group based on the skills above - communication, respect, and an understanding of roles. These could be expanded to include norms and values, decision making, and conflict resolution. Team members must be able to share thoughts and ideas effectively, address expected attitudes and behaviors, identify roles, examine alternatives, and resolve competing ideas and goals (Casto et al., 1994). This requires students to have a solid identity as a professional. It is ideal to facilitate these types of interactions in smaller classes, and is far more challenging to attempt in large lecture hall courses (Parsell & Bligh, 1998). External facilitation may also be used in the work setting to promote interprofessional collaborative practice, engaging professionals in sharing knowledge and experiences to promote a learning culture within the organization, encouraging them to learn from each other (Cameron et al., 2012). An effective facilitator can assist staff in change management, providing

oversight of the planning, management, monitoring, implementation, and evaluation (Bareil et al., 2015).

In addition to the carefully planned interprofessional education activities integrated into the curriculum and the classroom, the "informal" learning experiences are also valuable (Freeth et al., 2005). These are described as "social times" in interprofessional education, when students are able to have more casual encounters with classmates from other disciplines, and can increase positive attitudes and reinforce the goals of the interprofessional experience (Hammick et al., 2007; Mu et al., 2004). Gucciardi, Mach, and Mo (2016) also found such informal interactions essential to establishing collaborative relationships in the workplace, providing professionals with familiarity to promote trust and begin overcoming disciplinary boundaries. Encouraging such interactions provides opportunities for professionals of different disciplines to discover mutual interests and skillsets, helping to break down barriers and stereotypes (Gucciardi et al., 2016).

Participation in interprofessional collaborative practice requires mutual respect, cooperation, responsibility and accountability, shared power, trust, effective communication, autonomy, and coordination (Banfield & Lackie, 2009; Hall, 2005; Matziou et al., 2014; Norsen, Opladen, & Quinn, 1995). Opportunities should be made available for professionals from different disciplines to work and plan together to establish shared goals or outcomes that are aligned with the priorities and values of each team member (D'Amour et al., 2005; Hall, 2005; Orchard, 2010). Such opportunities provide for ongoing negotiation between disciplines to develop mutual understanding and respect, often through the multidimensional lens of patient care (Matziou et al., 2014).

Focusing on a common goal results in "idea dominance", highlighting the ability for each individual to contribute and shifting from their own professional focus to that of the team with realistic expectations of the overall outcome and accomplishments with shared responsibility (Hall, 2005, p. 194; Reese & Sontag, 2001).

Individuals participating in collaboration should recognize and respect all opinions and contributions, including their own, demonstrating confidence and a willingness to reexamine those personal beliefs and opinions (D'Amour et al., 2005; Hall, 2005; Norsen et al., 1995). Team members should actively engage others' input and views, valuing diversity and promoting different perspectives with an understanding of cultural sensitivity (Banfield & Lackie, 2009; Orchard, 2010). Cultural competence is the "ability to communicate between and among cultures and to demonstrate skills outside one's culture of origin" and to "respond effectively to patients and families from racially, ethnically, culturally and linguistically diverse groups" (Purden, 2005, p. 229). This requires an understanding of others' professional roles and responsibilities with a toleration for differences and the ability to overcome conflict in an effort to facilitate interprofessional interactions and develop interdependent relationships with other professionals (Banfield & Lackie, 2009; Barr, 1998; D'Amour et al., 2005). Significant relationships in interprofessional collaborative practice include those within a discipline and with other professionals, the community, and the patients, contributing to the overall culture of collaborative practice (Cameron et al., 2012). The recognition of this interdependency helps professionals see the ability to maximize their knowledge and skills to produce better outcomes (D'Amour et al., 2005; Matziou et al., 2014). In a study by Hepp et al. (2015), many healthcare professionals still struggle with this role clarity.

This includes taking responsibility and accountability for one's own role within the team and the patient care setting, with the ability to share that role and taking the initiative to work independently while still participating in group decision-making (Banfield & Lackie, 2009; Barr, 1998; Hall, 2005; Norsen et al., 1995; Orchard, 2010). This theme of sharing is a foundational concept of collaboration, with shared responsibilities, decision-making, philosophies, values, data, planning, interventions, and perspectives (Banfield & Lackie, 2009; D'Amour et al., 2005).

Rather than inherent to titles or disciplines, power should be shared among the team based on knowledge and experience, promoting non-hierarchical relationships (Banfield & Lackie, 2009; D'Amour et al., 2005). This distribution of power is essential in empowering team members with an expectation of being respected and valued in order to feel comfortable being open and trusting of each other (D'Amour et al., 2005; Laschinger & Smith, 2013; Orchard, 2010).

Open and honest communication is essential to this group process, promoting the exchange of ideas and assisting in the organization of group tasks (Banfield & Lackie, 2009; D'Amour et al., 2005; Hall, 2005; Matziou et al., 2014; Norsen et al., 1995). This includes verbal and nonverbal communication, interpersonal and conflict resolution skills, active listening, appreciative inquiry, and a common language between disciplines (Banfield & Lackie, 2009; Gucciardi et al., 2016). van Dongen et al. (2016) highlighted the use of collaborative tools for communication and documentation, including the use of technology such as Skype and shared information systems for sharing patient data. According to Gucciardi et al. (2016), providers indicated that face-to-face communication was more timely and efficient. Regardless, real-time discussions are not always feasible

and much of the communication in today's healthcare industry occurs via email, electronic records, and other asynchronous methods (Gucciardi et al., 2016). Hepp et al. (2015) found communication in patient-centered care to be a strength of many healthcare professionals currently participating in interprofessional collaborative practice, but that there were still gaps in overall team function and conflict resolution. Most collaborative examples identified included professionals from different disciplines working with each other on task-oriented patient care rather than in relation to shared problem-solving or care planning (Hepp et al., 2015).

Interprofessional collaboration requires a strong leader that can address challenges, assist the cohesion of multiple disciplines with different professional cultures, serve as a role model, and delegate appropriately (Banfield & Lackie, 2009; Hall, 2005; Orchard, 2010). This may also include the preparation, structuring, and organization of regular interprofessional team meetings, promoting and guiding reflection and discussion (van Dongen et al., 2016). Hepp et al. (2015) found that currently many interprofessional collaborative practice experiences are burdened with weaknesses in this area, stating collaborative leadership as an essential component to foster collaborative partnerships.

Interprofessional collaboration is a dynamic and interactive process that requires interdependency, constant communication, and shared decision making (D'Amour et al., 2005; Matziou et al., 2014). It regularly transforms, requiring life-long learning and blurring of professional boundaries (D'Amour et al., 2005). This blurring can be threatening to some, highlighting historical power struggles and hierarchical relationships and challenging the traditional role of the physician in control (Freeth, 2001; Hall, 2005). It may also raise fears of disciplinary neutralization, overlapping responsibilities to the

point of losing the differentiation between professions (Orchard, 2010). In order to overcome this, professionals may need to be re-socialized as part of an interdisciplinary team rather than a single discipline, learning how to incorporate the roles, knowledge, and skills of other providers (Orchard, 2010). This may include addressing discipline-specific language and the willingness to share historically discipline-specific responsibilities (Orchard, 2010; Reese & Sontag, 2001). While students are often exposed to multiple opportunities to practice communication skills, they are not necessarily focused on communication between the disciplines, which each enter the workforce with their own disciplinary language, problem-solving strategies, and values (Hall, 2005). It requires a shift of focus from that of competition between professionals to one of coordination (D'Amour et al., 2005). Frenk et al. (2010) refers to this as a form of new "professionalism", one focused on the patient through collaborative team efforts of interdependency and complementary skillsets. The inclusion of this parallel identity, that of the individual discipline and that of the interprofessional collaborative team, should be promoted in the socialization processes in education and the workplace in order to break down disciplinary siloes and traditional hierarchies (Khalili, Orchard, Laschinger, & Farah, 2013). Khalili et al. (2013) describe this as a dual identity in which students and professionals are encouraged to develop and promote a professional identity while learning and valuing other professional cultures in an effort to overcome concerns of identity loss, discrimination, and territoriality through inclusion.

In addition to promoting the inclusion of all professions within the healthcare team, it is important that the patient is recognized as a contributing member. With the team goal focused primarily on the patient, their perspective is key (van Dongen et al.,

2016). When they are included in decision-making, it often leads to more positive outcomes (D'Amour et al., 2005). Although they are regularly identified as part of the team when discussing interprofessional collaboration, many patients are unaware of this consideration and there are few recommendations to guide professionals on how to include them (D'Amour et al., 2005; Orchard, 2010). In fact, many feel they are not listened to, finding their opinions ignored and questioned, and may even view the team as a challenge in connecting with an individual professional (D'Amour et al., 2005; Orchard, 2010). In addition, when including the patient professionals may overestimate their knowledge and ability for self-care, and patients may be left unprepared upon discharge (Hepp et al., 2015). Patients should be recognized as an influential factor in interprofessional collaboration, placing them in an active role with a focus on their goals and wishes as a contributing member of the team (van Dongen et al., 2016). A family conference is an example of a great opportunity to engage not only the patient, but their family members and caregivers, "the quintessential forum for patient-centred interprofessional care" (Dojeiji, Byszewski, & Wood, 2015, p. 415).

The organization also plays a key role in promoting patient-centered interprofessional care. The organizational culture can set an expectation of a collaborative environment through a shared vision and mission with authentic, supportive leadership that empowers members of the healthcare team (Regan, Laschinger, & Wong, 2016). Professionals should be provided time, information, support, and space to engage in collaborative practice and encourage feedback from peers (Orchard, 2010; Regan et al., 2016). It is important that although it is a collaborative environment, individual team members still feel supported and recognized in their professional role (Regan et al.,

2016). Working collaboratively requires time to engage with others, so adequate staffing is also important to relieve time constraints for professionals and administrative support can help with documentation and organizational tasks (van Dongen et al., 2016; Orchard et al., 2005; Regan et al., 2016). Orientation programs should be provided to introduce professionals to the different disciplines within the healthcare team, encouraging them to share their roles, responsibilities, skills, and knowledge (Orchard, 2010; Reese & Sontag, 2001). Professional development and continuing education should be offered to assist professionals in practicing teamwork skills both face-to-face and via electronic communication means (Orchard, 2010). Regular team meetings can help individuals further develop their understanding of others' roles, build additional relationships, and identify common goals (Gucciardi et al., 2016). These may benefit from external facilitation to assist with change management and deal with the complexity of certain types of patient care, helping to overcome potential barriers of collaboration (Bareil et al., 2015; Cameron et al., 2012). Offering such opportunities promotes a culture of collaboration and helps to improve interactions and outcomes of patient-centered care (Orchard, 2010).

Implementation of Interprofessional Education and Collaborative Practice

The push for interprofessional learning experiences in the classroom seeks to instill interprofessional collaborative skills in students before entering the workforce, where it can be rather challenging to impart new skills on working professionals with minimal time available outside the often busy working hours. Interprofessional collaborative practice opportunities should also be offered in the workplace to expand on these experiences and allow professionals to continue to develop these skills. However,

the implementation of interprofessional education in post-secondary institutions and of interprofessional collaborative practice initiatives in facilities also comes with its challenges. There is still some debate about when interprofessional education should be integrated into the curriculum, whether it is appropriate for the new undergraduate student or should be reserved for the advanced professional student. Regardless of the decision, interprofessional education and interprofessional collaborative practice are initiatives that require significant resources, demanding institutional, faculty, and staff support. They are time consuming forms of learning that require skilled faculty and facilitators and often challenge longstanding university and organizational structure and tradition to overcome logistical obstacles.

Timing

Since the initial push for interprofessional education, there has been some debate about when in a student's educational career it should be introduced. Initially, the majority of interprofessional education initiatives focused on students who had already gained acceptance into a professional health program, such as medical school or perhaps a nursing program (Hoffman & Harnish, 2007). Many IPE efforts have originated in graduate programs, where students have been accepted into their professional program and have begun to build a professional identity (Tunstall-Pedoe et al., 2003). Some argue this establishment is necessary to gain the experience and confidence needed to participate in a collaborative interdisciplinary group (Dombeck, 1997). In a study by Bradley, Cooper, and Duncan (2009), students felt that in an early interprofessional learning experience they did not understand their own role enough to gain benefit from learning with other disciplines. Unfortunately, little research has been done on the

effectiveness and value of introducing interprofessional education earlier, before a

student has been accepted into a professional program (Hoffman & Harnish, 2007).

Some question whether introducing interprofessional education at such an early

stage in a student's career would be effective (Glen & Reeves, 2004). Many students not

yet accepted into a professional program are still debating on a major, some will change

disciplines, and some will not be accepted and diverted on another path. Miller, Freeman,

and Ross (2001) identify these stages as "pre-clinical", "clinical novice", and

"probationer", arguing that all stages are necessary before a student can engage in

meaningful interprofessional collaboration. It may be necessary for a student to have

sufficient time in a professional program to adequately develop a sense of the profession,

a professional identity, and the confidence needed to work with other disciplines as a

representative of their chosen discipline (Dombeck, 1997).

On the other hand, perhaps it is essential to introduce such concepts before a

student is fully entrenched into their chosen discipline, creating that siloed professional

identity and perhaps negative stereotypes or attitudes towards other professions

(Herzberg, 1999; Hoffman & Harnish, 2007; Leaviss, 2000; Soothill, Mackay, & Webb,

1995). Students have requested interprofessional education early, before they began to

develop "professional prejudice", with even first year health professions students seeing

value in interprofessional education (Hoffman & Harnish, 2007; Horsburgh, Lamdin &

Williamson, 2001; Parsell & Bligh, 1998; Rudland & Mires, 2005). Cooper, Spencer-

Dawe, and McLean (2005) found that students indicated starting interprofessional

education early in their academic career would foster understanding and create a bond

between professions. Reeves and Pryce (1998) found that first year medical, nursing, and

dental students had already developed stereotypical views of the healthcare professions; this may interfere with their motivation for interprofessional learning experiences (Curran, Sharpe, Forristall, & Flynn, 2008; Glen & Reeves, 2004). Earlier introduction may also protect from the positive effects of the training being lost (Carpenter, 1995; Casto et al., 1994; Parsell & Bligh, 1998). Areskog (1988) argues that basic interpersonal and professional skills should be taught early in the undergraduate curriculum, allowing students to develop communication, teamwork, and critical thinking skills. This helps to develop mutual respect and understanding to create a capacity for teamwork (Tunstall-Pedoe et al., 2003). Hoffman and Harnish (2007), and Tunstall-Pedoe et al. (2003) agree, arguing that many of the desired interprofessional education skills do not require professional content or skills. Integrating interprofessional education early in the curriculum enhances knowledge of roles and responsibilities, student attitudes towards each other, and interprofessional communication (Parsell & Bligh, 1999; Parsell, Spalding, & Bligh, 1998; Reeves & Freeth, 2002). This early integration does, however, come with its challenges. It may be more complicated to identify common times, deal with larger cohorts, and integrate diverse curricula (Glen & Reeves, 2004).

Infrastructure

Several studies have documented the benefits of collaboration and interprofessional education, indicating that it raises knowledge of roles and responsibilities and creates a deeper understanding of the contributions of other healthcare team members while enhancing attitudes and communication (Parsell & Bligh, 1999; Parsell et al., 1998; Reeves & Freeth, 2002; Russell & Hymans, 1999). However, creating and maintaining interprofessional curricula and workplace opportunities is

challenging, complex, and involves many individuals (Blue, Mitchan, Smith, Raymond, & Greenberg, 2010; Gilbert, 2005; Reeves, Goldman, & Oandasan, 2007). They require institutional support, communication, enthusiasm and support by faculty and staff, a shared vision, faculty and professional development, and at least one champion to coordinate activities (Hammick et al., 2007; Page et al., 2009; Parsell & Bligh, 1999; Russell & Hymans, 1999; WHO, 2010). Some facilities hire external facilitators to help promote and manage interprofessional collaboration, but it can be expensive and challenging to prove financially beneficial (van Dongen et al., 2016). Organizations often begin with initial funding, but fail to account for continued funding, and initiatives will be lost when resources run out, key participants move on to other initiatives, or administrative support diminishes (Freeth, 2001). Some government funding is available, but more is needed in primary care to provide the time and resources to develop more effective and efficient collaborative experiences (Gucciardi et al., 2016). Furthermore, interprofessional education can be expensive, with a focus on problem-based and case-based learning requiring multiple instructors and often more preparation time than a traditional class (Buring et al., 2009; Gilbert, 2005; Page et al., 2009). Financial constraints are a common concern with new educational initiatives, particularly during times when funding for education is reduced, and departments may be less receptive to requests for shared funding pools. As Gilbert (2005) states, "When budgets are constrained, disciplines tend to regroup around disciplinarity; funding for anything outside disciplinary bounds is usually reduced or cut" (p. 93). Multidisciplinary projects in healthcare facilities often lack funding sources as well and collaborative practice is rarely incentivized financially (Freeth, 2001; van Dongen et al., 2016). In addition,

colleges and universities with a diverse set of programs may meet substantial challenges in creating a commonly shared vision with mutual objectives (Reeves et al., 2007).

Attitudes and stereotypes may also need to be overcome at the faculty level and with many already feeling overcommitted, the faculty support can be challenging to get (Parsell & Bligh, 1999). Mandates from administration often impede collaboration and may impose requirements that are not reasonably feasible. Roles may be blurred between departments and faculty are often concerned about their interprofessional education efforts in terms of promotion and tenure (Gilbert, 2005; Page et al., 2009). Traditional workload policies may need evaluation in terms of teaching load, accommodating for courses or portions of courses taught by several faculty. Faculty appointments are typically discipline specific, department curricula are often discipline specific, many programs have additional restrictions placed by accrediting and licensing bodies, and the scheduling and coordination of classes within the curriculum is highly complex and often leaves little room for flexibility. Traditional views and methods specific to a discipline must be broken down (Gilbert, 2005). Furthermore, many faculty are unclear on the true definition of interprofessional and what such an educational experience would look like in the classroom. This unfamiliarity may come with some skepticism of the value (Glen & Reeves, 2004). Faculty may be uncomfortable with students with different levels of education or their lack of skill or experience with interprofessional education, and may be unwilling to experiment with different teaching methods (Areskog, 2009; Barton, 2009). They may have difficulties in preparing a common curriculum that incorporates each discipline's specific requirements and regulations, or lack proper assessment tools for interprofessional education competencies (Areskog, 2009; Barton, 2009). To overcome

these challenges, it is necessary for faculty to have appropriate training needs identified, and time to focus on interprofessional learning activities (Areskog, 2009). To enhance the longevity and promote initial success, it is recommended that interprofessional education initiatives be integrated first by only those faculty and staff fully committed to the program (Freeth, 2001).

Overcoming these barriers means reframing the traditional mindset of universities and facilities, and the structure of organizations, faculty, courses, students, and resources between and within those entities. As stated by Gilbert (2005),

> [Interprofessional education (IPE)] should provide an innovative environment for developing, supporting, and sustaining collaboration across participating disciplines through various common collaborative groupings, such as interprofessional courses, clinical/fieldwork (practice) education, information technology to enhance and forward goals of IPE, IPE curriculum development and evaluation, and collaborative evaluations and research associated with its many components. (p. 101)

It requires collaboration and cooperation across disciplines and departments that are traditionally competing for resources. To begin such collaboration, faculty and staff need to learn and practice interprofessional education and collaboration to obtain the knowledge, skills and values needed to effectively facilitate interprofessional activities with students and staff and serve as role models and mentors (Blue et al., 2010; Buring et al., 2009; Hammick et al., 2007; Page et al., 2009; Silver & Leslie, 2009; Steinert, 2005). This includes an understanding of group learning theories and conflict resolution, knowledge of health care professions, an understanding of current professional practice

issues, team teaching experience, an understanding of problem-based and active learning, practical skills, experience with interprofessional collaboration, and confidence in facilitating an interprofessional experience (Buring et al., 2009; Reeves et al., 2007). Facilitating interprofessional learning requires self-awareness, respect, an understanding of group dynamics, management of issues around power and hierarchy, and an integration of teaching philosophy (Silver & Leslie, 2009). This development needs to occur prior to the implementation of interprofessional education into the curriculum, and faculty must view the development as vital rather than just additional work (Buring et al., 2009). As stated by Blue et al. (2010), "When faculty embrace interprofessional collaboration in their educational work with students and in their other academic functions, they further embed interprofessional education within the institutional culture" (p. 1294). Healthcare organizations need to participate in regular evaluation of interprofessional collaborative practice opportunities and shared planning of team goals and progress (Freeth, 2001). In addition, facilities may need to reassess management structures to address power differentials (Zwarenstein & Reeves, 2007)

According to Silver and Leslie (2009), interprofessional education initiatives need to address the individual, instructional, and organizational development needs. This includes awareness of changes and implementation at the individual faculty and staff level, the learning environment both within and outside the classroom, and the college and university system. Prior to implementation, an education plan must consider each of these needs. Initial professional development opportunities should be provided, such as basic team skills training, brown bag sessions, workshops/seminars, peer coaching and mentoring, web-based learning modules, or even a faculty development institute, as well

as continued offerings to further build faculty preparedness (Blue et al., 2010; Reeves et al., 2007; Silver & Leslie, 2009; Steinert, 2005). These opportunities should model the principles of interprofessional education and collaborative practice (Steinert, 2005). A general program on communication skills, such as team dynamics, phone etiquette, assertiveness and diversity training, and/or conflict and stress management can be beneficial for all staff to build the foundations of interprofessional collaboration (Barton, 2009). Other professional development activities may be aimed at attitudes, knowledge, and skills; team and self-assessment; current healthcare issues; quality improvement and safety issues; leadership and organizational change; and/or teaching and learning (Silver & Leslie, 2009). Such activities will increase the competence and confidence of the staff, which is key in successful delivery of interprofessional learning activities (Hammick et al., 2007).

When creating and planning to implement a shared interprofessional activity, faculty and organizations may run into logistical issues (Russell & Hymans, 1999). These can include conflicting schedules, unshared technical equipment and course sites, dealing with students that miss class, and uneven or overly large class sizes (Barton, 2009; Glen & Reeves, 2004; Hammick et al., 2007; Parsell & Bligh, 1999; Russell & Hymans, 1999; Whelan et al., 2005). Although many issues may sound like relatively minor barriers, they can be significant challenges to overcome. Time alone has proven a difficult issue, finding sufficient time for faculty or leaders to prepare and for students and staff to interact meaningfully, and to find common times between students and staff from multiple disciplines (Hammick et al., 2007; Hepp et al., 2015). This is also true of working professionals, with many providers identifying a lack of time to effectively

participate in collaborative activities and insufficient time for team building (Orchard, 2010; Zwarenstein & Reeves, 2007). When interprofessional experiences are scheduled, there can still be issues with team members arriving late and general lack of preparation (Hepp et al., 2015). Location and timing of interprofessional meetings can also be an issue in the work setting (Freeth, 2001). Rules and regulations inherent to the healthcare industry can cause issues, with professional barriers to the sharing of patient information (van Dongen et al., 2016). It is recommended that faculty are transparent about any logistical difficulties that may arise around or during a class, sharing potential concerns with students (Russell & Hymans, 1999). Unclear or ambiguous reporting structures can prove problematic in the health care setting, as well as teams that grow too large in size and diversity of disciplines, which can create issues with communication, availability, and accommodation (Freeth, 2001).

Outcomes of Interprofessional Education and Collaborative Practice

As interprofessional education initiatives continue to be integrated in post-secondary institutions, more research is being conducted, with a variety of results. These studies have used a various methods, both quantitative and qualitative, and have looked at students from multiple disciplines. Although medicine and nursing are the most common disciplines studied, other studies have included students from respiratory therapy, pharmacy, nutrition, social work, occupational therapy, physical therapy, radiology, and midwifery. The majority of the studies focused on student outcomes have been conducted in Canada, the United Kingdom, and Australia, and target the current student. Most quantitative methods consist of standardized instruments or researcher-constructed

questionnaires, and the qualitative methods use focus groups (primarily), observation, interviews, and student work analysis.

Many studies have found that students are gaining knowledge of different professional roles, improving their attitudes towards, understanding of, and skills around collaboration (Cooper, Carlisle, Gibbs, & Watkins, 2001; Dufrene, 2012; Glen & Reeves, 2004; Hammick et al., 2007). According to Hammar (2000), however, after exposure to an interprofessional learning experience, not all students worked collaboratively. Students are exposed to the scope of their discipline, learning professional boundaries and experiencing group-based learning and problem solving (Hoffman & Harnish, 2007; O'Neill & Wyness, 2005). It helps students improve teamwork skills, breaking down barriers and enhancing communication (Casto et al., 1994; Cooper et al., 2001). While not only learning of other disciplines, students also have the opportunity to share their own knowledge and skills (Areskog, 2009). They are able to practice integrating both technical and interpersonal skills, and are encouraged to continue interprofessional education as a lifelong learning process (Bandali et al., 2008; Russell & Hymans, 1999). Faculty and staff also have these opportunities, enhancing their communication and understanding of other disciplines (Areskog, 2009). Faculty have the opportunity to be exposed to different educational activities, practicing problem-based learning, case studies, and group assignments (Hoffman & Harnish, 2007). Interprofessional education initiatives also offer new research opportunities, promoting interdepartmental collaboration (Areskog, 2009).

Specific study results offer a variety of insights, varying on the disciplines involved, the learning activities conducted, and the data gathered. Whelan et al. (2005)

found that the majority of student dietitians valued interprofessional learning and were interested in working with a larger variety of disciplines. However, Cooke, Chew-Graham, Boggis, and Wakefield (2003) found that not all students involved fully understood the value of interprofessional education. Several other studies have found overall positive attitudes towards interprofessional learning (Dufrene, 2012; Margalit et al., 2009; Williams et al., 2011). Tunstall-Pedoe et al. (2003) investigated a variety of factors, looking at student attitudes towards the interprofessional course, opinions of each other's professions, and association with student maturity. Initially, more than 90% of the students held a positive outlook on interprofessional learning, looking forward to the opportunity to interact with students from other disciplines. However, this attitude actually became less favorable after the course, with fewer students identifying enhancement of learning, respect, knowledge, or understanding (Tunstall-Pedoe et al., 2003). Carpenter and Hewstone (1996) also found that interprofessional education can have a negative effect on attitudes, and others have found that this can vary by profession (Curran et al., 2010). Still others found that the interprofessional learning experience had little or no effect on attitudes, even after repeated exposure to interprofessional activities (Curran et al., 2010; Salvatori, Berry, & Eva, 2007). In Tunstall-Pedoe et al.'s (2003) study, several students felt the course taught irrelevant skills, but did feel it would enhance interprofessional collaboration in the future. The idea of learning unnecessary skills was more common amongst the younger students, the same demographic that found less value in studying together to improve patient care (Tunstall-Pedoe et al., 2003). Interestingly, Pollard, Miers, and Gilchrist (2004) found that the more mature students,

particularly those with professional experience, had more negative perceptions of interprofessional collaboration.

Hoffman and Harnish (2007) found a significant increase in student knowledge of interprofessionalism and of other professions. Others have had similar findings, reporting a significant increase in student understanding of both theirs and others' roles and disciplines (Fineberg, Wenger, & Forrow, 2004; Hope et al., 2005; Kipp, Pimlott, & Satzinger, 2007; O'Neill & Wyness, 2005; Rodehorst, Wilhelm, & Jensen, 2005; Salvatori et al., 2007; Whelan, Spencer, & Rooney, 2008). For Hoffman and Harnish (2007), the majority of participants found that the interprofessional activity gave them the desire to learn more about other professions, and some even wanted to consider a change in major. Despite this desire to learn about other professions, less than half of the participants were interested in additional interprofessional learning activities.

Cooper et al. (2005) underwent a significant study that utilized an experimental and control group to identify benefits of and motivators for interprofessional education. They found that students who participated in a voluntary interprofessional learning activity had a better understanding of the need for interprofessional education and collaboration, and were more ready to share their disciplinary expertise in team-based activities; they were more confident in their own professional identity. As stated by one participant, "...it opens the door big time for what you can do with patients as a team rather than as an individual" (p. 500). Enrollment in the interprofessional experience was voluntary, with participants indicating a desire to learn about teamwork, other health professions, and other students, and to document such learning for their future career. Students indicated it was a time for self-awareness and self-expression. Participants

valued the time to socialize with other disciplines, breaking down the silos between the groups. Group facilitation fostered team cohesion, "enhanced by democratic participation and the feeling of belonging to a group who were perceived as being 'likeminded people, even though they are pursuing different professions'" (p. 500). They did not, however, find any significant difference between the groups pertaining to the acquisition of teamwork skills. Cooper et al. (2005) adds that the educational value of the learning experience was strongly linked to the quality, content, and delivery of those experiences.

Tunstall-Pedoe et al. (2003) asked students to identify characteristics of other professions. Initially, medical students indicated nurses were more "do-gooder" and less practical and assertive; however, after the course the nurses were rated less dedicated, more detached, less hard-working, and poor communicators. Initially the allied health and nursing students had positive attitudes towards the radiology students, but at the end found them indecisive and detached. Despite these changes in attitudes, Tunstall-Pedoe et al. (2003) confirm that their study indicated a strongly positive relationship between interprofessional education and enhanced interprofessional collaboration and better patient care.

Several other studies have also indicated enhanced collaboration skills. Students have perceived enhanced collaboration and collegiality with improved team atmosphere and group work (Cooke et al., 2003; Hope et al., 2005). Selle, Salamon, Boarman, and Sauer (2008) used a role-play approach to demonstrate collaboration, and students indicated a deeper understanding of the importance of an interprofessional team with multiple perspectives and felt better prepared to participate in interprofessional collaboration in the future. Students in a study conducted by Rodehorst et al. (2005) also

found observing interprofessional collaboration beneficial, but O'Neill and Wyness (2005) found that some students witnessed negative experiences. Bradley et al. (2009) found that student readiness for interprofessional collaboration significantly increased after an interprofessional learning experience. However, this readiness seemed to decrease at 3- and 4-month follow-ups.

Despite the benefits identified by several studies, there has been little evidence to verify that these skills and attitudes translate to the professional world (Cooper et al., 2001). In fact, some have found that perceptions and attitudes towards others can worsen following an interprofessional education experience (Hammick et al., 2007). In addition, it has been noted that there may be a publication bias in the possible favoritism of publishing positive results of interprofessional education, particularly in journals primarily focused on interprofessional collaboration (Hammick et al., 2007). Although qualitative methods have been used, it has been recommended that additional qualitative studies are needed to fully include the voices of the students (Cooke et al., 2003; O'Neill & Wyness, 2005). In addition, although nursing students have participated in many of the studies, it is suggested that additional research is needed to study them in a more proportionate experience that involves other professions outside of medicine (Dufrene, 2012). Dufrene (2012) identified other gaps in the literature, including studies that involve other health professions students, particularly prelicensure students; studies that measure perceptions over time, especially post-graduation; and studies that measure learning outcomes.

This same skepticism is addressed in the research on the outcomes of interprofessional collaborative practice. Although much of the literature claims potential

benefits to the patient and health care system, little has been proven in this area and it is recommended that these be recognized as promising rather than definitive (Brandt, 2014; Zwarenstein et al., 2009). Studies have indicated that collaboration is expected to result in health gains with claims of higher responsiveness to patients, higher satisfaction with care, better treatment acceptance, improved quality and patient safety, better patient outcomes, and efficient use of resources (Hepp et al., 2015; Korner et al., 2015; Matziou et al., 2014). Team-based care with clearly identified goals can improve patient flow, communication, and coordination of care, ultimately reducing the patient length of stay (Hepp et al., 2015). Specifically, patient outcomes have been studied in relation to interprofessional collaborative practice in stroke care, secondary care, inpatient care, geriatrics, and acute care (Rice et al., 2010). Little has been done in the area of population health (Brandt, 2014). Potential benefits extend beyond patient care to the staff and organization, with higher job satisfaction and improved mental health in a positive team climate with increased efficiency (Korner et al., 2015). This may result in cost savings, better retention and less turnover (Korner et al., 2015; Matziou et al., 2014). The patient and organizational benefits may be reciprocal in that improving one leads to improvements in the other. In addition to claimed benefits, studies have identified claims of the negative effects when collaborative efforts are ineffective such as poor patient outcomes and undermining of clinical decision making with errors in implementation (Matziou et al., 2014; Zwarenstein & Reeves, 2007). Despite these claims, it is evident that further research is needed to confirm the benefits and effects of interprofessional collaborative practice. This includes qualitative research that expands on context-specific experiences and implications in a variety of settings (Brandt, 2014).

Challenges to Implementation of Interprofessional Education and Collaborative

Practice

Creating these shared experiences may bring some challenges. Students and staff may be resistant to these experiences if there is a perception that it distracts from the profession-specific competencies or competes with personal values and expectations (Barton, 2009; Reeves & Freeth, 2002). Additional resistance may occur if there have been previously poor experiences with collaboration, or if there are fears of territoriality or identity loss (Bareil et al., 2015; Khalihi et al., 2014). The socialization of professionals through education and training programs helps disciplines identify and differentiate professional values, scope of practice, approaches to problem-solving, tools, and roles and responsibilities through professionalization (Hall, 2005). When these concepts overlap it can lead to role blurring, potentially causing confusion on practice boundaries and leaving individuals either feeling left out or overwhelmed (Gucciardi et al., 2016; Hall, 2005). Territoriality, focus on personal agendas, general lack of interest, and lack of personal responsibility and accountability may cause a team member to hesitate in sharing insights with the team or blame others for negative outcomes, leading to a sense of competition and negative group norms (Hepp et al., 2015; van Dongen et al., 2016; Reese & Sontag, 2001). This can fuel conflicts and burnout in team members, leading to turnover, fatigue, and stress (Hall, 2005; Hepp et al., 2015). Unfortunately, many professionals are not aware of conflict resolution techniques (Hepp et al., 2015). Strong leadership is necessary to prevent individuals from retreating to the safety of their own discipline with the desire to work autonomously, separate from the team (Hall, 2005). Incentives may be necessary as professionals may not make the efforts to

collaborate based strictly on potential, but not necessarily known, outcomes for the patient (D'Amour et al., 2005). The perception of this experience can be influenced by the mandatory or elective nature and whether or not it is evaluated (Curran et al., 2010; Gilbert, 2005). In a study conducted by Kipp et al. (2007), students indicated interprofessional education should be a voluntary opportunity, as it attracted the more high achieving students.

As with any group activity, there may be conflicting personalities, poor communication patterns, misperceived hierarchy, disruptive behavior, and/or cultural, ethnic, generational, and gender differences (Hojat et al., 1997; Zwarenstein et al., 2009). Healthcare professionals lack a shared framework of communication which can create tension around interpersonal issues and impact team dynamics (Matziou et al., 2014). It may be challenging to create strong relationships with new team members built on trust and respect, causing additional distress when having to replace former members (Freeth, 2001; van Dongen et al., 2016). This can be particularly challenging if team members lack an understanding of others' roles and responsibilities (Gucciardi et al., 2016; Zwarenstein et al., 2009). To fully embrace each member of the team, professionals need to recognize and respect the expertise, skills, training, and values of other disciplines (van Dongen et al., 2016; Reese & Sontag, 2001). Without this understanding, essential members of the team may not be included due to a lack of recognition of their potential contributions (Reese & Sontag, 2001).

Historical professional hierarchies can cause issues, with problematic power dynamics and conflict may arise when different professionals have different approaches to patient care (Zwarenstein et al., 2009). In a study by Hepp et al. (2015) members of the

healthcare team indicated that major decisions were made by the physician and that many professionals felt as though their input was not valued in consideration of patient discharge. Although the healthcare disciplines share a baseline understanding of the human body and medical practice, they each have a different approach to patient issues and the priority of their care (Rice et al., 2010). This perceived hierarchy can impact communication and collaboration, with individuals such as physicians expecting orders carried out with little to no discussion and others naturally contributing to the team in a more passive role, even when in disagreement (Rice et al., 2010). For example, the nurse-physician relationship has been historically challenging, with the physician in a dominant practice role, but the nurse often serving in a leadership role in other areas (Orchard, 2010). This leadership role places nurses in a position to influence the interprofessional collaborative nature of the facility, but some have identified them as a challenge in the transition (Orchard, 2010). In addition, if leadership roles are primarily taken by physicians and nurses, it leaves few opportunities for other professionals to develop these skills (Hepp et al., 2015). Much of this is related to the autonomy of different professionals in their ability to make decisions on behalf of the patient (Regan et al., 2016). In addition to hierarchical issues, teams may be disproportionately representative of certain disciplines, with a single discipline far outweighing others (Reese & Sontag, 2001).

Students and professionals will experience differences in education, social status, legal jurisdiction, communication styles, professional elitism, sex-role stereotypes, role ambiguity, and incompatible expectations between disciplines (Hojat et al., 1997). Students and professionals may have to overcome discipline-specific differences in

language and jargon, and address concerns around clinical responsibility and rapid decision-making (Barton, 2009). Working collaboratively can be time-consuming and heavy workloads can be a barrier (Hepp et al., 2015). Although these concerns are indeed challenging, perhaps the biggest threat to the implementation and success of interprofessional education and collaborative practice are the longstanding professional stereotypes and ingrained professional cultures (Barton, 2009; Pecukonis, 2014).

Professional Stereotypes

As the trend for greater specialization of healthcare professionals continues, there is also a demand for more holistic, patient-centered care. This makes it essential for healthcare professionals to work together as a team (Tunstall-Pedoe et al., 2003). Our societal view of the members of the healthcare team, however, is riddled with a variety of stereotypes. According to Tajfel (1981), stereotyping is a natural process of grouping like things together, which may emphasize similarities of the group and differences from other groups. Students enter post-secondary education, even at the freshman level, with these preconceived ideas of different healthcare professions (Reeves, 2000; Tunstall-Pedoe et al., 2003). These professional values begin to be internalized as soon as students begin their post-secondary education career, contributing to the challenges of interprofessional education and breaking down the disciplinary silos (Cooke et al., 2003; Cooper et al., 2005; Pecukonis, 2014; Tunstall-Pedoe et al., 2003). According to student responses, Cooke et al. (2003) found that the stereotypical hierarchy did not have a negative effect when different groups of students worked together. However, other students have indicated fear and worry around hierarchical relationships and stereotypes, feeling intimidated about working with other disciplines (Bradley et al., 2009).

Unfortunately, often times these stereotypical views are negative and can impede the attitude towards shared learning activities (Carpenter & Hewstone, 1996). Curran et al. (2008) found that health science students held different attitudes of the health professions upon entering post-secondary school, and these attitudes persisted, raising the concern of addressing incorrect stereotypes that exist before students even enroll. According to Rudland and Mires (2005), first-year medical school students held negative stereotypes of the nursing students during the first week of class. In a study by Carpenter (1995), medical students were rated higher in academic quality by social workers. In some instances, the negative perception may begin or grow during the course of education as students are influenced by instructors and clinical supervisors, or preceptors (Leaviss, 2000). Tunstall-Pedoe et al. (2003) ask, "Are stereotypes so thoroughly established in society and the professions themselves that the laudable aims of IPE are unachievable?" (p. 171).

Although people may have stereotypical views of different healthcare professions, each profession has its own "professional culture" (Pecukonis, 2014, p. 61). Each discipline has common educational experiences, curriculum, core values, attire, professional symbols, languages, health and care philosophies, and traditional treatment methods (Barton, 2009; Pecukonis, 2014). Students are introduced to these customs in their professional programs, influencing their perceptions, attitudes, and behaviors. In a study by Cooke et al. (2003), students indicated that while they enjoyed an interprofessional learning experience, they wanted to maintain some professional distance with the opportunity to learn the desired skills alone. The professional culture also helps those in the profession identify power distribution, decision making protocol, and conflict

resolution mechanisms in ways that may be unique to that profession. This is further identified and promoted by faculty and clinical preceptors, clarifying scope of practice and, unfortunately, often promoting isolation and territorialism (Pecukonis, 2014). Pecukonis (2014) identifies profession-centrism as "a constructed and preferred view of the world held by a particular professional group developed and reinforced through their training, educational, and work experiences" (p. 62). This draws on the idea of ethnocentrism, which theorizes that strong group association may lead to negative perceptions of those not in the group. Interprofessional education and collaborative practice is not about ignoring these individual cultures in an attempt to create one, cohesive culture, but to learn about and appreciate each culture, enhancing future communication and collaboration. Each professional culture must be identified, understood, and addressed (Pecukonis, 2014). This clarification may address concerns that arise around losing professional identity through interprofessional education and collaborative practice (Barton, 2009; Pecukonis, 2014). Interprofessional learning and collaborative practice experiences should help students and professionals learn to use and promote their own professional identity to maximize the ability of the interprofessional team.

The identities formed in professional cultures reflect the suggestions of social identity theory (Tajfel, 1981). This theory suggests that a large portion of our identity, pride, and self-esteem comes from the social groups to which we belong. With this self-pride comes pride of the group itself, which may be accompanied by negative views of other groups. It creates a world of "them" and "us" through social categorization. Thus, students' membership in a health profession at least partially forms their identity and

rules for understanding and behaving. This identity is created and molded through group interaction (Pecukonis, 2014). To enhance this social identity beyond a student's chosen discipline, the contact hypothesis suggests that positive interaction between groups can change attitudes, providing an opportunity to discover similarities (Hewstone & Brown, 1986; Tajfel, 1981).

Changing a Culture

The necessity of overcoming established stereotypes and shifting to the integration of interprofessional education and collaborative practice throughout the curriculum and healthcare facility requires a change in the academic and organizational culture (Bareil et al., 2015). Culture consists of the artifacts, behaviors, and ways of thinking that differentiate groups of people, and these customs are often passed down through generations (Hall, 2005). Thus, an organization can consist of several subcultures for different populations, not only between disciplines but also between classifications such as faculty and students. Each healthcare discipline assumes a professional culture of values, beliefs, attitudes, customs, and behaviors that are inherent in the training and educational programs, and reinforced in the workforce setting (Hall, 2005). In addition to the subcultures, the overall organization reflects a culture of values, beliefs, and perceptions shared by the different professionals that has an impact on interprofessional collaboration (Korner et al., 2015). This should be apparent in the organization's mission, vision, and value statements, and evident in strategic planning efforts, organizational structure, and leadership practices, but often these assumptions and beliefs operate unseen (Korner et al., 2015). This can have an impact on teamwork, particularly if one discipline is dominant within the culture or the organization operates bureaucratically

rather than in an inclusive and dynamic manner (Korner et al., 2015). If interprofessional collaboration is a priority, organizations need to foster a learning environment that supports collaboration and demonstrates a commitment to interprofessional efforts by providing access to resources, such as continuing education (Cameron et al., 2012; Regan et al., 2016). This environment should promote trust and good communication, perhaps challenging historical structures and processes, such as the traditionally dominant role of the physician (Cameron et al., 2012; van Dongen et al., 2016).

Kreitner and Kinicki (1998) address the complexity of this change in terms of "low" and "high", with criteria based upon complexity, cost, and uncertainty. When these criteria are low, when change is relatively simple, inexpensive, and more certain, it comes easier and is more readily accepted. However, when these criteria are high, when the change is complex, costly, and the outcomes are more uncertain, change can be considerably more challenging and met with significant resistance. The latter scenario reflects interprofessional education, as it is a new way of thinking to many, requires additional training, and incorporates a number of teaching methods that can be more expensive to implement and may be unfamiliar to many faculty. The positive outcomes, however, may be enough to overcome the resistance and uncertainty.

Implementing such a change may require steps similar to creating a behavior change in an individual. Prochaska and Norcross (2001) identify a transtheoretical model of behavior change describing six stages, including precontemplation, contemplation, preparation, action, maintenance, and termination. Precontemplation marks a stage at which there is no intention to change, even if there may be a desire to do so. In contemplation, there are plans to change, with no serious actions yet taken. Preparation

marks the stage at which action begins in the form of intention, and the action stage

signifies an actual modification in behavior, experiences, and/or environment.

Maintenance follows to sustain action, and finally termination indicates the end of the

change process. Change processes vary in effectiveness depending upon the stage of

change of the individual or group undergoing a modification in behavior.

Kotter (1996) suggests eight steps for leading organizational change. This begins

with establishing a sense of urgency and creating a guiding coalition. Organizational

commitment must be demonstrated from top administrators and from faculty and staff

(Barton, 2009). A vision and strategy should be developed and communicated,

emphasizing behavioral standards and the relationship between interprofessional

education and patient care (Barton, 2009; Kotter, 1996). This should empower broad-

based action and generate short-term wins (Kotter, 1996). It should also account for the

organization's current status, and an internal assessment can offer a self-awareness of the

prevalence and possible impact (Barton, 2009). Opportunities for collaboration and

communication should be offered, dictated by a standard set of behavior policies and

procedures (Barton, 2009). The organization should consolidate gains to produce more

change, and anchor new approaches in the culture. This requires a fundamental shift in

perspective and conscious and consistent leadership that guides people into new roles and

develops systematic ways to measure progress and guide improvement, embracing

opportunity as it comes (Barton, 2009).

Conclusion

In this chapter I have attempted to define interprofessional education and

collaborative practice, identify the benefits and challenges of implementation, and

explore the potential outcomes. Although there are a number of definitions, interprofessional education clearly addresses the intent to bring together students from different disciplines to learn from, with, and about each other with a goal of improving future collaborative efforts. Interprofessional collaborative practice involves this same type of collaboration within healthcare facilities, with professionals from multiple disciplines coming together to provide quality patient care. A set of core competencies for interprofessional collaborative practice focus on the values and ethics of care, professional roles and responsibilities, and effective communication and teamwork. Interprofessional activities seek to teach professional values and ethics, the differentiation of roles and responsibilities of the healthcare team, communication skills, and the essential elements of teams and teamwork. These learning experiences integrate a variety of learning theories, using strategies such as case-based and problem-based learning to encourage students to learn together and to be exposed to real-world experiences. The experiences should be interactive and flexible, and can be time-consuming both for faculty and student collaboration. In these experiences the faculty usually act in more of a facilitation role, mentoring the group-based learning activities. In addition to learning experiences within the educational setting, opportunities should be provided within the work environment for professionals from different disciplines to practice working together on a common goal. Practicing collaboration may help to build respect and trust, allowing professionals to practice communication and teamwork skills, to experience shared power, and to clarify responsibilities. Professionals should be encouraged to engage others' input and views, providing an opportunities to learn more about disciplinary roles and responsibilities and to build interdependent relationships. There

should be ample opportunity to develop leadership skills, and teams should be encouraged to practice shared decision making. It is also important that the patient is not forgotten as an essential member of the healthcare team; they should be engaged in an active role to contribute to their own care and recovery. The organization plays a key role in promoting such interprofessional collaborative practice, and should foster a culture of teamwork.

In addition to being time-consuming, there are other challenges that arise in the implementation of interprofessional education and collaborative practice. There is still some debate over when in the academic career it should be introduced, with some concerned about a lack of professional identity and others concerned with ingrained stereotypes and biases. Regardless of when it is introduced, such an initiative requires institutional support, significant resources, faculty and staff buy-in, and professional development. Even with these elements, most educational institutions and healthcare organizations still run into logistical issues of schedules, time, curriculum, and physical space.

Despite these challenges, the literature suggests mostly positive outcomes. Students in several studies have indicated improved or at least an increased comfort level with teamwork skills, communication, and collaboration. Students in most studies appreciate the opportunity to learn with students from other disciplines, and learn more about both their own profession and those of the students they have the opportunity to work with. Overall, several studies have shown a positive attitude towards interprofessional education. However, the long-term effects and translation to the profession is lacking sufficient research. Many studies claim benefits, but few have

proven a direct effect and primarily view interprofessional collaborative practice as promising rather than definitively beneficial. It has been stated that effective team-based care can improve patient flow, communication, and coordination of care, potentially leading to shorter patient lengths of stay and higher job satisfaction resulting in more effective and efficient care and less staff turnover. However, if the teamwork is ineffective, it may contribute to poor patient outcomes and medical errors. Although a number of studies have focused on student perceptions, more qualitative research is needed to give a strong voice to the participants of interprofessional education, the students. In addition, more research is needed on undergraduate students, particularly prelicensure students, and on their perceptions of their interprofessional education experiences after graduation. It is also evident that additional research needs to explore the effects of interprofessional collaborative practice, including qualitative research that addresses experiences in a variety of settings.

Several studies have indicated that incoming students have often misinformed stereotypical views of the healthcare disciplines, and once they enter a program develop a social identity around their own professional culture, naturally withdrawing from the other professions. With a large number of studies conducted outside of the United States, it is reasonable to assume the educational structure, preconceived stereotypes, and overall culture may be different by country, and further research is needed in the U.S. Institutions implementing interprofessional education are facing the challenge of changing the culture of the institution, of healthcare, and in some ways, even society. After entering the workforce, graduates are faced with problems that require an interdisciplinary team approach and it is important for institutions and facilities to gain a better understanding of

these experiences and how they relate, if at all, to previous interprofessional education experiences. Learning more about these experiences may provide insight into the value and effectiveness of the interprofessional education and collaborative practice initiative.

CHAPTER THREE: METHODOLOGY

"There is no burden of proof. There is only the world to experience and

understand. Shed the burden of proof to lighten the load for the journey of experience." -

From Halcolm's Evaluation Law (Patton, 1990)

Purpose

This inquiry addresses the perceptions of undergraduate nursing, health science,

radiologic science, and respiratory care graduates concerning the role of interprofessional

education in interprofessional collaborative practice. Although results are slightly mixed,

the majority of research on student perceptions of interprofessional education indicates

positive attitudes towards the experience and at least some gain of collaboration skills.

However, the majority of studies have investigated students during or immediately

following an interprofessional learning experience. Only a few have followed up with

students three or more months after the event. I was interested in hearing from students

who had graduated from an undergraduate program that incorporated an interprofessional

learning experience, to learn more about their perceptions of the impact that learning

experience has had on their collaborative knowledge and skills since entering the

workforce. Although the outcomes of interprofessional education are identified by

several entities, there has been little investigation into the graduates' perceptions and

experiences.

According to the literature review in the previous chapter, studies concerning

student perceptions of interprofessional education have employed a variety of research

techniques, including quantitative approaches, qualitative approaches, and several with mixed methods. Additional qualitative inquiries are recommended to capture the voice of those who have participated in interprofessional learning activities. Such an approach is needed to identify individual differences and unique circumstances that envelop each interprofessional education experience and the students involved. Using standardized quantitative measures to compare customized, variable programming can distort the overall conclusions around desired outcomes. They may oversimplify complexities of the experiences, miss major factors of importance, and overlook the program as a "whole" (Patton, 1990). With qualitative inquiry, "greater attention can be given to nuance, setting, interdependence, complexities, idiosyncrasies, and context" (Patton, 1990, p. 51). Such inquiry is used in program evaluation to better understand a complex multifactorial system, addressing the social and political environment in which it is situated (Patton, 1990). Any educational initiative is going to be influenced by the social and political environment in which it is introduced, leading to variation in the outcomes of such initiatives. Although widespread programmatic standardized assessments are necessary to address national educational initiatives, I feel it is also necessary to conduct in-depth investigation into unique settings to better understand the complexities and variations of the system. When the focus of such initiatives is to influence student behavior, it is imperative to investigate the student perspective and experience to gain a better understanding of the outcomes and influence of these efforts.

To address the perceptions of graduates in a relatively unique interprofessional education setting, where the focus is on both clinical and non-clinical undergraduate students in a university without an associated medical school, I felt that a

phenomenological study of individuals from one setting, or case, was most appropriate.

Qualitative methods are particularly important in assessing and developing innovative

programs with an intention of improvement and exploration of effects on participants

(Patton, 1990). I focused on graduates' perceptions to learn more about their experiences

and how one university can focus on program improvement. Interprofessional education

is similar to most other educational initiatives in that it is not a "one size fits all" plan that

allows a cookie-cutter recipe to be used in all settings. In order to be successful with this

initiative, it is important that the university tailors it specifically to its student, faculty,

institutional, and community needs. As Patton (1990) states, "personalizing and

humanizing evaluations are particularly important for education" (p. 124).

As this institution continues the journey of interprofessional education, meeting a

multitude of challenges along the way, it is important to not only consider the outcomes

of the program, but also to address the extent to which it has already been implemented.

In program evaluation, implementation information is essential and Patton (1990)

recommends including detailed, descriptive information about the participant experience,

services provided, and program organization. This information is essential in the

continuing support and growth of any program, providing details about the program, its

development, and its progression (Patton, 1990). Successful implementation must adapt

to meet the needs of the organization, staff, and participants to ensure a significant

change in participants' attitudes and skills as desired (McLaughlin, 1976). In order to

meet these needs, it is essential to address the perception of the participants as they relate

to the desired outcomes in order to adapt as needed. According to Patton (1990), the

methods used to study this "must be open-ended, discovery-oriented, and capable of

describing developmental processes and program changes" (p. 106). Such a qualitative approach allowed me as the researcher to study the graduate perceptions in depth and detail. Exploring the meaning of a program and the quality of an experience requires holistic investigation in order to accurately represent participants and capture their voice (Patton, 1990).

A phenomenological approach was used to interview four participants to learn more about their interprofessional education and collaborative practice experiences. These individuals were graduates of an undergraduate health-related program that are now working in the healthcare field. They represent a variety of disciplines, including nursing, respiratory therapy, health science studies, and radiologic sciences. They were interviewed multiple times over a short time period, establishing a relationship with the researcher and allowing time for reflection and verification. Participants were asked to describe their interprofessional education experiences and their interprofessional collaborative practice experiences, and to reflect on both.

Research Questions

The overall focus of this research centers around the question, "What is the essence of a graduate's interprofessional education and collaborative practice experiences?" The following questions are guiding this inquiry:

- How do undergraduate Health Science Studies, Nursing, Radiologic Sciences, and Respiratory Care graduates describe their interprofessional *collaborative practice* experiences?

- How do undergraduate Health Science Studies, Nursing, Radiologic Sciences, and Respiratory Care graduates describe their interprofessional *education* experiences?

- How do undergraduate Health Science Studies, Nursing, Radiologic Sciences, and Respiratory Care graduates experience the relation of their interprofessional *education* and their *collaborative practice* experiences?

Through my research I explored the perceptions of baccalaureate graduates concerning their interprofessional education and interprofessional collaborative practice experiences. I learned more about their perception of what role interprofessional education plays in their ability to work in interprofessional teams. This study focused on a slightly different population than many of the previous studies on students' perceptions of interprofessional education. These alumni graduated from a health science studies, nursing, radiologic sciences, or respiratory care program, from a U.S. university. They all completed an interprofessional capstone course at least three months prior to participating in this study, in addition to some other varied experiences in interprofessional education and collaborative practice.

Research Design

This research design incorporated themes of qualitative inquiry, using inductive and deductive analysis, gathering qualitative data, and embracing design flexibility (Glesne, 1999; Patton, 1990). Although there are a variety of desired learning outcomes surrounding interprofessional education, I used an inductive method during the interviews. I explored open-ended questions to discover what themes and interrelationships emerged. As I embarked on my data collection, it was imperative that I

remembered the need for design flexibility in qualitative inquiry. I remained open to adapting my questions as the situation changed and I gained a better understanding of the graduate perspective. I have had the advantage of observing students in an interprofessional course and reflected on that as I explored the graduate perspectives, focusing on what was meaningful to them as individuals and as a group. The collection and analysis of qualitative data requires detailed, thick descriptions of the graduate experiences. I have used direct quotations from the participants in order to analyze and capture the graduate perspective and experience (Patton, 1990).

My focus on the graduate perspective aligns with symbolic interactionism, which emphasizes meaning and interpretation within human processes (Blumer, 1969; Mead & Morris, 1962; Patton, 1990). It focuses on the symbols or themes that give meaning to human interactions, which becomes the participants' reality (Patton, 1990). According to Blumer (1969), humans act on the interpreted meaning something has based on social interactions. These interpretations can only be identified and better understood through direct interaction and qualitative inquiry into the perceptions and understandings of people. The identification of these meanings and symbols are an essential component of learning more about an initiative, providing a better understanding of the most important aspects to the participants, the aspects most prone to resistance, and what needs to be changed for future success (Patton, 1990).

This method of research takes an interpretivist approach, with the assumption that the reality of this experience for students is socially constructed and that the variables of the learning experience are complex and interwoven (Glesne, 1999). Although the true

experience of these individuals may be difficult to measure, I have gained a better understanding of their experiences both as a student and as a new professional.

Phenomenology

Phenomenology studies a phenomenon from multiple angles, focusing on the comprehensive descriptions and experiences of the participants, in an attempt to better understand those experiences (Husserl & Gibson, 1962; Moustakas, 1994). Patton (1990) clarifies this with the question of phenomenology, "What is the structure and essence of experience of this phenomenon for these people?" (p. 69). It focuses on how the participant experiences the world, their perceived reality of the situation (Taylor & Bogdan, 1984). This perception of the participant is the primary source of knowledge (Moustakas, 1994). Husserl's "most basic philosophical assumption was that we can only know what we experience by attending to perceptions and meanings that awaken our conscious awareness" (Patton, 1990, p. 69). An objective reality does not exist, it is rather what each individual experiences and the interpretation of the meaning of that experience. This is based on the doctrine of *verstehen*, or "understanding", which highlights the human ability to make sense of the surrounding environment. This is important when studying humans, in comparison to other life forms, because we have emotions, purpose, plans, culture, and values that influence our behavior (Patton, 1990). Thus, when investigating the perceptions of participants, or members, it is necessary that we look at the meaning of behavior and the context of the interaction, focusing on understanding a personal experience (Denzin & Lincoln, 1994; Patton, 1990). As stated by Patton (1990), "The tradition of *verstehen* places emphasis on the human capacity to know and understand others through empathic introspection and reflection based on

direct observation of and interaction with people" (p. 56). There is an assumption of an essence to the shared experience that participants can identify as common meanings and themes. A phenomenological study focuses on this shared experience, describing the what and how of the experience from the participant's perspective (Patton, 1990).

Phenomenological inquiry is free from bias and routines, focusing on things as they are. It looks for meaning in these appearances, requiring reflection and description rather than analysis. It is concerned with wholeness, utilizing multiple angles and perspectives to examine the essence of an experience. The objective and subjective are intertwined, with the perception and experience inseparable (Moustakas, 1994).

Studying a topic with a phenomenological method requires epoche, phenomenological reduction, imaginative variation, textural portrayal, and synthesis (Moustakas, 1994; Patton, 1990). My use of the phenomenological perspective has focused on what graduates experience and their interpretation of that experience. Epoche, an ancient Greek term, calls for the suspension of judgment, the time to review a phenomenon with fresh, new eyes (Moustakas, 1994). I have been aware of my own bias as data was collected and analyzed. Reporting of experiences necessitates thick descriptions of such experiences from the participant's perspective, not from my perspective. In addition to analyzing and reflecting on individual experiences, I looked at the experiences as a whole, focusing on deeper meaning of the phenomenon or experience of the graduates (Patton, 1990). Phenomenological reduction focuses on the relationship between phenomenon and self, opening oneself up to the participants' textures and meanings. This involves focusing specifically on the topic and question, and initially treating every statement as equal; later one can eliminate those unrelated to the

topic and question, or those that are redundant (Moustakas, 1994). The data was broken down into themes used to describe the phenomenon, utilizing a multi-angle approach and considering a variety of perspectives (Moustakas, 1994; Patton, 1990). Imaginative variation requires one to look at possible meanings utilizing multiple lenses, using imagination to vary the view, looking at possible polarities and reversals, and considering multiple perspectives, positions, and roles (Moustakas, 1994). As Moustakas (1994) states, "How did the experience of the phenomenon come to be what it is?" (p. 97). This step focuses on the structure of the phenomenon, requiring a look at structural meanings that underlie the textual descriptions and identifying underlying themes and contexts. The result of this process is to capture the essence of the experience and phenomenon for the population under study (Moustakas, 1994). Rather than focusing on the differences between individual experiences, I targeted the essence of graduates involved in interprofessional education and collaborative practice, and the meaning of those experiences. There is some assumed commonality within this experience for graduates, and I have identified these shared meanings and themes (Eichelberger, 1989).

Site Selection

The participants of this study came from a northern rocky mountain university within its College of Health Sciences. This institution was chosen because it represents a unique setting for interprofessional education initiatives. It serves a predominantly undergraduate population with a large number of nontraditional students, offers limited health-related graduate programs, and is not associated with a medical school. The interprofessional education initiative seeks to integrate students rarely identified in other studies, such as those in allied and public health disciplines.

Location and Timeframe

The study took place at the university and focused on students who graduated from a health-related baccalaureate program during the 2014-2015 academic year, when they took an interprofessional capstone course. This year was chosen for study because it included the most disciplines involved with the interprofessional capstone course. All participants came from the same section of the course, offered in Spring 2015.

The University

This university is a public, metropolitan research university that offers a variety of both undergraduate and graduate degrees. In the fall of 2014, there were a total of 22,259 students enrolled. Nearly half of these were part-time (40%) and the majority were enrolled in undergraduate programs (87%). The student population is predominantly White (76%), with slightly more females (54%) than males. It has historically had a large nontraditional student population, with many older students returning to school from the workforce, a large number married with families, and many commuting to campus. However, the more traditional student population is growing, with 63% under the age of 25 in fall of 2014 (Campus Website, 2015).

The College of Health Sciences is home to the School of Allied Health Sciences, the School of Nursing, the School of Social Work, and University Health Services. The School of Allied Health Sciences includes the departments of Community and Environmental Health, Kinesiology, Radiologic Sciences, and Respiratory Care. The Department of Kinesiology, School of Social Work, and University Health Services were added to the College in 2014. In the fall of 2014, the College enrolled 4,267 undergraduate students and 361 graduate students. The College is predominantly serving

the undergraduate population as it makes up 92% of the enrolled students (Campus Website, 2015). Graduate programming is currently limited to the disciplines of health science, kinesiology, nursing, and social work. In addition, there is no medical school associated with the university. Students intending to attend any graduate clinical program outside of nursing or social work, such as medical, dental, or physician assistant school, have to apply outside the university.

The college offers a diverse set of undergraduate degrees, with a Bachelor of Science offered in the following areas: athletic training, environmental and occupational health, health education and promotion, health science studies, kinesiology, nursing, K-12 physical education, pre-dental studies, pre-medical studies, pre-veterinary medicine, radiologic sciences, and respiratory care. With the integration of social work, the college now also offers a Bachelor of Arts in Social Work. In addition, emphases, minors, and advising are offered in other areas, including addiction studies, biomechanics, computed tomography, diagnostic medical sonography, diagnostic radiology, exercise science, gerontology, health informatics and information management, health policy and leadership, magnetic resonance imaging, pre-allied health, pre-chiropractic, pre-clinical laboratory science, pre-dental hygiene, pre-dietetics, pre-occupational therapy, pre-optometry, pre-pharmacy, pre-physical therapy, pre-physician assistant, pre-speech-language pathology, and public health (Campus Catalog, 2014). The College of Health Sciences also offers graduate degrees, including a Doctor of Nursing Practice; a Master of Athletic Leadership; a Master in Health Science with emphases in health policy, health promotion, and health services leadership; a Master of Kinesiology or Master of Science in Kinesiology with emphases in behavioral studies, biophysical studies, and socio-

historical studies; a Master of Nursing in adult-gerontology; and a Master of Social Work (Campus Catalog, 2014).

Interprofessional Education at the University

This university's College of Health Sciences began an interprofessional education initiative in 2010 with the intent of creating an interdisciplinary curriculum for all students within the college, including an undergraduate senior capstone that was common to all majors. The capstone course was the first goal to be addressed, and an interdisciplinary team was formed to create the class. This was occurring at the same time that the university was transitioning to the Foundational Studies Program and reducing all baccalaureate degrees to 120 credits from 128 credits. To maximize the integration of the capstone into the curriculum, it was decided that it would also serve the purpose of the Finishing Foundations requirement. This designation meant the course had to meet university learning outcomes related to writing and communicating effectively, critical inquiry and problem solving, and teamwork. It was first offered in Fall 2012 in the College's online-only programs, integrating the disciplines of nursing and respiratory care. It has been offered every semester since then, growing in capacity to include on-campus students in community and environmental health, nursing, radiologic sciences, and respiratory care.

The course is currently set up as a 1-credit class that is offered in both online and hybrid formats. It aims to meet the following university learning outcomes:

- Write effectively in multiple contexts, for a variety of audiences.
- Communicate effectively in speech, both as a speaker and listener.

- Engage in effective critical inquiry by defining problems, gathering and evaluating evidence, and determining the adequacy of argumentative discourse.

- Think creatively about complex problems in order to produce, evaluate, and implement innovative possible solutions, often as one member of a team. (Campus Website, n.d.)

Although these learning outcomes do not specifically address interprofessional education, they are aligned with the designated interprofessional competencies concerning communication and teamwork. With a Fall 2012 implementation, the full capacity of the course was not reached until Spring of 2016. In addition, since the creation of the course, new programs have joined the College of Health Sciences, including those in kinesiology and social work. As the course continues to grow and is considered for use by additional degree programs, it is important to assess the perception of the course by students and graduates to identify if it is contributing to the vision of interprofessional education within the College.

Interprofessional Capstone Course

The interprofessional capstone course is currently required for a Bachelor of Science in Environmental and Occupational Health, Health Science Studies, Nursing, Pre-Medical/Dental Studies, Pre-Veterinary Medicine, Radiologic Sciences, and Respiratory Care. The intention of the course is to create student groups that involve a variety of these disciplines, encouraging them to work together on a common goal. These group projects aim to promote interprofessional collaboration, providing students an opportunity to work with students from other disciplines to learn more about each other and how each discipline can contribute to a common goal. The original course structure

was developed by an interdisciplinary team of faculty. It involved a group writing project, several discussion boards, readings, and journal postings. However, after the first offering, it was found that the amount of work was too much for one credit, for both students and faculty. The course was revised to better fit the needs of the online-only programs, which were the first to adopt the class. This course template was used for several semesters, but as the course grows and additional faculty are involved in teaching the class, it has begun to change. Each variation offers a unique experience for students to deliberately work with other students from a variety of disciplines.

One challenge in the course is creating groups with equal representation from the disciplines. Health Science Studies and Nursing have the largest student populations and thus dominate most of the course sections. In fact, the Department of Community and Environmental Health, which houses the Health Sciences Studies degree, and Nursing are the two largest undergraduate enrollment units at the university (Campus Website, 2014). However, there is still enough variety within the Health Science Studies students, including their chosen minors and plans for graduate programming, that they bring a variety of perspectives. Most student groups consist of two to three Health Science Studies students, two to three Nursing students, and one or two Radiologic Sciences and/or Respiratory Care students.

Participants

Eligible participants included university students who graduated from a baccalaureate program that required an interprofessional capstone course, in the 2014-2015 academic year. This included students who received a Bachelor of Science in Health Science Studies, Nursing, Respiratory Care, or Radiologic Sciences. Although the

course is also required for a Bachelor of Science in Environmental and Occupational Health, Pre-Medical/Dental Studies, and Pre-Veterinary Medicine, in order to narrow the focus of this study I chose to exclude these graduates as eligible participants. These represent a relatively small sample of the students graduating from the college, and the graduates of the pre-professional programs have yet to truly gain a disciplinary identity as their undergraduate focus is primarily on pre-requisites for graduate school. During the fall and spring semesters of the 2014-2015 academic year, there were 388 students enrolled in 15 sections of the interprofessional capstone course. Three sections were combined and co-taught in one course site, totaling 83 students. In order to better control external factors, I targeted this combined section as it had the most variety in student disciplines, including 34 Health Science Studies students, 45 Nursing students, 5 Radiologic Sciences students, and 3 Respiratory Care students. The demographics of these students was representative of the university, and participants brought a variety of previous health care and interprofessional experience. In addition, participants were required to be currently working in the health care field as was identified in the recruitment script.

<div align="center">**Sampling**</div>

In line with the nature of a qualitative study, the sample was small and purposeful with a focus on "information-rich" cases that address the questions of the study (Patton, 1990, p. 169). The choice of using this particular university is an example of deviant case sampling (Glesne, 1999; Patton, 1990). The majority of studies addressing interprofessional education are conducted on graduate students and/or undergraduate students in a university associated with a medical school. This university represents a

unique example of integrating interprofessional education into a primarily undergraduate, non-clinical college without an associated medical school. The sampling for the interviews utilized a stratified purposeful sampling method to include graduates from health science, nursing, radiology, and respiratory care. A list of eligible participants was obtained and all were contacted for their interest in participating in the study. A recruitment email was sent to all students from one section of the capstone course. Six students responded, including two Health Science Studies graduates, two Nursing graduates, one Radiologic Sciences graduate, and one Respiratory Care graduate. One Health Science Studies graduate was ineligible due to work setting, and the first Nursing student to respond was chosen to participate. Thus, interviews were conducted with four alumni, one from each program.

Sample Size

The determination of appropriate sample size is not necessarily a mathematical equation in qualitative research, but rather a matter of maximizing the use of information-rich sources (Patton, 1990). I believed the richest cases would come from individual interviews. In order to encourage participation from all disciplines, I interviewed one alumni from each of the baccalaureate degree programs of Health Science Studies, Nursing, Radiologic Sciences, and Respiratory Care. While this may not be a large number of participants, the purpose of this research was not to generalize the findings, but to describe the essence of these graduates' experiences.

Data Collection

A phenomenological inquiry requires data rich with thick descriptions of participants' experiences, guiding the researcher to realize the overall essence of that experience. Such recounts of an experience are gained through an established relationship between researcher and participant, as is obtained through phenomenological interviewing. Interviewing allows one to see another person's perspective, beyond just what can be observed. When being used in a qualitative study, it assumes that a person's perspective is meaningful and knowable (Patton, 1990). It also allows the researcher to attend to the four people-oriented mandates in collecting qualitative data, as identified by sociologist John Lofland (1971). Interviewing provided an opportunity for me, as the researcher, to develop a relationship with the participants, enough to gain a better understanding of their perspectives. While interviewing, I audio recorded the participant responses to accurately capture what was stated. I also took notes to assist in describing the people, interactions, and settings. I transcribed these audio files and used the transcripts to identify representative direct quotes from participants in an attempt to describe their perceived experience and the essence of all participant experiences. In order to capture participant perspectives in the same way, I used an interview guide (see APPENDIX A).

An interview guide is used to identify a list of questions or issues to be addressed, guiding the researcher to ask for essentially the same information from each participant. It is not a restrictive list of specific questions to be asked, but frames the subject area for the interviewer to explore and probe. It requires the researcher to identify questions, sequence those questions, and clarify which areas are outside the scope of the research

project. Open-ended questions allow the interviewer to learn more about the participant's

perspective, essential in phenomenological inquiry (Patton, 1990).

Eligible participants were contacted via email to solicit interest in participating in

the study. This email explained the research and included a copy of the consent

document. Once an eligible participant agreed to be in the study, he or she was contacted

to confirm interview dates and locations. Each participant was asked to participate in

three interviews of approximately 60-minutes each. Each interview was audio recorded

and transcribed.

In addition to the interviews, I took field notes. Before and after each interview, I

documented my own notes, thoughts, and observations, reflecting on the conversation

and participant responses. This regular reflection and assessment of judgment and pre-

conceived ideas is a necessary practice in epoche. My field notes also detailed what I

observed during my interactions with each participant. They were dated and included

basic information about the settings and interactions, providing a descriptive reference for

me as I returned to the observations and interviews later during data analysis. I also used

field notes to document my insights, interpretations, and initial thoughts on analyses,

noting them appropriately as such. This nonlinear cross of data collection and analysis is

natural and necessary in qualitative research as the researcher processes and internalizes

the information received (Patton, 1990).

<u>Interview Method</u>

To guide my inquiry, I used a well-established phenomenological interviewing

method using the framework provided by Seidman (2013). This method consists of three

interviews with each participant, each with a different focus. Multiple interviews are

recommended to build the relationship between researcher and participant, and to provide the researcher with a more authentic context of the experience under study. It is recommended that these interviews take place within three to seven days of each other. The first interview queries the participant about their life before the experience. In my study, I wanted to learn more about the influences that led students to choose a certain healthcare discipline, including personal, educational, and professional experiences. I also gained insight into their perceptions of other healthcare disciplines and working in interdisciplinary teams. In addition, the interprofessional education is considered a previous experience for my participants, and I queried about that and other learning opportunities within their college career.

The next interview focuses on the experience itself. It aims to clarify the details of the present lived experience (Seidman, 2013). In my study, the second interview focused on the participants in their current professional setting. I wanted to learn more about their interprofessional collaborative practice experiences, gaining their perception of interactions and their role in the healthcare team.

Finally, the last interview calls for a reflection on the meaning of an experience or phenomenon. It requires participants to look at the interaction of their previous experiences, their current experience, and the factors involved. The first two interviews prepare the participant for this reflection, requiring them to explore the past and detail the present (Seidman, 2013). I used this interview to learn more about participants' perceptions of the relation of interprofessional education and collaborative practice experiences.

Data Analysis

Data analysis in the qualitative inquiry process involves data preparation and analysis of that data to reach a deeper understanding, sharing that data through thick descriptions and direct quotations, and offering an interpretation of the larger meaning (Creswell, 2003). Using a phenomenological methodology involves inquiry into the participant perceptions. Thus, I used both a deductive and an inductive approach, using the categories identified in the research questions to frame the identification of emerging themes. I prepared and organized the data, using NVivo to create a coding scheme based on that data, grouped the data elements according to emerging themes, and attempted to identify the overall essence of the participants' experiences of interprofessional education and collaborative practice. My analysis began during data collection as ideas arose during interviews and while writing reflective field notes (Patton, 1990). Although it was an ongoing process rather than a linear progression, below I have outlined the basic steps in my data analysis.

My data analysis began with organizing and preparing the data for analysis (Creswell, 2003). I transcribed all interviews and typed up field notes and reflective journaling which I documented during and after each interview. All electronic data is stored on a password protected computer, and all paper documents are stored securely in my locked office. Once recorded, I read through all data sources to get a general sense of the overall meaning, general ideas shared by participants, tone of the interviews, and a basic understanding of the depth, credibility, and use of the data (Creswell, 2003). Following recording and reading through the data, I began the coding process.

Coding helps to organize the large amounts of data in qualitative research, and I segmented sentences using indigenous concepts, finding key phrases and terms used by the participants (Creswell, 2003; Patton, 1990; Rossman & Rallis, 2003). A step-by-step visual of my coding and analysis process can be seen in Figure 1 below.
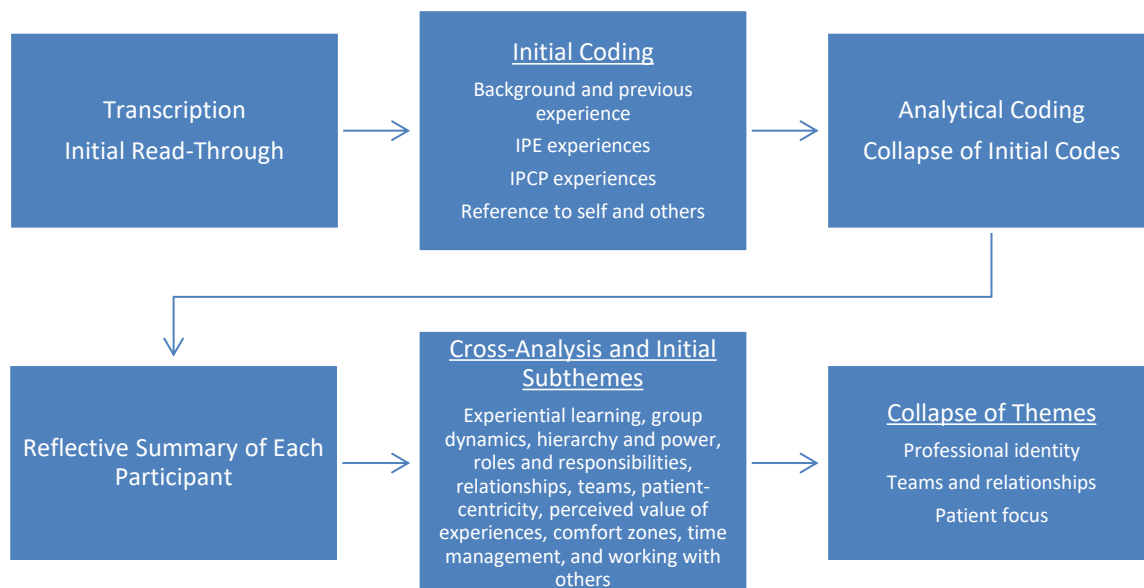
Figure 1. **A Step-by-Step Visual of My Coding and Analysis Process.**

To begin my coding process, I followed Tesch's (1990) recommended steps. As I read through all transcripts I took notes on overall ideas. I then began with the first interview to study in-depth, contemplating the overall meaning. I did this for one interview from each participant to begin a list of topics, beginning my open coding process (Merriam & Tisdell, 2016; Tesch, 1990). I used NVivo to first categorize each sentence around the type of experience, whether it be personal, educational, or professional, and the reference to person within each comment. These initial codes included the following: background and previous experience, interprofessional education experiences, interprofessional collaborative practice experiences, reference to self, and

reference to others. Some comments overlapped between the type of experience and those referenced, providing insight into how they described certain experiences and how they spoke about certain people, including themselves. I organized these codes into groups, progressing my axial coding before revisiting my transcripts (Merriam & Tisdell, 2016; Tesch, 1990). I used these as a preliminary coding scheme, utilizing NVivo for categorizing appropriate segments while looking for additional categories and codes in the process of analytical coding (Merriam & Tisdell, 2016; Tesch, 1990). After all initial codes were applied to all transcripts, I reviewed them for opportunities to collapse. The background and previous experiences code was originally subcoded to include personal, family, and professional experiences, but these were combined into the larger code. This code also included educational experiences as they were previous experiences for the graduates at the time of the interview. Similarly, a subcode for the capstone course was merged into the interprofessional education code, professional role was combined into reference to self, and subcodes for the specific people referenced, such as family member or nurse, were combined into reference to others. I used these initial codes to write a reflective summary of each participant, looking initially at how each responded to their interprofessional education experiences, interprofessional collaborative practice experiences, and how they reflected on their role and the roles of others in these interactions. I used these summaries to identify commonalities across subjects, revisiting my codes in an attempt to reduce or combine, linking them as appropriate (Tesch, 1990). As I continued this analysis I recoded data as necessary. I used these codes to identify each data element related to the experience, the process of horizontalization (Moustakas,

1994). This also helped me identify redundant and vague elements that did not pertain to the experience and were eliminated (Moustakas, 1994).

Once my data was coded, I used that process to create a general description, and identify themes. The initial themes were focused around the following: experiential learning, group dynamics, hierarchy and power, identification of roles and responsibilities, initiating interdependent relationships, interdisciplinary teams, patient-centricity, perceived value of interprofessional educational experiences, pushing one's comfort zone, time management, and working with others. These were collapsed into larger themes concerning the individual participant and their professional identity, their relationships and interactions with others, and their consistent patient focus. The identified themes highlight major findings and are supported by quotations and evidence from multiple interviewees (Creswell, 2003). These themes reflect the purpose of the research and are exhaustive, mutually exclusive, and conceptually congruent (Merriam & Tisdell, 2016). I conducted both case analysis, with themes analyzed for each individual interviewee, as well as cross-case analysis, identifying common themes between all interviews and creating a general description of the essence of the experience (Moustakas, 1994; Patton, 1990). In Chapter 4, I discuss each theme in detail and in Chapter 5 reference the interconnections between them. Chapter 5 also identifies the takeaways, reflects on the overall meaning, puts that meaning in the context of the literature, identifies the new questions that it fosters, and addresses the implications for students, faculty, and post-secondary institutions (Creswell, 2003).

Trustworthiness

Ensuring trustworthiness in qualitative studies has been debated, compared to the scientific rigor of quantitative studies, and interpreted in a variety of ways. It requires a focus on the rigor of data collection and analysis and credibility and qualifications of the researcher in an attempt to gain knowledge and understanding of the phenomenon being studied (Krefting, 1991; Patton, 1990). Some researchers are critical of the challenge of objectivity, but the subjective meanings and perceptions are essential in qualitative inquiry, and the researcher is charged with accessing and describing them (Krefting, 1991; Patton, 1990). In order to address trustworthiness in this study, I used Creswell's (2003) verification procedures. These include prolonged engagement and persistent observation, peer review and debriefing, member checking, rich and thick descriptions, triangulation, clarification of researcher bias, and external audits.

Qualitative inquiry requires an extended amount of time in the field and/or with participants to develop trust and engage with the environment (Creswell, 2003). In Seidman's (2013) phenomenological interview method, the use of three interviews per participant allowed me additional time to establish a relationship with the participant to gain more insight into their experiences. This time spent interviewing and building relationships with the participants contributes to the trustworthiness and neutrality of my study, and I feel the participants felt comfortable to speak truthfully and frankly (Glesne, 1999; Guba, 1981). This trusting relationship is important as the validity relies on the accuracy of the participants' responses (Glesne, 1999).

It is also recommended to share the research process and findings with others, gaining external reflection and input. Throughout my research process I checked in with

my faculty advisor as a method of peer review and external audit of my analytic procedures. I also visited with my participants, sharing the initial coding scheme and summary of their experiences as a method of member checking, to ensure I am capturing their experience accurately. In sharing these experiences I used direct quotations and rich, thick descriptions to allow the reader to experience the data (Creswell, 2003). These strategies add to the credibility of my study, contributing to accurate descriptions and interpretations of the participants' experiences (Guba, 1981; Krefting, 1991). In addition, although the intent is to describe the phenomenon under study rather than generalize findings, these procedures also contribute to the applicability, or transferability, of the study by providing sufficient descriptions to allow comparison (Guba, 1981; Krefting, 1991).

Triangulation is an essential component of qualitative inquiry, using different data collection techniques and/or different evaluation strategies. There are a variety of methods, including methods triangulation, triangulation of sources, analyst triangulation, and/or theory/perspective triangulation (Patton, 1990). In this study, my primary method of triangulation was triangulation of sources. Each participant was interviewed three times, and in each interview I asked a similar question. I used this question to check for consistency between interviews. In addition, my field notes contain descriptive observations I made at each interview; these were compared to the transcribed interviews for consistency and outliers were considered in both the case analysis and cross-case analysis. This process was also important for consistency, or dependability, in my study, although some variability is expected in qualitative research (Guba, 1981; Krefting, 1991).

Regardless of the analytical techniques to ensure quality in a study, the credibility of the researcher is of major importance. Patton (1990) identifies the possible negative impact of the evaluator effect. This may occur if the reactions of the participants are impacted by the identity of the researcher, if there are changes in the evaluation method, due to previous researcher bias, or due to lack of researcher ability. I identified safeguards to these potentially negative situations. I have been intimately involved with the interprofessional education efforts at this university, serving as the interim director for two years and teaching several sections of the interprofessional capstone course. I disclosed this information to the participants, but do not feel that it had an impact as they were no longer enrolled at the university. I have been faculty at this university for more than 10 years and work directly with the programs of the participants involved in this study. My department houses the Health Science Studies degree, but I feel confident in my knowledge of all degree programs and disciplines. My educational background and primary program is in Health Informatics and Information Management. In order to reduce bias and possible coercion, I did not recruit students from a section of the capstone course that I taught. I do not recall any previous contact with participants while at the university, and none indicated they had previously interacted with me. I used an interview guide to ensure consistent evaluation.

My history and interest in interprofessional education is what has led me to this investigation. However, I have not let these previous experiences negatively impact my study. I have read the literature on interprofessional education, attended conferences that focused on interprofessionalism, and have spoken with experts in the field, and I have a genuine interest in the experience of the students. I did this inquiry not to prove or

disprove the claims in the field, but to explore the experience of the graduates, in their own words and without presupposed ideas. Neutrality in qualitative research is not detachment, but approaching the study without the intent to prove my perspective or to manipulate the data (Patton, 1990). While my position at the university may cause some to speculate that I was seeking a positive outcome, that the interprofessional education experience made a substantial impact on the graduates, I was just as interested in the possibility that it made no impact or a negative impact as it guides this type of education in the future. My instinct may have been to discredit the participants who spoke negatively of the university, program, or faculty, but I have continuously explored my own biases. My field journal kept throughout my research process included the schedule and logistics of the study, a methods log, and reflections on my thoughts, feelings, ideas, and working hypotheses (Lincoln & Guba, 1985). By writing both before and after my interviews, I was able to address preconceived opinions and reflect upon my subjectivity. Complete objectivity may be impossible, as it represents a single reality, but I attempted fairness, assuming multiple realities and presenting all that are apparent (Guba, 1981). Although I would consider myself a novice qualitative researcher, I conducted the study under the guidance of my faculty advisor and committee.

Ethical Considerations

Conducting research with human participants requires several safeguards. Upon proposal approval, I received approval of my expedited application from the Institutional Review Board (IRB). I have served on this board for more than five years and have completed and kept up to date on all training. An expedited review was necessary because of the personal contact with participants, but the questions were not high risk

enough to warrant a full board review. Data collection did not begin until IRB approval. Potential participants were obtained from a HLTHST 400 class roster and were contacted via email to solicit interest and eligibility. After indication of interest, potential participants were contacted to schedule interviews and were provided with a copy of the consent form to read prior to the first interview. I also brought a printed copy of the consent form to the interview, answered any questions the participant had, and obtained a signature. I repeated this process at each interview, for each participant. The interviews took place at the location of the participant's choosing, with two participants interviewed in my office on campus, one at his home, and one at another public institution. The interviews were audio recorded and field notes were handwritten; all equipment remained with me when not in a locked vehicle or locked office. Electronic data is stored on a password-protected computer. Pseudonyms have been used to protect participant identity. Participants were allowed to skip any interview question that may make them uncomfortable, although none refused to answer a question. They were also free to discontinue participating at any time, but all participants finished the three interviews. I feel there was very little risk associated with this study and did my best to ensure the comfort and confidentiality of my participants.

<div align="center">**Reflections on the Research Process**</div>

This study offered the most in-depth qualitative inquiry that I have experienced as a researcher, challenging me with the responsibility of ethically collecting, transcribing, summarizing, interpreting, and sharing the experiences of my participants. With a background in interprofessional education as a director and instructor, and experience with the faculty and students in the programs targeted in this study, I have had to

regularly reflect on my thoughts and interpretations to ensure my inquiry is free from bias and routines (Moustakas, 1994). I was also sure to clarify this role with the participants in an effort to remain open and honest, attempting to build a trusting relationship with each individual. I must consider, however, that their knowledge of my position and our affiliations with the same institution may have had an effect on their responses, perhaps pressuring them to reflect more positively on educational experiences and deemphasize the negative. As I reflect on the two participants that primarily indicated poor educational experiences, particularly in the capstone course, each seemed comfortable in sharing this information, although both did add a bit of a laugh following their answers. This may have been a way to feel out my reaction as the researcher, to measure my response and acceptance of the critique.

As a qualitative researcher, it was essential that I spent enough time with the participants to establish this relationship, to encourage them to speak truthfully and frankly, impacting the quality of data I am able to collect (Creswell, 2003; Glesne, 1999; Guba, 1981; Johnson & Christensen, 2004). This, however, may also raise concerns about my role as the researcher and the interviewer, questioning my ability to remain objective (Johnson & Christensen, 2004). Overall, I felt each participant was comfortable with me and with sharing their thoughts and reflections. I did interview two participants in my office which was concerning in that I did not want to imply a power differential, but the room was set up for an equal conversation and the participants seemed comfortable in that setting. I had the most scheduling issues with Kylie, who also brought her nephew to one interview, contributing to a slightly more distracted environment. However, by the last interview I feel she was most comfortable, elaborating more in her

answers and taking the time to reflect more meaningfully on her experiences. As I reflect, I encountered distracting environments with all participants but Daryl. Robert and I visited in his home with his wife and newborn, with interruptions for him to assist with fatherly duties, and Brad and I visited in a public area that was at times quite loud. Regardless, all participants seemed comfortable and willing to share and reflect on experiences.

I had less influence on participant recollections of interprofessional collaborative practice experiences as I have no influential ties to the facilities in which the participants work. However, there may still be a desire to offer socially and professionally desired responses, as participants were representative of recent graduates and were new to their positions. As relatively new employees, there may have been pressure to speak positively of their organizations, experiences, and coworkers for fear of negative repercussions for speaking poorly of these topics. While pseudonyms have been used in the reporting of this data, it is possible they edited their responses to reflect their appreciation of being newly hired. Regardless of anonymity, knowing that your response will be recorded, transcribed, and analyzed may influence how you articulate an answer. As I reflect on the interviews conducted, participants often paused before answering a question, but to me this seemed more about giving a thoughtful answer rather than molding it into the "right" answer. Many questions asked them to recall specific interactions and experiences, an inquiry which requires some reflective thought, processing, and recall. Despite my impression, I do not have another data source, such as observation, to confirm the experiences shared by participants. However, the focus of this research was to explore how these individuals described these experiences, sharing this from their points of view.

I also recognize that as the interviewer I influenced the flow and direction of the conversation based on my question prompts, and may have unknowingly impacted the answers of the participants. In my distaste for awkward silence, I had to catch myself on several occasions before suggesting a word or phrase that the participant was searching for. In her first interview, Kylie often encountered challenges with finding words to describe the impact of experiences on her feelings, and for the second interview I offered a printed set of descriptors for her reference. She did not, however, use these. By the second interview she seemed more confident in finding the words to identify her experiences and the impact of those experiences.

In addition, choices are made by myself as the researcher in how I interpret and present the data, and as such, I must acknowledge my choices, beliefs, and biases. As a qualitative researcher there is a focus on "fluid and dynamic dimensions of behavior" with an assumption that behavior is "more situational and context-bound than generalizable" (Johnson & Christensen, 2004, p. 32). In my interactions and attempts to build a relationship with the participants, I assume that their experiences as a student and working professional, their indication of significance, and their responsive behaviors are influenced by the context of these experiences.

I was careful in my coding to treat, initially, all statements as equally valuable and in my findings to focus on the descriptions of the participants, using their own words to summarize their experiences (Moustakas, 1994; Patton, 1990). Admittedly, after coding the first participant, it took coding the others to help me clarify which statements were essential to the description of the experience and its meaning. I used a cross-analysis of

these experiences to identify shared themes, pulling in additional sources to clarify in an attempt to share the essence of these experiences for the participants (Moustakas, 1994).

Introduction of Participants and Summary of Responses

Participant Descriptions

The first interview probed participants about their personal healthcare experiences and educational experiences, exploring their interest in their chosen discipline. The next interview asked participants to describe their current professional roles, providing insight into their perceived role within the larger healthcare team.

Participant A: "Daryl"

Daryl's interest in healthcare began in a wilderness training course and continued as he served as a caretaker for his wife. As he continued to learn techniques to assist his spouse, he found a new skillset and continued on this path, getting his Certified Nursing Assistant (CNA) license, working in the field, and eventually continuing into a Registered Nurse (RN) program. Although acknowledging, "it's no fun to be your significant other's nurse" and that "being a CNA is very, very hard", he did enjoy the "technical part of it" and "liked working with patients". His pursuit of this career seems to have been met with positivity, indicating excitement from his spouse and contentment from his parents at pursuing a more definitive "career", as opposed to the odd jobs he had held before.

Daryl now works as a nurse in a rehabilitation hospital and when asked about his average day he stated, "the average is the unexpected", referencing the unpredictable nature of healthcare. He works on multiple floors within the facility, which each house a different patient type, doing medication passes, dressings and transfers, documentation,

and consulting with the therapists and physicians on patient progress and needs. He mentioned that he works "*really* closely" with several other disciplines, including the physical, occupational, and speech therapists; the dietary staff; the social workers; and the physicians. He identifies a clear role for himself with the patient and while he may ask for help from the other healthcare professionals, he seems to take the most direct responsibility for that patient's care. He describes himself as an "extension of encouraging and practicing the therapies with the patients when they're not in their actual therapy session."

Participant B: "Robert"

Robert did not have a direct path into respiratory therapy (RT), but had several life occurrences that steered him in that direction. His background in personal training, interest in horror films, and personal experiences in healthcare with his father's respiratory illness steered him towards the healthcare industry, but his educational experiences and personal contacts, including an instructor in RT, solidified his goal of becoming a respiratory therapist. He also considered radiology and even applied for both programs, but his primary goal was respiratory care. He indicated that his family, especially his father, were very proud of his career choice and progress in the program.

When asked to reflect on his current position as a respiratory therapist at a local hospital, Robert reflected on how far he has come, recalling how much he has learned since he started and how much more comfortable he is with his duties. He does not feel as a person that he has changed since graduation, but can definitely see his growth of experience and confidence. Although he had learned the skills in school, each facility has its own protocols and that took time to learn. There is a significant amount of time and

practice spent in clinicals, but "once they give you that patient load, it's totally different". He has become more comfortable with charting, and with some additional machines he had not been exposed to previously. He was initially paired with another therapist and had continued to be responsible for different types of procedures and different types of patients, building the complexity and volume of responsibilities. He appreciated having someone there to check his work initially, as it had often been quite some time since he performed certain things at school, or some he may have only read about. He now feels confident in his ability to meet the facility's needs and to be efficient in his tasks, practicing good time management, but aware that there are still new things to learn. For example, at the time of the interview, he was beginning to prepare to work in the intensive care unit, a new unit of the hospital for him.

Participant C: "Kylie"

Kylie began her college career like many other students, exploring coursework, considering future careers, and changing her major a few times. She explored biology, pre-optometry, and communications, but each came with unique challenges and concerns. She settled on something in the healthcare field, as it was an area that interested her. She enjoyed the structure of school, with the regular culmination of assignments, projects, and semesters. She misses that in her work and finds it more challenging to have a sense of self-accomplishment, not always being recognized for the work that is done. At the time of the interview, she was working towards returning to school to get a nursing degree.

Upon graduation, Kylie began working as a patient specialist at a local clinic, a job consisting primarily of administrative duties, including tasks such as registration,

answering patient phone calls, posting payments, and scheduling, among others. She enjoys interacting with the patients and her coworkers, and appreciates a day of successful communication and a completed task list.

<u>Participant D: "Brad"</u>

Brad came back to school after an established career in construction. An unexpected and serious accident on the job triggered him to look for something with better stability, with concerns of providing for his family, and he settled on healthcare. While on a construction job, Brad had a significant fall that resulted in several broken bones, including some in his back, a leg, and his feet. He was out of work for four months and stated that the experience "changed everything". Although he went back to construction after his accident, focusing more on the management side, his experience during the accident and his need for a more predictable income inspired him to pursue a degree in Radiologic Sciences. He was attracted to the variety and technology in the field, stating that he was "intrigued by the exams that you get to do, the different things you get to see . . . The technology and everything's always changing . . . you're not doing the same thing all day every day." He had also considered a career in pharmacy, but felt it was more limited in opportunities for variety. He indicated that his family overall was excited that he was going back to school.

Brad now works as a radiologic technologist, capturing images all over the hospital from the radiology department to the surgery suite to the fluoroscopy suite. He stated "I never know what a day's going to look like" followed by a laugh, but that seems to be in line with what attracted him to the field. He did state that "healthcare in general is a big change" for him in comparison to working construction as "you're dealing with

people at their worst" which for him meant "it's more personal than construction". He continues to experience personal growth on the job, and at the time of the interview was planning to continue his education in computed tomography (CT).

Summary of Interprofessional Education Experiences

When recalling and discussing interprofessional education experiences, the participants referenced three primary sources: a patient skills lab early in their program, the interprofessional capstone taken near graduation, and their clinical experiences. Participants reflected positively on the value of interprofessional education, but had suggestions for future efforts.

Robert and Brad had the opportunity to interact with students from nursing, radiologic sciences, and respiratory care in an introductory patient skills course that was taken upon admission to their respective programs. Both reflected positively on this course, appreciating the opportunity to learn skills common to all three disciplines and being able to practice these skills within an interdisciplinary group. Brad felt that it helped him clarify his role as the radiologic technologist, building confidence in his ability to represent his discipline's skillset in a group of diverse professionals. Robert also felt that he gained confidence in working with a variety of personality types.

All participants remembered the interprofessional capstone course, the only course required by all of the represented degree plans. The reflections on this course were varied. Daryl and Kylie did not feel that they gained much from the course, seeing it as a required stepping stone to graduation. Daryl did not indicate that he gained any better understanding of other disciplines. He did not necessarily have a bad experience, but with a group that was still predominantly nursing students, he did not see any benefits of an

interdisciplinary group. Kylie did not feel that her group collaborated well, had issues with the course being online, and struggled with noncontributing group members, but did acknowledge that the clinical students in the group raised ideas that she would not have otherwise considered. Robert and Brad also had issues with the course being online, but were able to overcome these with groups that were still able to meet on campus. They also recognized the different perspectives that were brought by the interdisciplinary nature of the group, and for them, this created a better, higher quality final group project. Overall, Robert and Brad seemed to have a much more positive experience in the course, with groups that worked well together and both gaining an increase in confidence with their ideas and contributions being regularly accepted. Robert also appreciated the opportunity to practice time management skills as a group and Brad gained a greater appreciation for group work.

Daryl and Brad also reflected on the interprofessional education experiences provided during their clinical rotations. Daryl gained an understanding of other's roles with a significant opportunity to work with a respiratory therapist, in addition to pharmacy and physicians, and the realization that he was part of a larger healthcare team. Brad appreciated the chance to observe interdisciplinary collaboration in action, noting instances when it went well and times when it was a struggle. These examples helped him witness the effect on patients based on the collaboration, or lack thereof, occurring around them.

Overall, all participants found value in interprofessional education. Robert and Brad both feel it necessary to push students out of their comfort zones, and Brad and Kylie feel the exposure is necessary to build confidence before entering the workforce.

Robert identifies interprofessional education as necessary to set an expectation that collaboration is essential to the healthcare team, and to afford students the opportunity to practice such collaboration. To Brad, this helps the students identify themselves as an essential component in the whole of the healthcare team. Although showing support, however, Robert did indicate that some of the values and skills needed to effectively collaborate are primarily personality-based and inherent to the upbringing of the individual. This suggests that are some things that perhaps cannot be taught. Similarly, Kylie felt that the most essential element was an open mind, and that many of the necessary skills are learned on the job. Despite these perspectives, all participants, including Robert and Kylie, had recommendations for improving interprofessional education. Daryl would have liked to learn more explicitly about other healthcare disciplines, and Kylie is insistent that the experiences occur face-to-face rather than online and include a wide variety of activities. Brad would have liked to see more opportunities overall, and Robert and Brad both mentioned the need for more simulations and real-world case-based experiences.

Summary of Interprofessional Collaborative Practice Experiences

Although all participants had occasionally experienced challenges in working with professionals from other disciplines, they all described the majority of their interprofessional collaborative practice experiences as positive, indicating that their teams typically work well together. There was no hesitation in their identification as part of a healthcare team, with all participants definitively indicating their inclusion. All were able to recall memorable interprofessional collaborative practice experiences from an emergency trauma and cardiopulmonary arrests, to a successful family meeting, team

effort in an isolation room, and working through processes with coworkers. They reflected on their expectations of such interactions, what contributed to success, what challenges they regularly encounter, and the outcomes they witness when interprofessional collaborative practice is effective.

Daryl and Robert indicated daily experience with interprofessional collaboration, with Brad recognizing significant collaboration as well. Daryl mentioned regular interaction with multiple different types of therapists, dietary staff, physicians, and the social workers. Robert seems to primarily interact with nurses, physicians, and physical therapists, indicating that he has not had much trouble collaborating with any of them. Kylies works regularly with other administrative staff, nurses, and physicians, and overall describes these as positive interactions. While not elaborating on specific interprofessional team experiences, she does consider herself a part of the healthcare team, seeing her ability to assist patients in accessing quality care and in the clinical staff being able to provide that quality care. This is a less direct patient-care role than the others, but from her viewpoint still a contribution to team-based care. Robert regularly spoke of his attempts to help others and Brad indicated an obligation to learn others' roles in hopes of offering his assistance, but Daryl discussed the reciprocal nature of not only his ability to help other professionals, but of their ability to help him with his patients.

Their expectations of these interactions were varied. Daryl was surprised at how much collaboration occurs on a regular basis and Robert was surprised there are not more friendly caregivers in the hospital. Kylie assumed there would be normal disputes that arise in all work settings, and Brad already had expectations of challenges with physicians. While Daryl felt that his facility viewed interprofessional collaboration as

essential, Robert primarily only witnessed an emphasis during orientation and Kylie did not feel as though her facility had an interest. Brad mentioned that he was regularly involved in interdisciplinary team building activities.

A variety of techniques and elements were identified by participants as indicators of successful collaboration. Daryl, Kylie, and Brad mentioned the necessity of mutual respect and Daryl stated a need to recognize and acknowledge the contributions of others. Similarly, Robert and Kylie emphasized the importance of treating all team members equally, appreciating all contributions. Daryl finds it helpful to be fully prepared before approaching another professional, and Kylie and Brad recognized the need for effective communication. Daryl, Robert, and Brad view the patient as the focus and feel that the team works well together when they keep that common goal in mind.

Despite the predominantly positive reflections on interprofessional collaborative practice experiences, each participant also identified challenges. Daryl, Robert, and Brad all struggled as new graduates in knowing their role on the team, knowing when to ask for help, and having the confidence to step in to help others. Daryl admitted that he has encountered other professionals that were short with him or too busy to help, and Robert has regularly met individuals that did not return his smile or were not friendly. Both admitted that these may be unique incidences based on someone having a bad day. Robert ran into the "cold shoulder" a few times as the "new guy", and Kylie has had challenges working in a predominantly female office, primarily with miscommunications and misunderstandings. Brad has also experienced challenges with certain personalities, other professionals claiming "That's not my job", and with physicians feeling challenged when questioned on orders.

Regardless of the challenges encountered, all participants reported witnessing benefits of interprofessional collaborative practice. Daryl felt that working together was essential in accomplishing the duties of the job, stating that he relies on the help from other disciplines. He and Robert both appreciate learning new skills and techniques from other disciplines, such as physical therapy. Daryl, Robert, and Brad all witness the impact of interprofessional collaborative practice on the patient, resulting in more relaxed patients, better care, and a more positive environment for the patients, families, and facility staff.

Summary

In the review of the literature, it became apparent that more qualitative studies are needed to capture the experiences of students concerning interprofessional education. Qualitative research inquires into the depths of the experience, adding more description to the nuances, complexities, relationships, and context. In addition, there are populations that are left out or underrepresented in the research, namely allied and public health disciplines. As interprofessional education is integrated into all types of programs with an intention of inclusion, it is important to learn more about the experience of students, both during the interprofessional learning activity and after, when they are exposed to interprofessional collaborative practice opportunities in the work setting. This research sought to learn more about the essence of a graduate's interprofessional education and collaborative practice experiences. As a study in pursuit of participant experiences, a phenomenological methodology was used to learn more about the perceived experience and overall meaning, or essence, of that experience.

The study took place at a Northwestern university that is a unique case in its student population and overall structure, with a large undergraduate population, integration of non-clinical programs into the interprofessional education initiative, limited health-related graduate programming, and no associated medical school. Participants were recent graduates of the Health Science Studies, Nursing, Radiologic Sciences, or Respiratory Care programs that were working in the health care field. Four graduates were recruited for a series of three interviews each, utilizing Seidman's (2013) phenomenological interviewing method. Interviewing provided an opportunity to build a trusting relationship with the participants to gain an authentic understanding of their perspective and experience.

Data analysis began with data preparation, recording and transcribing interviews and field notes. Once data was prepared it was reviewed for common codes and categories, and an appropriate coding scheme was developed. This was used in the process of looking for common themes and describing the essence of the experience. A variety of methods were used to enhance trustworthiness, including prolonged engagement with the participants through three interviews, external review by the dissertation chair and committee, member checking with participants, use of direct quotes and thick descriptions, triangulation of questions within the three interviews, consideration of alternative explanations, and continued reflection on researcher bias. All research was done with ethical considerations, following appropriate human participant protocol.

CHAPTER FOUR: THEMES AND ANALYSIS

As commonalities were explored across cases, multiple subthemes emerged. Once these were identified, it became apparent that participants reflected on their interprofessional education and collaborative practice experiences in relation to themselves as individuals, their interactions with others, and their focus on the patient as a common goal. Their personal, educational, and professional experiences contributed to their professional identity at the time of the interview. These experiences led them to healthcare and their chosen discipline, gave them the confidence to practice professionally, and have contributed to their successes in the workplace and with other professionals. Despite these successes, they also identified additional experiences that may have further enhanced their confidence and skillset within their professional role. They also described this role in terms of the larger healthcare team, noting the need for teams and interdependent relationships within their organizations and reflecting on the successes and challenges of those teams and relationships. These were influenced by group dynamics, professional roles, and individual characteristics. Finally, the participants highlighted the patient at the center of that team, contributing to their job satisfaction and inspiring empathy, empowerment, and a positive environment in an effort to improve patient outcomes.

Identification of Roles and Responsibilities: Developing a Professional Identity

Through a Variety of Experiences

Participants described the development of their professional identities and confidence in those identities through their personal healthcare experiences, personal attributes, educational experiences, and current role in the healthcare team. Their personal healthcare experiences triggered their interest in their current careers, and their educational programs provided an opportunity for them to challenge themselves, explore their strengths and weaknesses, push themselves out of their comfort zones, set an expectation for collaboration, practice their skills, and learn about others. However, these educational experiences also identified their desires for additional practical experiences in school, expressing an interest in more real-world case-based scenarios and simulations. They also felt a need to clarify the value of their interprofessional coursework and to learn more time management skills. These recommendations for education come from their current professional roles as they identify what they continue to struggle with and what would have helped them feel more successful and confident in their current role on the healthcare team. The opportunities for further collaborative learning opportunities could even be extended into the workplace.

All participants indicated previous personal experiences with the healthcare system, with Daryl and Robert serving as caregivers for family members, Kylie interacting with professionals during the care of her husband, and Brad suffering a severe work accident. Brad also identified his role in taking care of his family, although not directly related to a healthcare role. In addition, they each mentioned attributes aligned with healthcare. Robert and Kylie each identified with being a "people person", and

Kylie and Brad demonstrated their sense of responsibility, with Kylie being sure to accept her mistakes and Brad making career decisions with stability for his family in mind (Kylie transcript #2, 3/2016, p. 2; Robert transcript #1, 1/2016, p. 4). These previous experiences and inherent attributes contribute to their current professional roles and their interactions with others.

Participant descriptions of themselves as students were varied. Daryl felt that he was good in the sciences, excelling in the academic work of nursing since he had already identified the empathic side of the discipline. Daryl and Robert both felt nervous and scared when beginning their clinical practice, but are gaining confidence in their abilities. Robert was unsure of himself, surprised when he got into the program, and continues to question his technical abilities. Kylie initially struggled with choosing a major, more than the other participants, and has had a difficult time transitioning to the work environment in feeling the same sense of accomplishment she did in school, but also feels as though she has significantly matured since beginning her education. Brad was very focused when he entered school and gained confidence throughout, feeling proud of himself when he finished. Although Brad previously had challenges in developing relationships with other professionals, he feels that school helped him practice this skill and is feeling more comfortable with this in his current position, growing his confidence in working independently.

All participants consistently indicated that interprofessional experience was important, but none were satisfied in their interprofessional learning experiences. Daryl, Kylie, and Brad all stated that interprofessional opportunities need to occur more often during the academic career, with multiple opportunities provided throughout the

curriculum. Kylie specifically stated that it should not be done online, and all were proponents of real-world case and simulation-based scenarios, particularly ones that are unexpected or stressful. Robert and Brad indicated that it provides an opportunity to push students out of their comfort zones, giving them the initial exposure to interprofessional collaboration and working with others in stressful situations. Robert also feels that it sets an expectation early on that working with other disciplines is a reality of these professions.

Although each participant offers a different specialty within the healthcare team and thus a different skillset, all referenced their role as one of assisting and helping others. Daryl considers himself an extension of the therapies provided to the patient, as well as the primary patient and family educator. Robert identifies himself as a patient advocate, and Kylie focuses on making it easier for the clinical staff to provide quality patient care, and easier for the patient to access that care. Brad sees his initial obligation as knowing his own role and responsibilities, and then learning others' in order to be able to effectively assist them in their duties. Robert and Brad still seem to doubt their technical skills, but feel their confidence building as they gain more experience. In addition to inadequate interprofessional education experiences in school, three participants also indicated a lack of opportunities to practice in their current positions.

Personal Healthcare Experience, the Caretaker Role, and Personal Attributes

Daryl began his healthcare journey his first time in college when he took a wilderness first responder course. This piqued his interest in taking care of others, and was reignited a few years later when he met his now spouse who was facing some healthcare challenges. He found himself in a caretaker role, finding out he "was pretty

good at it", a role that seems to have continued into his current professional career (Daryl transcript #1, 1/2016, p. 2). This training has continued to help in his personal life, as he recounts his ability to assist his father when he underwent back surgery: "I was able to help him *significantly* more after having been a nurse" (Daryl transcript #1, 1/2016, p. 2). He had a sense of purpose and pride in being able to help him with his recovery.

Robert and Kylie also referenced caretaker roles. In his often emotional recollections of his father, Robert described his care and treatment of pulmonary fibrosis. He described how the providers "treated [him] like a family member or like a best friend", an act that was not only appreciated in the care of his father, but was also impactful in his decision to pursue a career in healthcare (Robert transcript #1, 1/2016, p. 2).

> And, it just, that's kind of who I am and what I wanted to be. There's other professionals that don't do that, and sometimes that would steer me away because I don't want to do what they do. I don't want to be cold and get in and get out and move on. But then seeing these other therapists and nurses have that really warm side, that's kind of who I am and that really stuck out to me. (Robert transcript #1, 1/2016, p. 2-3)

Kylie also has some personal experience with healthcare indicating that her husband suffers from a chronic condition, and mentioned her appreciation of the clinical staff's passion and professionalism, particularly that of the nurses.

Although he had a longstanding career in construction that he enjoyed, Brad sought out to change his career after a challenging work accident left him with several broken bones and he struggled to return to the industry. He stated that this experience "changed my whole outlook on everything" (Brad transcript #1, 3/2016, p. 2). He appreciated the care he received, was intrigued by the industry, and liked the idea of caring for others. "I wanted to make a difference to somebody" (Brad transcript #2,

3/2016, p. 6). This choice for a career change was obviously influenced by his family, and he indicated his wife was excited for the change. Not only does the industry offer more stability in income, but most positions in healthcare come with optional benefits such as health insurance. Brad indicated that she had been carrying the family for their healthcare coverage and his ability to take that over will allow her new career options and flexibility. Brad also feels confident in his ability to quickly move his career to another location if it were ever necessary for his family.

Robert mentioned entering the healthcare field due to his interest in the human body, horror films, and earning a regular salary instead of commission, but it was evident in his interviews that he connects with his patients and takes pride in a job where he "can make a difference" (Robert transcript #1, 1/2016, p. 2). He describes himself as a "people-person" and is "really close" with his family, bringing those values into his patient care (Robert transcript #1, 1/2016, p. 4). "I love *that* part of it" (Robert transcript #1, 1/2016, p. 6). Kylie also considers herself "a people-person" and finds satisfaction in task-oriented ways, feeling accomplished after successfully completing her to-do list (Kylie transcript #2, 3/2016, p. 2). Although she mentioned being "a little defensive" when confronted about an error she made in her example of an interprofessional collaborative practice experience, she stated "I don't want to be on the defense when I'm getting in trouble or when I did something wrong, but I like to explain myself" (Kylie transcript #2, 3/2016, p. 6). She did take responsibility for her mistake, recognizing that she needed "to own up to it" and by doing so felt that it brought mutual understanding of the situation (Kylie transcript #2, 3/2016, p. 7).

Brad recalled an emergency situation that involved a child similar in age to his own in which he felt personal growth, recognizing that "you have to be able to stay calm in those situations and you have to be able to think clearly and not get caught up in the reality of what's going on" (Brad transcript #2, 3/2016, p. 6). He reflected, "I'm able to put that in check", but also indicated his respect for the individuals that have to experience that extreme stress on a daily basis (Brad transcript #2, 3/2016, p. 6). He now gets to work with students as the mentor, recognizing their nervousness and trying to make it a less stressful and positive experience for them.

Educational Experiences in Shaping Identity: Facing Challenges, Building Confidence, and Clarifying Desired Opportunities

Daryl concluded that getting into the nursing program was perhaps the most stressful part of his professional education, focusing highly on grades with little forgiveness for anything less than a 4.0 GPA. His academic interests focused primarily around the hard sciences, as he acknowledged that nursing is "…kind of in its infancy or childhood…" in evidence-based best practices (Daryl transcript #1, 1/2016, p. 4). He talked about the technical side when asked about the nursing program, addressing the challenging coursework and his enjoyment of the science side of the curriculum.

> It was a challenging program. But, *{pause}* it wasn't as *hard* as some people made it out to be. I think, I suppose if you're not prone to be good at science and understanding science it can be very hard, like if you're coming at nursing from the emotional perspective, the science could be very challenging. I could see that. (Daryl transcript #1, 1/2016, p. 6)

His interprofessional clinical experiences in school helped boost his confidence in his skillset, encouraging him to ask for help, assistance, and advice. As he states,

> I understood that I could ask them for help. I could help them, and that we're all kind of part of the same team. And maybe while I'm doing the most direct patient

care, I need their help and they're happy to help me. I felt much freer to ask questions, ask advice. (Daryl transcript #1, 1/2016, p. 14)

He has continued to realize an "incremental increase in confidence and ability" in his work, acknowledging that he was once the "nervous new nurse that was kind of scared" (Daryl transcript #2, 1/2016, p. 3, 7).

When asked about the respiratory care program, Robert considered himself "really lucky to even get in" and spoke highly of the program (Robert transcript #1, 1/2016, p. 3). He was "kind of timid", finding it to be a very challenging program and sometimes questioning his preparedness and ability as he "was not good in school, in high school" (Robert transcript #1, 1/2016, p. 4, 6). "Man, can I do this? I don't know" (Robert transcript #1, 1/2016, p. 7). He discussed the impact of clinicals, stating "I remember . . . clinicals were coming up in three to four weeks and that scared me to death because I hadn't been with patients before" (Robert transcript #1, 1/2016, p. 4). He ran into some hesitation and insecurity in his clinicals on a few occasions, describing instances, particularly with new equipment, when he needed another therapist to verify his setup and administration of treatment. "I don't want to mess anything up" (Robert transcript #1, 1/2016, p. 7). In his first rotation he remembers feeling confident in his knowledge of breath sounds and the assessment protocol, but ran into basic concerns when performing, such as placing the stethoscope over or under the patient's shirt and removing standard equipment from the packaging. However, after accomplishing these tasks, ones that seem simple to him now, he felt empowered, "Oh, I did that! I was awesome!" (Robert transcript #1, 1/2016, p. 4). "I saw what huge things I was able to accomplish . . . It's such an incredible, difficult program, that I'm surprised I did as well as I did only because of the difficulty of it" (Robert transcript #1, 1/2016, p. 6). He felt

satisfaction in his ability to work through these challenges and views his successful completion of the program as "a big accomplishment", describing feelings of pride and satisfaction (Robert transcript #1, 1/2016, p. 6). "You know, without all those really tough struggles and long hours and long nights and every single day, it wouldn't have felt as good. It would have came too easy" (Robert transcript #1, 1/2016, p. 6). Robert also felt that his interprofessional experience in the introductory patient skills lab helped him to better understand patients and nurses and to build his confidence. He does not feel as a person that he has changed since graduation, but can definitely see his growth of experience and confidence. "And the more you do, it's just like second nature" (Robert transcript #2, 1/2016, p. 1).

Brad also found his program challenging, bringing pride in his accomplishment. He describes the radiologic sciences program as "*really* hard", indicating that it was more difficult than he had anticipated and very time consuming (Brad transcript #1, 3/2016, p. 3). This did not deter him from his goals, as he stated, "I pretty much made up my mind what I was going to do before I got in school" (Brad transcript #1, 3/2016, p. 4). He was very focused on his educational goals, aware of the time and financial commitment necessary and not wanting to waste either resource. He felt that school helped him get out of his shell, becoming "more outgoing towards people" and better able to talk and interact with individuals he does not know, a skill he uses in his current position to overcome some of the challenges he encounters which require help from other professionals (Brad transcript #1, 3/2016, p. 3). He sees the rigor of the program as a positive, as he feels better prepared in the workforce. He also feels pride in his

accomplishment when he is able to indicate his degree on a resume or during a job interview, and comfort in his ability to provide for his family.

Robert and Brad found that the group experience in the interprofessional capstone course boosted their confidence. Robert appreciated "that a lot of my suggestions were taken and we went with those" (Robert transcript #1, 1/2016, p. 11). It felt particularly good to be accepted by experienced peers, "it's the healthcare field, these are professionals and these are ones that have been working" (Robert transcript #1, 1/2016, p. 11). He gained confidence "in working with different types of people", helping "create that sort of awareness to have to do that with different healthcare workers" (Robert transcript #1, 1/2016, p. 11). Brad appreciated the opportunity to bring ideas to the group and the acceptance of his ideas helped build his confidence.

> I've always had a pretty good ability to come up with ideas, but it allowed me another step of moving forward of being able to actually voice my ideas instead of just having them in my head . . . It just gave me more opportunity to actually put those ideas out there and a lot of them were accepted and it just allows me to let go a little bit and not just keep my thoughts to myself. (Brad transcript #1, 3/2016, p. 9)

He was able to work with people in construction previously, but felt that it took him longer to establish relationships. He gained confidence when his ideas were accepted by his peers, encouraging him to speak up more often.

Kylie was the only traditional aged student in the study and seemed to have struggled the most with choosing a major. While the other participants were returning to school after beginning or establishing a career in another discipline, Kylie was exploring

her options while in school and ended up changing her major several times. This uncertainty made her feel a little self-conscious when interacting with students from other more structured, cohort programs such as nursing. She recalls the nursing students being very focused on their degree and career upon graduation, but she felt much less confident in her future career and settling on a degree that did not certify or license her to do one particular type of job. Her initial focus was in healthcare education and promotion, but became a bit worried about employability and decided to switch the general health sciences. The more general health science degree allowed her the flexibility to choose courses in her areas of interest, as she expressed appreciation for the diversity of programming within the degree.

Kylie felt as though she matured while in school and looking back, she missed it. She was a bit nostalgic about her school days, stating "I guess I had . . . expectations that life was going to be easier once I was done with school and it really isn't" (Kylie transcript #2, 2/2016, p. 3). Her need for a sense of accomplishment was evident in her highlighting a great day at work as one in which she gets "everything accomplished and done" and that her nostalgia about school was that there were regular confirmations of accomplishments, such as a grade on a test or successful completion of a course (Kylie transcript #2, 2/2016, p. 2). The individual credit for hard work is less defined and allocated in the work setting. While in the health sciences program, Kylie indicated that she gained "a lot of knowledge", critical thinking skills, and a better understanding of other cultures (Kylie transcript #1, 2/2016, p. 4). She almost seemed overwhelmed at how much she had gained from the program and experience, describing it as "so much" followed by a laugh (Kylie transcript #1, 2/2016, p. 4).

A Reflection on Learning Opportunities: The Desire for Experiential Learning,

More Opportunities for Practice, Evident Value, and Time Management Skills

The 1-credit pass/fail nature of the capstone course was not lost on the

participants, with each referencing this inherently low value. Robert, Kylie, and Brad

mentioned their distaste at it being online, and viewed it as a one-credit "busy work"

course, although Brad was surprised to find value in the class at the end (Brad transcript

#1, 3/2016, p. 9; Kylie transcript #1, 2/2016, p. 7). This highlights the need for

educational experiences to have value for adult learners clearly contributing to their

professional skills and identity. This value is not always evident for or recognized by all

students.

Although not a topic addressed by the literature or a skillset intentionally explored

in the interviews, three of the participants specifically mentioned time management skills

in their reflections of their educational and professional experiences. Daryl has struggled

with time management, balancing his patient load and the variety of demands on his time.

Robert also mentioned challenges with time management, and Kylie indicated that school

helped her with her time management skills. The commonality of time management may

offer an opportunity for interprofessional education focus, allowing students from

multiple disciplines to practice these nondiscipline-specific skills.

In reference to faculty, Daryl's preference lied primarily with those that had

practical experience, bringing applicable scenarios and observations into the classroom,

beyond theory and the textbook. He appreciated the acknowledgement that although a

procedure may ideally occur in a theoretical way, the real world is unpredictable and thus

things may need to be adapted. Consistent with this theme, he felt his years as a CNA

were more formative than his years in the nursing program.

According to Daryl, he was afforded "great interprofessional experience" in his

clinicals, but not many opportunities were available in the academic coursework (Daryl

transcript #1, 1/2016, p. 13). In his experience, the "execution during academics leaves

something to be desired" (Daryl transcript #1, 1/2016, p. 14-15). He would have liked to

have seen more intentional interprofessional experiences throughout his entire academic

career, particularly to be more integrated with respiratory care, pharmacy, physical

therapy, and social work. With mixed experiences in interprofessional education, Daryl

stated that:

> As a concept, I think it's very valuable. I think the more you can be exposed to
> others' roles, especially before you're on the job, the better. The better you can
> utilize your teammates, the better you can assist them. (Daryl transcript #1,
> 1/2016, p. 14)

Daryl was consistent with this opinion throughout the series of three interviews, stating "I

think a lot more could have been done" and recalling his positive interprofessional

experiences from his clinical rotations (Daryl transcript #1, 1/2016, p. 15).

> I think that in education the idea is there and the desire to do more
> interprofessional work before you get in the workplace. I think the
> implementation is still lacking. And I'm sure there's a variety of reasons for that.
> But, I definitely think more could be done to bring students of different
> disciplines together and also even have students work with professionals of other
> disciplines like nursing with RT, or nursing with PT, or any of the combinations
> would be really nice. (Daryl transcript #3, 2/2016, p. 3)

Overall Brad felt that interprofessional education was "important", but, like

Daryl, that it needs to be provided more often (Brad transcript #1, 3/2016, p. 12). In

general, Kylie also indicated support for interprofessional education, but felt it should be

practiced in face-to-face coursework rather than online. She stated that it is important to reflect the "real world" of healthcare in which different disciplines work together, and it could be used to better prepare for that (Kylie transcript #1, 2/2016, p. 9). The online experience did not feel "realistic to real world" and she would have liked more opportunities, different scenarios to discuss and solve with her group (Kylie transcript #1, 2/2016, p. 9). Daryl suggested perhaps some "kind of free form time with other disciplines", referencing a project that was more open and less restrictive, or "spending a day in the shoes of so-and-so" that identifies the challenges other disciplines experience regularly (Daryl transcript #2, 1/2016, p. 9; Daryl transcript #3, 2/2016, p. 4). He thought such an experience could provide the student with "a little bit of empathy for their situation and what challenges they face" (Daryl transcript #3, 2/2016, p. 4).

Participants primarily recommended additional simulation and case-based scenarios. Robert felt that additional exposure in school through interprofessional simulations would help students "grow each semester", and suggested creating more "realistic" simulation scenarios, with disturbances like interruptions by another person entering the room (Robert transcript #3, 2/2016, p. 3, 6). "Give everyone a little more experience as they keep going in their field, before they graduate" (Robert transcript #3, 2/2016, p. 7). Brad feels that having more advanced, perhaps unsettling or emergency scenarios would "take that nervous edge off" when similar encounters happen on the job (Brad transcript #3, 3/2016, p. 7).

> Even just that one sim class really helped. Rather than just walking in the hospital for the first time and having to be part of that team . . . When you were getting ready to go into the scenario, they gave you the scenario and you had a few minutes to talk about it first, which doesn't always happen in the hospital – you're just put into it a lot. But it just feels like that helped a lot – knowing that you're going to have to rely on other people. (Brad transcript #3, 3/2016, p. 6)

For Brad, having that opportunity to practice in school, to be pushed out of "your comfort zone", helps students get "over that initial awkwardness" that one can often encounter in unexpected situations in the hospital (Brad transcript #3, 3/2016, p. 7). Robert agreed, stating "I think it's good because it forces you to do something you don't want to do. First of all" (Robert transcript #1, 1/2016, p. 13). This was followed by a small laugh. He stated that students are "wrapped up in [the] program" and the interprofessional experiences "force" them to do something else (Robert transcript #1, 1/2016, p. 13). He and Brad recalled an introductory skills course that introduced them to basic nursing functions and equipment, and standard protocol for things like contact and droplet precautions or patient mobility and transport. The students worked in groups of three, one from each discipline, "so we had to work together and use our skills at that time" (Robert transcript #1, 1/2016, p. 7).

Brad stated that initially the students in the skills lab from the different disciplines habitually sat with their same-discipline peers, but the entire class was then divided into interdisciplinary groups.

> I think that just that whole environment they put you in made you step out of your comfort zone and maybe be the only x-ray tech in your group and so you had to speak up. You couldn't rely on other people that were learning the same thing as you. You had to interact with the other fields. (Brad transcript #1, 3/2016, p. 7)

Robert found it applicable, "I thought it was a really good class to collaborate with the professions and make us work together because that's what we do today" and appreciated learning about things that may require a combined effort, such as patient transport (Robert transcript #1, 1/2016, p. 7). "Those little things kind of stick out, those things we have to do together, whether we think it's in our job title or not, it is" (Robert transcript #1, 1/2016, p. 8). He felt that "it kind of sets a tone" of an expectation that they will be

working with each other in the future (Robert transcript #2, 1/2016, p. 15). Robert felt

that the relationships built in school may reignite in the workplace and "it just forces you

to keep building those" (Robert transcript #1, 1/2016, p. 13). "You have to work with

these people, so if you're out in the real world and you need to force yourself, you need

to make that contact/connections with somebody that I think that class helps" (Robert

transcript #1, 1/2016, p. 13).

This experience helped Brad to gain "the ability to work with people",

specifically comfort in working with others he does not know (Brad transcript #1, 3/2016,

p. 4). In addition to the skills he learned in his class, Robert found that it "helped me

understand that any type of personality is going to be working with me" (Robert

transcript #1, 1/2016, p. 9). It "really showed me how the same people in school are

going to be same people I see and work with when I get out" (Robert transcript #1,

1/2016, p. 9). Brad also found that his course "helped with people skills more", providing

an opportunity to "work with people you never met before" and helping to "break down

those walls" (Brad transcript #1, 3/2016, p. 8).

In addition to the skills lab, Brad mentioned interaction in a simulation lab that

he found particularly useful.

> It was great because we all started learning different things. Like if you walked in
> on the chart and it said there was an iodine allergy, that's a huge clue to us
> because it's something we deal with, but the nursing students – right over their
> heads. And we learned from them too. Like respiratory therapy – if this is
> happening to the patient then we've got to do this. And it was stuff we didn't
> know so I thought that lab was awesome. (Brad transcript #1, 3/2016, p. 5)

He appreciated the exposure to the roles and responsibilities of the other professions. "I

think it makes you aware of everybody else and if there's anything you can do to help

them in situations" (Brad transcript #1, 3/2016, p. 7). He recommended adding something

similar towards the end of the programs when the students are more confident and knowledgeable in their skills and abilities, and have had the experience of clinicals.

> That first one kind of scratched the surface and let us see a little bit of what everybody does, but I think a more advanced . . . one would just let you go further into what the other professions have to do. (Brad transcript #2, 3/2016, p. 10)

Similarly, Daryl recalls his clinical rotations giving him "a much greater understanding of the other roles that [he] worked with", empowering him to ask for help and to help them based on what each discipline could offer and offering the realization that "we're all kind of part of the same team" (Daryl transcript #1, 1/2016, p. 14). He found it helpful to have this baseline understanding of other disciplines before beginning his job. He suggested a mock family conference, a common situation that could incorporate nursing and the different therapists interacting with a patient and family, complicated by a family dynamic that creates friction.

In addition to having more experiential learning opportunities and valuing mock situations that simulate real-world scenarios, participants indicated the need for an evidence of value placed on interprofessional learning experiences and for more emphasis on time management skills. As Daryl looked back on his interprofessional capstone course, overall he did not feel much effect of the course on himself, stating "I feel like the intent was good, but the execution in my particular course was not. It was fine, but it didn't really do anything one way or the other" (Daryl transcript #1, 1/2016, p. 12). When asked what he got out of the course he whispered, "Not a lot" (Daryl transcript #1, 1/2016, p. 12). Similarly, when asked what she got out of the class, Kylie stated "a credit", followed by a small laugh and apology (Kylie transcript #1, 2/2016, p. 7). Daryl described it as "just another class and another paper we had to write" (Daryl transcript #1,

1/2016, 12). "As a little 1 credit 'nothing' course, it was just extra work" (Daryl transcript #1, 1/2016, p. 13). Kylie did not recall any of the members of her group, and overall felt that the class was "busy work" (Kylie transcript #1, 2/2016, p. 7). Brad admitted that "initially it just seemed like another busy work class", but in the end he found value in the group work (Brad transcript #1, 3/2016, p. 9). Rather than a low point, Robert referenced a "got-in-the-way point", in that he had to balance the class amongst a heavy workload during that particular semester (Robert transcript #1, 1/2016, p. 12). "But it was important in the end, I didn't realize" (Robert transcript #1, 1/2016, p. 12).

For Daryl, it was simply an extra one credit course that he needed to graduate, "but it's too bad that that's really how it was" (Daryl transcript #1, 1/2016, p. 12). He thought, perhaps, if it would have replaced another required course, been worth more credits, and/or included lectures from faculty or professionals in different disciplines that it would have been more of interest. "It was just so focused on what, whatever our project was that it didn't leave a lot of room for discussion about, like, lots of outside things" (Daryl transcript #2, 1/2016, p. 9). The feelings generated included "ambivalence" or perhaps "almost annoyance, at having to do this last thing", stating that there were no highs or lows in the class (Daryl transcript #1, 1/2016, p. 13).

When asked about his educational experiences, Daryl indicated an appreciation of the emphasis his nursing program had on time management, a large part of the day-to-day job of a nurse and a self-proclaimed area of weakness for him. Upon his return to school he felt "much more focused", but acknowledged that time management has always been a challenge for him (Daryl transcript #1, 1/2016, p. 8). He worked on this in school and in his current position, stating "I do an ok job of it now" (Daryl transcript #1, 1/2016, 8). It

has taken some time to properly manage his day in order to accomplish all tasks necessary and he still identifies managing his time with his patient load as "a large challenge" for himself (Daryl transcript #2, 1/2016, p. 2). This is particularly challenging in a rehabilitation setting, as the patients need to learn to do much of their own care, requiring continued adaptation to each patient. He has been working to improve it, but also acknowledges the need for balance. "I'm still a little slower than some other people, but that's ok. I do it in a timely enough manner that there's no issue for the most part" (Daryl transcript #2, 1/2016, p. 3).

Similarly, Kylie and Robert mentioned time management in their education and professional experiences. Kylie was the only traditionally aged student included in this study and when asked about personal changes throughout her schooling, she mentioned overall maturity and enhancement of her time management skills. Robert also felt that he gained some experience in time management in school. As a respiratory therapist, Robert works all over the facility, and has had to learn to manage his time and efforts efficiently in order to see all of his patients during his shift. Although the management of that is a bit challenging, he does appreciate the variety of patients and experiences that it offers.

Professional and Healthcare Team Role

It was evident throughout Daryl's description of his work experience, his interprofessional collaborative practice experience, and the particular example he gave that he considers himself a part of a healthcare team. When asked directly, he stated "Absolutely" (Daryl transcript #2, 1/2016, 8). He is humble enough to recognize when he needs help from other healthcare professionals and is willing to ask for it, but also has pride in that he has something to offer them as well with his own skillset. He views his

role as the person who carries out the medical orders, a coordinator of patient's time, an "extension" of the therapists and physicians to ensure patients are continuing recovery efforts beyond formal sessions, and the patient and family educator on medical matters, the "medical expert" or "medical point person" (Daryl transcript #2, 1/2016, p. 2, 6, 8).

> I'm there with them every day. If something's going wrong, I'm the first line of defense kind of a thing. I make sure they get their medications. I make sure they're safe. You know, just overseeing their general wellbeing. And the other role is most often a coordinator. I very actively have to manage patients' time. I have to oversee my aides, making sure that this patient's ready for pool therapy and they have their clothes on for this therapy or they have an imaging appointment so they need to have these clothes on, or this patient has therapy at 8:30, they need their medications first. (Daryl transcript #2, 1/2016, p. 8)

He also stated "And maybe while I'm doing the most direct patient care, I need their help and they're happy to help me" (Daryl transcript #1, 1/2016, p. 14) When asked about a specific interprofessional collaborative practice experience, Daryl indicated that his role in the identified situation was to provide the medical education – to explain physiologically what had occurred, to review the medications, and to help identify and clarify the physical effects that the patient would continue to experience.

In general Robert considers himself a part of a healthcare team, stating "Oh definitely", but his description of that role varied (Robert transcript #2, 1/2016, p. 13). He described himself as a leader in interprofessional experiences in school. "I'm always usually the one to really jump in and kind of be the leader, but not necessarily . . . But not like control, kind of lead and make sure everyone has a part" (Robert transcript #1, 1/2016, 9). He wanted to ensure that "our group progress" and "make sure everyone in the room is comfortable", with a focus on the patient (Robert transcript #1, 1/2016, p. 9). He stated that he has brought that same strategy "into the real healthcare field" (Robert transcript #1, 1/2016, p. 9). In his description of a specific interprofessional collaborative

practice experience, however, he identified himself as "just a part of the team" with no "bigger role than the student", "just a piece of the pie" (Robert transcript #2, 1/2016, p. 10). These experiences have helped him gain further confidence in his professional skills, valuing it "as another experience. Adding another element. And knowing, building confidence with another group of healthcare workers and a situation that's going to come up again and just makes it that much easier for the next one" (Robert transcript #2, 1/2016, p. 11). When asked in a later interview about his role within the larger healthcare team, he focused on his role as a patient advocate, "I'm always focused on the patient" (Robert transcript #2, 1/2016, p. 13). He tries to question protocols and recommendations, "Is this what we should be doing with them? Or are we just doing it just to do it? What is it doing? What are we benefitting here?" (Robert transcript #2, 1/2016, p. 13). In his view, "I think that should be everyone's role . . . I think that's the most important role" (Robert transcript #2, 1/2016, p. 14).

Kylie was less descript in her professional role, but does consider herself part of a healthcare team. She identifies with her role "to make it as easy as possible for the providers and clinical staff to do their job and for the patients to get in and see them" (Kylie transcript #2, 3/2016, p. 7).

When asked if he considers himself as part of a healthcare team, Brad responded "Absolutely" (Brad transcript #2, 3/2016, p. 8). He sees his role to first "know my job and be able to do my job at a high level" before learning more about the roles and responsibilities of other disciplines (Brad transcript #2, 3/2016, p. 8).

> Like when I'm in surgery now, I've gotten to the point where, like if the doctor switches sides or something, I know what needs to be done, like unplugging his light and plugging it in on the other side and being ready to take care of those things, or reaching under the table and sliding the pedal over for some of the

equipment they're running because you know he's going to need it in a minute. (Brad transcript #2, 3/2016, p. 8)

Once he learns more about other jobs, he can take initiative to help them in their roles. In his description of an interprofessional collaborative practice experience, Brad described his role as "kind of a hurry up and wait role" (Brad transcript #2, 3/2016, p. 5). "You kind of stand back and look for anything you can do to help, but then be ready when it's time to do your job" (Brad transcript #2, 3/2016, p. 5). He struggled with this a bit initially, finding the chaos a bit overwhelming and himself unsure of where he "fit into the whole picture" (Brad transcript #2, 3/2016, p. 7). He recognizes that he is more independent than when he was a student, "not necessarily answering to someone all the time" (Brad transcript #2, 3/2016, p. 3). He also recognizes the values and struggles of other professionals and their contributions to the team. "I've always been in some kind of field where you have to respect the other person and their knowledge to be able to get the project done" (Brad transcript #3, 3/2016, p. 2).

Although the participants indicated that they built confidence throughout their education and professional practice, Robert and Brad are still building this confidence. Robert indicated that the biggest challenge he currently has at work is his lack of confidence in his skills and ability in a "code blue", when a patient goes into cardiopulmonary arrest (Robert transcript #2, 1/2016, p. 5). These situations may seem a bit chaotic, "they're coded, but everyone's running, you know checking blood pressure, compressions . . . people are yelling, this and that. . .", but it is essential to keep a level head and adhere to protocol amidst the emergency (Robert transcript #2, 1/2016, p. 6). He describes them as "challenging and uncomfortable", but states "I like to throw myself into that because it's the only way I'm going to be able to be the best for that patient"

(Robert transcript #2, 1/2016, p. 6). As "the new guy" he has encountered "the cold shoulder", but he is sure to acknowledge everyone on the team and recognize their contributions (Robert transcript #3, 2/2016, p. 8). He is feeling more confident now with experience, with answering patient questions, and with building "a better rapport" with the nursing staff (Robert transcript #3, 2/2016, p. 5). Similarly, Brad indicated that he is feeling more comfortable and confident with time and experience on the job, and feels as though the other staff, such as physicians and nurses, are feeling more comfortable with his skillset. For Brad, his biggest challenge is simply remembering all the specifics about all of the different imaging procedures, particularly ones he has not performed recently. He also indicated that surgery brings with it additional challenges of unpredictability in placement, room setup, and equipment.

As with their desired interprofessional educational experiences in school, participants indicated an interest in continued interprofessional learning opportunities to practice collaboration and teamwork skills. In his current organization, Daryl indicated that although there is interest, he did feel as though the facility could put more effort into educating the staff on the skills, abilities, and responsibilities of each discipline. He mentioned a program that he had heard about in which new nursing graduates shadowed the different therapies before working on the floor, stating "I would love to sit in on one of those" (Daryl transcript #2, 1/2016, p. 8). Robert also mentioned that it is "talked about", that teamwork, collaboration, and shared values are emphasized in orientation and "it was just a really big focus point in the beginning" (Robert transcript #2, 1/2016, p. 14). After that, however, he states "you're just kind of thrown into the wolves and then you just figure it out" (Robert transcript #3, 2/2016, p. 3). Despite a movement towards

team care, Kylie initially indicated that she does not see a big emphasis placed on interprofessional collaboration in the workforce, stating that the team as a whole only meets together twice per year. In the following interview, however, she did state that she felt they were "moving in that direction" (Kylie transcript #3, 3/2016, p. 5). Brad was the exception, mentioning that his facility offers interprofessional teambuilding exercises where individuals are randomly mixed in teams to address a situation, such as reducing patient wait time or addressing inefficiencies in processes.

Being a Member of a Team: The Importance of Interdependent Relationships, Group Dynamics, Power, and Individual Attributes

As participants reflected on their interprofessional experiences, they highlighted the nature of the healthcare team and the relationships within the workplace. It was evident that each felt healthcare teams were essential within their individual work settings, with multiple disciplines required to work together to provide patient care. While it is widely recognized that patients encounter a variety of professionals during any healthcare encounter, participants indicated that in working together, these professionals could provide a better experience for the patient and could be more efficient in their duties. These interdependent relationships were seen as necessary to the participants in order to meet the demands of their patient loads and other job functions. These can be influenced, however, by the inherent hierarchies of the healthcare professions and by group dynamics, among other challenges. Working with others requires shared contributions and when the group is viewed as unequal or of low value, the outcome will not highlight the benefits of a collaborative effort. The participants recognized physicians as a member of the healthcare team, but did not speak of them in a reciprocal role.

Rather, they were addressed as more of an authority figure to whom to report findings and updates. Participants recognized other challenges in working with a variety of professionals, including the occasional unfriendly greeting, unwillingness to help, and emotional reaction. These seemed primarily related to personalities, workload, and perhaps a difference in values, but were not discipline-specific. Overall, participants reflected positively on their interprofessional collaborative practice interactions and felt that effective collaboration positively influenced the work environment and patient outcomes.

Each participant identified the necessity of the interprofessional healthcare team, an essential component of the everyday functions within a facility. Daryl feels effective teamwork is essential to rehabilitative care, and Kylie appreciates the holistic approach that is encompassed in collaborative team-based patient care. Robert experiences interprofessional collaborative practice on a daily basis in his position, and overall seems to have positive experiences. Brad compared the effective collaborative experiences he witnessed to those less effective, and views quality team-based care as essential to the patient's improvement and wellbeing. All recognized the need for professionals to work together as a system to provide the highest quality and most efficient care possible.

Daryl, Robert, and Brad indicated that building relationships with other professionals was vital, providing opportunities to assist each other when needed. In collaborative situations, Daryl and Robert clearly feel responsible for establishing interprofessional relationships, and Brad is gaining more confidence in this ability. Brad and Kylie recognize effective communication as an essential element in establishing working relationships, Daryl emphasizes the need for mutual respect and recognition, and

Robert spoke repeatedly of his philosophy of greeting and smiling at everyone, offering his assistance, creating a positive environment, and treating everyone as equals.

In participant descriptions of working in groups in the interprofessional capstone course, it was evident that the group dynamics played a key role in their satisfaction of the project and the course. Kylie mentioned struggles with her group collaborating, instead dividing tasks and working individually, and also with equal contributions from all group members. The other participants felt that their groups worked well together, but Daryl did not indicate that the interdisciplinary nature of the group made any difference in their end product. Robert and Brad, however, found value in having multiple disciplines within the group, appreciating the multiple viewpoints it allowed. Kylie also mentioned appreciation for the clinical viewpoint that a group member added, in contrast to her primarily administrative take on the subject. Robert stated that he would not have learned as much in a single-discipline course and Brad felt that the end product would have been of lower quality.

Although not explicitly stated, in discussions of professionals from different healthcare disciplines, the inherent hierarchical nature of the professions continues to be an issue, particularly with physicians. Daryl and Robert described them as pleasant, nice, and understanding, and Kylie as respectful. However, Daryl and Robert also specifically mentioned their need to be prepared prior to calling a physician, showing a slight intimidation in that interaction. Brad has run into challenges when questioning an image that a physician ordered, something they may perceive as a challenge, and stated that overall they were a bit difficult to work with. In contrast, Daryl, Robert, and Brad all spoke highly of the different therapies, including physical, occupational, and respiratory

therapy, finding them very helpful and caring, and appreciating the opportunity to learn new techniques from them to work with the patient. They did indicate occasional issues with nurses, primarily a lack of friendliness or unwillingness to help, but overall still indicated positive relationships. These disputes seem more related to personalities and work demands than on an inherent power differential. Overall, they seemed to highlight a more reciprocal role with other non-physician professionals. Physicians were not highlighted in participant descriptions of interprofessional collaborative examples, outside of Brad mentioning that an emergency physician usually takes the primary leadership role in a trauma situation. He also mentioned, however, that many of the other professionals, such as the nurses, are stepping in to start protocol immediately. Daryl also indicated that physicians may be involved in family meetings, but that the social worker typically takes on the leadership role as the case manager. Interestingly, the only reference to a physician in a participant's recollection of personal healthcare experiences was that of Daryl when speaking of his wife's care.

Participants encountered a variety of challenges in working with other individuals, both within and outside of their own disciplines. Robert is surprised at how many unfriendly individuals he has encountered that were not willing to work collaboratively. Brad also witnesses this, noting individuals who are unwilling to step outside of their specific job duties to contribute to the team, and Kylie has experienced challenges working with primarily women. All recognized the need for individuals to contribute to the team, taking an inclusive mindset over a competitive view.

Interdisciplinary Teams: A Natural Occurrence Necessary for Patient Care

Working in a rehabilitation setting, Daryl indicated that his day is nearly entirely interdisciplinary, interacting regularly with therapists, physicians, and patients and their families. "I mean my whole day is an interprofessional day basically" (Daryl transcript #2, 1/2016, p. 4). In this type of work setting, he feels that interprofessional collaboration is "necessary, mandatory, like it just happens. There's no, it doesn't need helping along because it's just your normal day" (Daryl transcript #3, 2/2016, p. 3). Robert also indicated that he had regular interprofessional collaborative practice experiences in his current work setting. "That's what I do all day is work with nurses and I'll see radiology once in a while, but mainly I work with the nurse" (Robert transcript #1, 1/2016, p. 7-8). Kylie views the interdisciplinary healthcare team as "more like a machine and less as individual parts", and finds it necessary for quality patient care (Kylie transcript #3, 3/2016, p. 3).

> I just feel like if everyone works together it would just, it's better for the patient's health and the work environment and I do agree that if it worked just like a team instead of just me do my job, you do your job, then it's a better outcome. (Kylie transcript #3, 3/2016, p. 4)

Brad felt very familiar with the idea of a team-based approach and interprofessional collaborative practice, comparing it to his experiences in construction when multiple professionals are required to work "as a system" to complete a project (Brad transcript #1, 3/2016, p. 6). "People are specialized and you need to rely on them" (Brad transcript #1, 3/2016, p. 5).

Brad has been most impressed with how well teamwork occurs in an emergency trauma setting. He mentioned an incident when two trauma patients were flown in and sharing a room with "probably 18 people in there", including respiratory therapists,

nurses, physicians, surgeons, radiologic technologists and perhaps others (Brad transcript #2, 3/2016, p. 5). "It's crazy and people *have* to work together in that situation . . . That's when everything really comes together and people don't argue . . . That was a great example of everybody working together" (Brad transcript #2, 3/2016, p. 5). From Daryl's perspective, each member of the healthcare team can learn from everybody else. "I think learning and being open to learning from other professions is necessary" (Daryl transcript #3, 2/2016, p. 4). For example, he learned from physical therapy "new tricks on how to transfer patients and keep them safe, basically everyday" (Daryl transcript #3, 2/2016, p. 4). This may be "second hand for them", but was very helpful and "awesome" for Daryl to learn (Daryl transcript #3, 2/2016, p. 4). For Robert, most of his interactions with other disciplines were unplanned, simply based on who is in the patient room at the same time. In these cases he tries to help as much as possible and often finds that the patient's therapies complement each other, such as a breathing treatment with physical therapy. "We coordinate as best we can, for the most part" (Robert transcript #3, 2/2016, p. 7). During these interactions with professionals from other disciplines, Daryl stated that he relies "on their expertise in their field to help [him] perform [his] job appropriately and inform [his] decisions" (Daryl transcript #3, 2/2016, p. 1). Brad felt that his ability to observe other professionals during his clinicals allowed him to quickly recognize when collaboration during clinicals was going "really good or really bad" (Brad transcript #1, 3/2016, p. 12).

> And when it's really good, it's awesome. Like when one discipline's grabbing something and handing it to somebody that they didn't even ask for it, that they know they need that they having nothing to do with . . . Everything, everybody's willing to help each other and not just say, "That's not my job". But I've seen that too in clinic where "That's not my job" is pretty much the mindset of people. (Brad transcript #1, 3/2016, p. 12)

Initiating Interdependent Relationships: Contributor to Job Satisfaction and Efficiency

Throughout the interviews, it was clear that family and relationships were important to Robert, particularly that of his father. His recollections of his father, as he described his care and treatment of pulmonary fibrosis, was often emotional. He described how the providers "treated [him] like a family member or like a best friend", an act that was not only appreciated in the care of his father, but was also impactful in his decision to pursue a career in healthcare (Robert transcript #1, 1/2016, p. 2). This theme of close relationships was evident throughout the interviews with Robert. In his mind, treating a patient like a member of the family is the best type of relationship he can build with his patients. Robert also spoke very highly of his program faculty, attributing his success to the faculty. "I saw what huge things I was able to accomplish with these professors" (Robert transcript #1, 1/2016, p. 6). He mentioned that one was like a family member to him, a father or perhaps uncle, and that there were "hugs all the time" (Robert transcript #1, 1/2016, p. 5). He also mentioned a few of his classmates that he maintains contact with after graduation. Similarly, Brad bonded with several classmates, offering each other support through the program by studying together, support which he indicated was "vital" (Brad transcript #1, 3/2016, p. 3). He has also continued these relationships beyond graduation.

Robert feels as though establishing positive working relationships will create a more positive environment for the patient, one that will contribute to their overall health and motivation to work with him and his therapies. The nurses are typically in the patient's room when Robert enters for therapy, and he takes it upon himself to establish that working relationship because they are "sharing that patient" (Robert transcript #2,

1/2016, p. 7). "A lot of times when I go in the room, they're already in there doing their thing and so right away I've got to just build a relationship with them" (Robert transcript #2, 1/2016, p. 7). Robert wants to "come across as helpful", offering assistance and making sure he will not be in the way, rather than just "barging in and doing kind of what you want, or not smiling" (Robert transcript #2, 1/2016, p. 7). He stated "I think it makes a huge difference" (Robert transcript #2, 1/2016, p. 7). He mentioned that sometimes the nurses do not return the smile, "but most of the time, it's really been easy to work with them" (Robert transcript #2, 1/2016, p. 7). They share information about the patient with each other to collaborate on the patient's care. On occasion he will encounter a physical therapist when entering a patient room and he likes to offer them his assistance as well. "I just think that goes a long way . . . It just makes it a healthier, more positive atmosphere for the patient" (Robert transcript #2, 1/2016, p. 7). When asked to recollect and describe a particular interprofessional collaborative practice experience, Robert described a day when he entered a patient room along with a physical therapist and her student and he offered to help them with their protocols before doing his own treatments. He described the therapist as "a little surprised", perhaps that he had offered a joint effort for them to all interact with the patient rather than each entering separately (Robert transcript #2, 1/2016, p. 10). This reaction really stood out to Robert, "that I was willing just to both hit it, both go at it" (Robert transcript #2, 1/2016, p. 11).

> It just made me feel that's one more healthcare worker that I've built a relationship with, that I know that they can count on me and it seems like I can count on them for anything in the future for patients. (Robert transcript #2, 1/2016, p. 11)

He felt "it's just a good atmosphere for the hospital" and he had "just wanted to make a good impression" (Robert transcript #2, 1/2016, p. 11). He identified it as a "friendly

relationship" which "made me feel good and I think made her feel good, which makes the patient feel good, the family feel good" (Robert transcript #2, 1/2016, p. 12).

As Daryl discussed his ability to gain his confidence in interprofessional interactions, it seems as though he also took the responsibility and initiative to build the relationships. "And I feel like we, I've built a great working relationship with the therapists" (Daryl transcript #2, 1/2016, p. 3). Changing his identifier from "we" to "I" reflects Daryl's view on how these relationships were established. He mentioned that he would regularly ask the therapists for assistance or tips on how to do things, but he also acknowledges his ability to help them as well. Perhaps from his point of view it was necessary for him to reach out to establish these connections as a new nurse within the facility, both to help him be more efficient and effective in his job and to provide the best possible care for the patients. Brad also indicated that he overcomes issues with finding others to assist him by establishing relationships with the other disciplines, such as nurses, being sure to call them by name and stating, "I think the way you ask has a lot to do with it" (Brad transcript #2, 3/2016, p. 8). He reflected positively on his current relationships with professionals from other disciplines, describing his increased ability to offer his assistance and trust that they will return the favor. He admits that he is still learning more about the other professions, but attributes his success to his previous work experiences and understanding the need "to respect the other person and their knowledge" (Brad transcript #3, 3/2016, p. 2). Daryl attributes the positivity of his interactions to "a willingness to acknowledge" each other's skillsets, "a mutual respect" with the "patient's best interest in mind", and recognition that by "working together we can do a better job" (Daryl transcript #3, 2/2016, p. 2).

The building of these relationships, however, can have its challenges. In the beginning, Daryl found it difficult to ask for help, to recognize the situations in which their expertise was needed, "basically not knowing what I didn't know" (Daryl transcript #3, 2/2016, p. 2).

> I think it was just a natural extension of doing the job where I just started asking questions of everybody because I needed help. My patient load, I was finally at a full patient load and I couldn't do it all. You know, I could not spend all the time in the world with my patients so I had to ask for help. I needed questions answered. I had all these problems to solve and the best places to go were the, you know, other team members. (Daryl transcript #3, 2/2016, p. 5)

He felt as though this was a common problem for new graduates, which may have an impact on their ability to collaborate with other disciplines. Although she encounters challenging situations in building relationships with others on occasion, typically due to a misunderstanding, Kylie overcomes these through "good, thorough communication" and mentions that "explaining the way I think is really important" (Kylie transcript #3, 3/2016, p. 2). She indicates the communication is also one of her biggest challenges, but does not see this as a problem specific to any one discipline. In working with other disciplines she feels "as though we are a team that works together to provide the patients in our environment the best care" and describes these as "good experiences" (Kylie transcript #3, 3/2016, p. 1). In her current job, she feels as though "we all treat each other respectfully and equally" (Kylie transcript #3, 3/20126, p. 1).

Overall, Robert described his relationships with other disciplines as "light and fun" (Robert transcript #3, 2/2016, p. 1).

> Everyone's always super busy and getting run ragged and it's easy to get in a bad mood . . . So I just try to keep it light and fun and make comments or jokes, or and then offer my help, just to make it easier for everybody. (Robert transcript #3, 2/2016, p. 1)

He attributes his successful interactions to "just smiling", "always saying hi", and making himself "known to them or available" (Robert transcript #3, 2/2016, p. 2). He enjoys "just being friendly and having that positive attitude" (Robert transcript #3, 2/2016, p. 2). He feels it brings "more openness" towards him and "just a better environment" (Robert transcript #3, 2/2016, p. 1-2). He wants to "come across as helpful" and tries to contribute to the patient's care by building those relationships with the other caregivers, offering his assistance and being sure to greet them with a smile (Robert transcript #2, 1/2016, p. 7). To him "it just makes it [a] healthier, more positive atmosphere for the patient" (Robert transcript #2, 1/2016, p. 7). He expects similar values to be held by other healthcare professionals and seemed disappointed when they are not.

Group Dynamics: The Group Experience Can Influence Team Function and Produced Outcome

Kylie remembered her interprofessional capstone, but felt her group "didn't collaborate very well together" (Kylie transcript #1, 2/2016, p. 7). She recalls that one individual took the lead and initiative to distribute assignments to each member of the group to complete a portion of the paper. "I mean the biggest collaboration was honestly picking our topic and subject. That was when we all collaborated and said what we wanted to do. After that it was just kind of doing our own work" (Kylie transcript #1, 2/2016, p. 7). Her highest point was finishing the course and lowest was the interaction in the discussion boards. She also mentioned that her group had issues with some members not completing their parts of the paper, leading to her "picking up other people's slack" (Kylie transcript #1, 2/2016, p. 8). At the time, Kylie admitted that this problem negatively impacted her perception of the disciplines associated with the students that

"were slacking off" (Kylie transcript #3, 3/2016, p. 3). However, she feels differently now that she works with these disciplines in her job. Overall, she did not recognize any benefits to the course and said "it wasn't really a positive thing" (Kylie transcript #3, 3/2016, p. 3).

Participants also found working through group dynamics to be more challenging in an online environment. According to Kylie, "people act certain ways online that they wouldn't necessarily in person" (Kylie transcript #2, 2/2016, p. 8). Robert found taking a leadership more challenging in his online class:

> It's a different angle to take the lead, I guess, because it's easy when everyone's in a room . . . Your body language can help show a lot. And your tone of voice. And you can't do that online. (Robert transcript #1, 1/2016, p. 9-10)

Instead, when they were able to meet in person, he "kind of pushed to take the lead and everyone was good", taking initiative to make suggestions (Robert transcript #1, 1/2016, p. 10). Brad's group also decided to meet on campus even with the challenge of coordinating multiple schedules. He appreciated this opportunity to meet face-to-face with his group, feeling that it made them more successful.

> If you try to do it all online it doesn't work. It doesn't. I've done it and got the grade that we wanted, but it didn't feel like it was what they were trying to do. I feel like the online group work, you're still doing your own thing. It works great for schedule, but I don't think your work is very good. (Brad transcript #1, 3/2016, p. 10)

Daryl also experienced some issues within the course. His group still consisted of three fellow nursing students, with one student from another discipline, a discipline he could not recall. "Unfortunately, there were *so* many nursing students and so few other students that it was basically a nursing course" (Daryl transcript #1, 1/2016, p. 10). His impression was that the non-nursing student may have felt a bit "intimidated" or perhaps

just a bit of an outsider, as the three nursing students already knew each other so well (Daryl transcript #1, 1/2016, p. 11). This may have excluded that student from fully participating, which "might have been just a little unfortunate for them" as Daryl stated "the other three of us were just like, 'Alright, we're doing this like all our other classes'" (Daryl transcript #1, 1/2016, p. 12).

Robert and Brad, however, reflected more positively on the course. Robert's group ended up meeting in person when possible to complete the final project, and although they were unsure of what they were doing at the beginning of the course, they "collaborated well" with each person taking responsibility for a piece and they "had it done really quick" (Robert transcript #1, 1/2016, p. 10). Brad had a similar experience, stating that "everybody worked really well together" and they were able to get done pretty quickly (Brad transcript #1, 3/2016, p. 8). He highlighted the fact that it was a senior-level course, which he thought added to the maturity level of the students, a contributing factor to their success as a group. Robert also enjoyed working with upper division classmates, "everyone had a better head on their shoulders of what was going on in school, so everyone was pretty strong in their part" (Robert transcript #1, 1/2016, p. 10). He recollected bonding most with the other respiratory therapist in the group, who had already been working in the field. They complemented each other well as Robert "was fresh on a lot of school" while the other student "had a ton of experience in the health field" (Robert transcript #1, 1/2016, p. 10). Similarly, Brad appreciated the respiratory therapist in his group who stepped in as "kind of like the mediator", helping to coordinate ideas and "he was really good at just keeping the group working together" (Brad transcript #1, 3/2016, p. 8). "We walked in the first day and sat down and wrote

3/4ths of the paper with people we hadn't met before" (Brad transcript #1, 3/2016, p. 8).

He compared this to the frequent shift changes he experiences on the job, making it

challenging to get to know everyone. "I'd say my attitude about group work changed a

little bit" (Brad transcript #1, 3/2016, p. 9). Overall Robert seemed happy with the final

project and felt satisfied when it was complete, and Brad felt the course provided "more

ability to work as a group" (Brad transcript #1, 3/2016, p. 9).

Robert and Brad both felt that having an interdisciplinary group contributed to a

better final project. When asked if the project had been done in a single discipline course

instead, Robert responded:

> Well I could use all my own stuff. Everything I guess. It had probably been a lot
> easier, but I wouldn't have gotten all these ideas and angles and suggestions from
> these other fields. So, I mean, you could say it would have been better, but you
> wouldn't have learned as much I don't think. Definitely not as much. (Robert
> transcript #1, 1/2016, p. 12)

He described the culmination of the project as the high point of the class, "I think just

finalizing it all and everyone agreeing on it and everyone did their part and at least had

something in there from them" (Robert transcript #1, 1/2016, p. 11-12).

> I think we collaborated and came up with a lot of things . . . I think we did a lot of
> suggesting and things that we put into our final project that I didn't really think
> about. I probably wouldn't have, so it made us think about what we could do in
> the community to help the community in this way. So I thought that was pretty
> cool, that everyone had such great ideas. (Robert transcript #1, 1/2016, p. 10-11)

Brad was also proud of their final product, naming it as the highlight of the class. He did

not feel as though the quality would have been as good in a strictly radiologic sciences

course. "I think your mindsets all the same. You don't have different outlooks on the

same subjects . . . I think having different points of view made the paper better" (Brad

transcript #1, 3/2016, p. 10). Initially, Kylie did not feel as though her experience would

have been any different if she had been in a course with just students of the same major, as she did not feel as though her teammates' disciplines had an impact on their contribution. She later stated that she did appreciate the clinical viewpoint brought by members of her team, as she was more familiar with the administrative side and they mentioned ideas she would not have considered herself. Daryl, however, did not feel that having an interdisciplinary group overly affected the process or outcome, recollecting "that could have easily been an assignment that we did in any other class" (Daryl transcript #1, 1/2016, p. 13).

<u>Hierarchy and Power: Professional Role May Influence Interprofessional Relationships</u>

<u>References to Physicians</u>

When referencing physicians, Daryl stated "I feel lucky that our physicians are generally pretty nice about understanding that I'm relatively new", hinting that perhaps his impression is that physicians in other facilities may not be as receptive (Daryl transcript #2, 1/2016, p. 4). Their interactions with patients can sometimes be time consuming, and Robert tries to work around that, offering "Do I need to go do another patient and come back?" (Robert transcript #2, 1/2016, p. 8). He described the physicians he works with as "pleasant and nice" and he answers their questions about the patient's breathing and progress so they can take that into account in their care plan (Robert transcript #2, 1/2016, p. 8). Daryl has found physicians to be responsive to his questions and described them as "receptive" even to phone calls that occur after hours or on the weekends (Daryl transcript #2, 1/2016, p. 4). "As long as I'm organized and prepared, there's no issue" (Daryl transcript #2, 1/2016, p. 4). The physicians may not interact with the patients as frequently as a respiratory therapist or nurse, so Robert is sure to contact

the attending physician when a patient's condition changes or if the care plan is not working as expected to offer suggestions. Although intimidating at first, Robert is feeling more comfortable with this process, as long as he is prepared prior to making the call. Although not indicating any negative encounters, these statements infer that the responsibility of preparedness is on the nurse or therapist in a commonly recognized power differential in which many interpret the physician as the superior. Furthermore, the physician holds the primary responsibility of making decisions concerning patient care, but relies heavily on the information provided from other healthcare professionals.

Daryl has found common ground in their primary focus, "I've been really pleased that they seem like really their primary mission is to take care of their patients" (Daryl transcript #2, 1/2016, p. 4). Brad also appreciated this common goal. In the interprofessional collaborative practice situation he described, it was determined that the best care for one of the patients was to be transferred to a competing hospital. He appreciated the cooperation of the trauma doctor – "doing what's better for that patient even if it's sending him to a different facility was really cool to see" (Brad transcript #2, 3/2016, p. 7). Daryl mentioned that physicians may be involved in family meetings, but did not elaborate on their role within that very interprofessional, team-oriented interaction. The interprofessional relationship references and collaborative practice experiences of all participants failed to elaborate on the role of the physician.

Brad mentioned having the most challenges when working with physicians. "There's a lot of good doctors where I work too, but I think that as a overall whole some of them are pretty hard to deal with" (Brad transcript #2, 3/2016, 4). He respects their education and knowledge, but feels as though some do not like to be challenged in their

diagnostic testing orders. As experts in imaging, radiologic technologists will often recommend different studies when looking for particular conditions and these recommendations are not always well received by physicians when they are different than what was ordered. This was not surprising to Brad, however, because he expected to run into challenges with the physicians when he began school. He had previous experiences when dealing with healthcare for his children, encountering "a lot of doctors [that] have a superiority complex a little" (Brad transcript #2, 3/2016, p. 4).

<u>References to Other Professionals</u>

In reference to other disciplines, Brad spoke highly of those individuals involved in his personal care when he was injured on a job site. Although traumatic, Brad recalls the care following his fall as a very positive experience, expressing his gratitude and appreciation for the healthcare professionals involved.

> It was just, I think, the whole care process from when I got hurt, the paramedics picking me up at the sight to physical therapy, to just all the way through, just kind of the whole thing – that there's a lot of different parts that made it a good experience. (Brad transcript #1, 3/2016, p. 1)

He describes the paramedics as "really caring" and expressed overall comradery between the professionals (Brad transcript #1, 3/2016, p. 2). This experience was influential in his decision to pursue his degree, "I saw a lot of different fields, a lot of different people caring for me and it just made me want to be able to do the same thing" (Brad transcript #1, 3/2016, p. 1).

Therapy. Robert was highly involved in his father's care with a chronic respiratory condition, and recalled how impressed he was with the rehabilitation professionals. "The girls over there were *really* awesome" (Robert transcript #1, 1/2016, p. 2). He appreciated their interest in their patients, and that they were happy to answer

his questions and explain their protocols. He encountered this type of care again in his clinicals by therapists, solidifying his choice to go into respiratory care. He spoke highly of working with physical therapy as well, on the job, often finding that collaborating with them was helpful for the patient. He mentioned his appreciation of the opportunity to learn more about physical therapy techniques in his interprofessional collaborative practice, such as the use of a therapeutic chair.

> I guess it just, the picture gets bigger for the other healthcare fields that I don't know about. I don't know a lot of what they do, so it just builds that picture and I get to know more and more about what they do and learn in that area too. (Robert transcript #2, 1/2016, p. 12)

Daryl also acknowledges that he needs the therapists and appreciates "that they're there" (Daryl transcript #1, 1/2016, p. 14). He mentioned "I'm not an expert in recovery so I then pass that off to therapy", and has an affinity for asking "lots of questions" to the therapists about individual patient needs and the reasoning behind certain recommendations (Daryl transcript #2, 1/2016, p. 6). He works as an extension of the therapists to assist the patient in continuous progress beyond the formalized therapy sessions. Thus, when interacting with the therapists, he likes to "ask them lots of questions about what this patient needs to do for themselves" (Daryl transcript #2, 1/2016, p. 3). These focus around such things as mobility, diet, and regular daily activities such as eating and speaking. He states:

> And the therapists have been great about answering my questions, educating me as to why they're doing certain things, why this patient needs this adaptive device, or whatever the example would be . . . They trust that I will take care of the patients and, I don't do their therapies, but continue their protocols at their request. (Daryl transcript #2, 1/2016, p. 3)

When asked to recall a specific interprofessional collaboration experience, Daryl described a recent family meeting in which the patient and family were having some communication issues, and the patient was feeling nervous about going home. All professionals in attendance helped to clarify the needs of the patient and "as a team, we were able to educate the family, answer all their questions" (Daryl transcript #2, 1/2016, p. 5). He was particularly impressed with the therapists and how they supported each other in establishing limitations for the patient and family.

> They really worked in concert to reinforce the limitations and challenges that patient had. I guess it just further increased my trust and respect for the therapists and what they do. It makes me feel like I'm an integrated part of a team too, which I absolutely am. (Daryl transcript #2, 1/2016, p. 6)

Daryl also noted strengths of the respiratory therapists, "RT knows respiratory much better than I do, so I rely on them for that" (Daryl transcript #3, 2/2016, p. 2). Robert, a respiratory therapist himself, did not speak much about other respiratory therapists, but did mention a patient that complained that her respiratory therapist did not smile and recommended her family leave the room. Robert seemed disappointed in this interaction. Brad spoke highly of the respiratory care faculty that led the CPR portion of his patient skills lab and a respiratory therapy student who took the initiative to lead his group in the interprofessional capstone course. He mentioned further interactions with respiratory therapy primarily as a student, when they would converse in the hallways on campus.

Nursing. Daryl's only directly negative reference to a type of healthcare professional was actually within his own discipline of nursing, when reflecting on past personal experiences in healthcare.

I've also seen a lot of bad nursing, especially at the beginning of my wife's care . . . And I now know that a lot of the practices that the nurses were using were fairly unsafe. And it's a little disappointing now, to see that. (Daryl transcript #1, 1/2016, p. 3)

He also mentioned that it was a challenge in clinicals if, as a student, you were placed with a nurse that "just didn't care, like wasn't particularly passionate or inspiring" (Daryl transcript #1, 1/2016, p. 9). But he also gained some insight on that since becoming a nurse himself, stating "I get that. I totally understand now, that you can't be that all the time" (Daryl transcript #1, 1/2016, p. 9).

Robert hinted at some preconceived ideas, stating "Just because it's a nurse, I can't just assume it's going to be a certain type of personality" (Robert transcript #1, 1/2016, p. 9). He does work with the nurses regularly and is sure to greet them and offer his assistance, but this is not necessarily reciprocated. "There's a couple nurses that have never smiled, I won't lie. And I just don't really say a whole lot to them" (Robert transcript #2, 1/2016, p. 7). With his emphasis on relationships this is odd to Robert, "I don't even know why they're in that job" (Robert transcript #2, 1/2016, p. 7). He recognized this while in school as well, "I remember the nursing class . . . and there's some that you can kind of point out that . . . you probably don't want to hang around them much" (Robert transcript #2, 1/2016, p. 9).

In reference to working with other disciplines, Kylie stated that it had "been good so far" and specifically mentioned positive interactions with the nursing staff (Kylie transcript #2, 3/2016, p. 4). She has had good experiences with them when dealing with her husband's diabetes and found them to be very focused in school. She also interacts with them regularly in her current position, and indicated that "it's been positive" (Kylie

transcript #2, 3/2016, p. 3). In fact, Kylie is interested in returning to school to become a nurse herself.

Brad's description of nurses seemed very cooperative, mentioning their complementary skillsets in assessing and treating patients. He is particularly impressed with the nurses in the trauma room, "it's impressive that they can remember everything they have to do and all the medications" (Brad transcript #2, 3/2016, p. 6). He has taken it upon himself to be sure to learn some of the nurses' tasks so he can step in to assist as needed.

Other disciplines. While participants described interactions with the therapists, nurses, and physicians, they did not elaborate much on interactions with other disciplines, although several were mentioned. As a graduate of the radiologic sciences program, Brad indicated that some of the clinical mentors were off-putting, treating students as a burden and scaring them from certain areas of the hospital, such as the surgery suite. Kylie mentioned working with the administrative and coding staff, and Brad with the paramedics and administration, but neither of them expanded on these interactions. Kylie stated overall that she felt the people within her office treated each other with respect. In general, Robert was surprised to find other professionals in the hospital less friendly, collaborative, and responsive than he expected, but Brad felt his current facility was significantly better at collaborating than a few of the facilities he attended in clinicals. He mentioned that the other disciplines at his current facility have been "*really* good to work with compared to some of the other places I've been" (Brad transcript #2, 3/2016, p. 1).

Robert is also sure to mention the entry-level and non-clinical staff, including the nursing assistants and cleaning staff, recognizing their contributions to the care of the

patients. He views everyone on an equal playing field, each adding value to the patient care experience. He feels that serving as the patient's advocate should be everyone's role. He seems to have a preference of disconnecting value from power. "I still try to put everybody on the same level. I don't care if it's a doctor, if it's a CNA, or if it's one of the environmental services, cleaning, I always say 'Hi' to them" (Robert transcript #3, 2/2016, p. 8) He is considerate of other professionals' time and treatment, recognizing that no one person's interaction with the patient is more important than another's. Overall, he concluded "it hasn't been hard to collaborate with everybody" (Robert transcript #2, 1/2016, p. 8). He characterized his collaborative experiences as "strong and positive" (Robert transcript #3, 2/2016, p. 2).

<u>Working With Others: The Impact of Personalities, Workload, Attitude, Values, and Feelings</u>

Robert mentioned that his sister had told him about all the "great people in healthcare" and while he confirmed this to be true, he was "surprised there's not more" (Robert transcript #2, 1/2016, p. 9). He goes about his day with a smile and greeting everyone he sees, "it makes my day go better", but stated:

> I guess I expected everybody to be a little more friendly. But I don't know how their day's going . . . I guess my expectations were that everyone would be more than it has been. Because there's more not as friendly than, and less collaborative or responsive to me than I would have thought, I guess. (Robert transcript #2, 1/2016, p. 9)

He followed this up with the caveat that it could just be on a particular day, and he does not encounter everyone every day. "Maybe it's just their bad day" (Robert transcript #2, 1/2016, p. 9). Daryl recollected that he hadn't "had any really significantly negative experiences" with professionals from other disciplines (Daryl transcript #3, 2/2016, p. 2).

He continued "sometimes people are busy, or something. They're a little short with you, and I think you have to learn to just kind of forget it and move past and it has nothing to do with you, really" (Daryl transcript #3, 2/2016, p. 2). Brad mentioned that at times he can have trouble finding someone to help him with his efforts to get a quality image, to help move or position a patient for example. "Sometimes it's trouble to get somebody to do something that's not specifically in their job description" (Brad transcript #2, 3/2016, p. 8).

When asked what an individual struggling with interprofessional collaboration would be like, Daryl stated:

> I think someone would be kind of defensive about their ideas, even if they're kind of speaking outside their area of expertise. They might think they know best in all situations, kind of thing. And I've occasionally seen that when like, PT, OT, and speech are all together. Because there's a significant overlap in all three of those. They're on a continuum more and sometimes, like speech and OT will kind of bicker back and forth about a patient's ability or what's best for them or something. (Daryl transcript #3, 2/2016, p. 3)

Rather, when it is going well, Brad stated that "It looks like they've worked together for a long time. It looks like they know each other . . . It looks like two neighbors barbecuing out in their backyard" (Brad transcript #3, 3/2016, p. 4). They share a common goal and are focused on the task at hand rather than arguing with each other.

Similarly, Robert indicated that someone struggling with collaborative interactions has issues with "communication skills or people skills" and comes off as "inconsiderate" or "not really caring", "values that you *need* to be in the healthcare profession" (Robert transcript #3, 2/2016, p. 4-5). This type of person does not incorporate teammates or suggestions, they "know it all" and "that's the way to do it", they "think they know everything", and/or "they're too proud to ask or coordinate with

people" (Robert transcript #3, 2/2016, p. 5). Brad indicated that they "would put themselves first and think they just needed to do their job", rather than coordinating with others to make it a more timely, efficient and positive experience for the patient (Brad transcript #3, 3/2016, p. 4). In contrast, according to Kylie, a person successfully participating in such a team "communicates efficiently and accurately to their team members and works with them" (Kylie transcript #3, 3/2016, p. 4). For her, those struggling with this interaction are "people that aren't ok with change" (Kylie transcript #3, 3/2016, p. 4). This is why, although it may come naturally to some, to Brad this promotion of teamwork "needs to be pushed because people don't want to change" (Brad transcript #3, 3/2016, p. 4). He feels as though people can get set in their ways and may not be open to approaching patient care in a different way. Kylie also notes alignment within disciplines and recognizes that it may be more challenging to coordinate with those outside of your own discipline.

> I think that a lot of people within their certain area work well with their people. Like ultrasound techs work great with other ultrasound techs, and nurses work great with other nurses . . . And so I think that it's not like they don't work well together, but I think it's hard for people to accept other people's jobs and realize what they're doing is important too . . . They work well in their silos, but now it's a whole team around one person and I think that's the way it's going . . . Everyone needs to treat just not their people in their circle, but the whole team the same way and work with them. (Kylie transcript #3, 3/2016, p. 4-5)

Robert described a patient encounter in which the patient was unsatisfied with his nurse, "He started complaining about how the nurse was just *so*, not mean, but just inconsiderate and not really caring. You know, a lot of these values that you *need* to be in the healthcare profession" (Robert transcript #3, 2/2016, p. 5). Robert described a lack of social skills or people skills and the impact it was having on the patient, impeding that patient's desire to cooperate with the nurse. Rather than attributing it to her discipline,

however, he indicated it was "because just the way she was brought up" (Robert transcript #3, 2/2016, p. 5). When asked how healthcare professionals could be best prepared for interprofessional collaboration he stated it primarily "goes back to the personalities", which may not be something that can be learned in school (Robert transcript #3, 2/2016, p. 6).

> And a lot of it I think just comes with the type of person that you're working with. It's not something maybe that's learned in school necessarily, it's almost just a respect thing from growing up and however they were brought up. (Robert transcript #3, 2/2016, p. 4)

Brad recognizes that this ability to work as a team is not automatic and does not always occur seamlessly, as "personalities matter" (Brad transcript #2, 3/2016, p. 4). When asked about working with individuals from other disciplines, Brad stated:

> I think it matters what kind of people they are because there's some people that are *really* hard to work with at the jobsite in other professions because they just – if you ask them something or notice something and bring it up to their attention, then they feel like you're questioning their ability of *their* job. (Brad transcript #2, 3/2016, p. 4)

Robert also gave example of a patient describing another respiratory therapist, with the patient stating "Gosh, I told them to not bring that other RT back because she never smiles. She's just in here and she tells me I shouldn't have all my family in here" (Robert transcript #2, 1/2016, p. 5). This last statement was particularly puzzling to Robert as family is essential to him and, in his view, the healing process. Thankfully, this is the exception as "most of the time, it's been really easy to work with them" (Robert transcript #2, 1/2016, p. 7).

Brad mentioned that a bad experience in a clinical rotation can create future anxiety around certain aspects of the job.

There's certain times when the student gets to go in the OR for their first time in surgery and if it goes really bad then they don't ever want to go into surgery again, and there's a *lot* of techs that don't want to go into surgery. And I think that's why – it's because a lot of, just bad experiences right at the first and I think some of that is techs not really wanting students in there with them, some of it's doctors not wanting people in there, some of it can't be controlled, like just the surgery going bad. Then there's a lot of tension – you feel that. Some of it can't be controlled, but some of it can. (Brad transcript #3, 3/2016, p. 5)

Brad primarily felt the bad experiences occurred between the radiologic technicians and their own students, outside of the occasional warning from a nurse or doctor when a student was too close to the sterile field. He was disappointed in the techs that made him and other students feel like they were an inconvenience. Brad now works with students on the job and feels that giving them a positive experience sets them up for faster advancement with their skills.

Kylie did not expect to encounter any issues when working with other disciplines, other than the normal disputes that can arise "in any work situation . . . because everyone comes from different backgrounds, whether it be education, whether it be culture…" or any other differences (Kylie transcript #2, 3/2016, p. 3). Rather than anything related to the disciplines, she stated that her primary challenge has been "working with all women" (Kylie transcript #2, 3/2016, p. 2). She indicated that the only male staff were some of the physicians. She stated that emotions can come into play, feelings can get hurt, and she often hears the phrase "that's not fair" (Kylie transcript #2, 3/2016, 2).

Focus on Patient-Centricity: A Common Goal for Satisfaction, Empathy, Environment, Empowerment, and Outcomes

As participants described their personal health care, educational, and work experiences, it was evident that each was impacted and driven by patient care. This fulfills their desire to make a difference, providing purpose in their work and satisfaction

in patient outcomes. They express empathy for the patients and families, recognizing their challenges and need for empowerment. When the healthcare team focuses on the patient as the common goal, collaboration can be more effective, contributing to the patient's wellbeing and confidence. Ineffective collaboration, however, may increase anxiety and doubt, challenging the patient's trust in the team. Even when not providing direct patient care, the actions of all involved in the organization and the overall culture and environment should contribute to a better patient experience.

As with many who go into healthcare, Robert and Brad feel a need to make a difference. All participants find their job satisfaction within the patient experience. Robert works on establishing a solid relationship with his patients, Brad enjoys creating a positive patient experience, and Daryl strives to see his patients get better. Kylie wants to help these interactions occur, supporting clinical staff in caring for patients and assisting patients in receiving that care. In reflections on interprofessional collaborative practice, the participants also mentioned the impact on patients. Robert and Kylie highlighted the creation of a positive environment for patients, families, employees, and the facility, leading to better patient outcomes. Robert feels that demonstrating teamwork in front of the patient encourages them to work hard to be a part of the team and shows them that their time is valued, and Brad sees patients react as more relaxed and less nervous. As witnessed by Brad, ineffective collaboration can increase patient anxiety and result in longer stays.

<u>Job Satisfaction</u>

It is evident that the satisfaction Daryl gains from his career is driven by his patients and their outcomes.

What I enjoy most is when my patients get better… and when I can send somebody home, to their house, you know and they, say they had a stroke, and they've been in rehab for a month and they came in and they couldn't speak an intelligible word and we can hold a conversation when they go home. Like that's really cool, that's a big deal. (Daryl transcript #2, 1/2016, p. 2)

After asked to recall a specific interprofessional collaborative practice experience, he indicated that he left that particular experience feeling good that the patient "was going to most likely be successful at home . . . they were in a relatively good situation" (Daryl transcript #2, 1/2016, p. 7).

Robert's job satisfaction also comes from his patients, in building that relationship and helping them feel better. In selecting his career, he was intrigued by the notion of caring for a patient over a course of time that is typically sufficient enough to build a relationship and hopefully an opportunity to see progress, rather than seeing multiple patients quickly in passing. He stated "it's nice to build a good relationship" and "it's just really rewarding that you're making a difference" (Robert transcript #2, 1/2016, p. 5). He mentioned one patient with metastatic cancer who he had been working with for some time, and described the relationship he had built with the patient and her spouse. He described the last encounter they had before she left the hospital, "we got to talking and then they kind of started crying and were so thankful" (Robert transcript #2, 1/2016, p. 5). He was also nearly brought to tears at that encounter and reflected, "it's nice that I can do that – have that impact and have them actually feel good" even if they are in a less than ideal situation (Robert transcript #2, 1/2016, p. 5). His dedication to patients was evident throughout the interviews, "it's all about them" (Robert transcript #2, 1/2016, p. 5). "Whatever I'm doing, I'm doing for the patient" (Robert transcript #1, 1/2016, p. 9). In another example, he reflected on how proud he was of the patient for working hard and

pushing herself to contribute to the overall team goal of her progress. "It's usually the patient that stands out the most" (Robert transcript #2, 1/2016, p. 11). He is aware of their presence in the room even when working directly with other healthcare professionals, and believes they will pick up on negative energy or arguments over their care, to the detriment of their recovery. He identifies that the patient does not want to be there at the hospital, and most likely would like to keep interruptions to a minimum. In his examples of patients speaking negatively of another healthcare professional, he seemed to take the side of the patient.

Although Kylie does not work in direct patient care, she does interact with patients daily in her administrative role. Ideally, for Kylie, interprofessional education would teach a focus on "one whole patient" with an intention "to give them the best experience and make sure they're healthy" (Kylie transcript #3, 3/2016, p. 5). For her, entering the workforce with a collaborative "mindset" with a focus on the patient is the best way for a professional to prepare for a team environment, and most of these collaborative skills are learned on the job (Kylie transcript #3, 3/2016, p. 6).

Brad enjoys his job and gets his satisfaction from helping patients, "when a patient actually says they've had a great experience in the ER today or something" (Brad transcript #2, 3/2016, p. 2). He feels as though healthcare is a significant change from construction in that "you're dealing with people at their worst", which requires a bit more balance in accommodating the patient's needs and comforts with the physician's needs for adequate diagnostic images (Brad transcript #2, 3/2016, p. 3). He recognized that a collaborative team effort in healthcare has a different impact than the teamwork he had seen in construction, stating:

But we have somebody – their life at stake or their wellbeing at stake – I think it's more important than whether that wall gets framed today. So to me it feels really important to work as a team because it's somebody else you're caring for. (Brad transcript #1, 3/2016, p. 13)

He indicated that the industry emphasis on interdisciplinary team-based care was "key" (Brad transcript #3, 3/2016, p. 3).

I really think if you're all out there for the patient then I think it's the most important thing – is that everybody's willing to work together because it always makes the outcome better . . . Teamwork is, I think it's the most important thing for the patient and that's why we should be there. (Brad transcript #3, 3/2016, p. 3)

Empathy

While Daryl clearly has an affinity for the science side of health care, he also demonstrates an "emotional perspective" in his description of his patients and their families (Daryl transcript #1, 1/2016, p. 6). He has a sense of empathy for patients and responsibility in providing the best care, reflecting on his disappointment in the unsafe nursing practices he now recognizes in his wife's care and acknowledging that "the most valuable part is that patient insight" (Daryl transcript #1, 1/2016, p. 4). He stated, "Being a patient is incredibly hard", and he continues to acknowledge that in his current work setting (Daryl transcript #1, 1/2016, p. 3). He can "very much see the patient view", one that is "scary" and "hard" (Daryl transcript #2, 1/2016, p. 7). Brad shares this empathy indicating that there is a balance between sympathizing with the patient and their pain and discomfort and getting the best image possible for the clinician. When reflecting on an interprofessional collaborative practice experience, Brad was impacted by the fact that one of the patients was a child close in age to his own son. "It made the job seem real and

that's why I got into healthcare – I wanted to make a difference to somebody and that felt like the opportunity's there" (Brad transcript #2, 3/2016, p. 6).

When asked to reflect on an interprofessional collaborative practice experience, Daryl was proud of how successful a family meeting was, thankful that the family was "willing to listen" and open to suggestions (Daryl transcript #2, 1/2016, p. 6). He mentioned that it "was more successful than most", stating that "a lot of times, families have a hard time grasping what their loved one's ability is now, as opposed to previously. They think it's going to all be better, or something like that" (Daryl transcript #2, 1/2016, p. 6), He felt "empathy for the family and the patient":

> I have never had to take care of a loved one with a stroke before, or that kind of disability. And it's super hard and I can see it from both points now. I can very much see the patient view, that it's scary and it's hard. And the family, they don't really know what's going on. Like they have a very hard time relating to their loved one's experience and I think often they don't get enough education on what's happened and happening to them, to their family. I guess I see the need for more family education. And that's hard sometimes – sometimes you don't see the family very much, sometimes they don't want to learn. Sometimes, you know, all kinds of things. (Daryl transcript #2, 1/2016, p. 7)

Environment

For Robert, it is essential to establish a positive relationship not only with the patient, but with everyone in order to ensure a positive and comfortable environment for patient care. He regularly mentioned the impact of interprofessional interactions on the patients.

> They can hear everything so they're probably feeling good, instead of somebody arguing back and forth. They don't want to be in the hospital anyway and then they're hearing this crap above them, arguing. It just makes a bad environment for the patient. (Robert transcript #2, 1/2016, p. 7)

He talked about his interactions with the certified nursing assistants (CNAs), who he treats "like anyone" for the sake of the patient (Robert transcript #2, 1/2016, p. 8). "I think it's setting the atmosphere for the room, the tone for the room, for the patient" (Robert transcript #2, 1/2016, p. 8). He mentioned "I just try to treat everyone the same", including those in environmental services, or the cleaning crew (Robert transcript #2, 1/2016, p. 8).

> And a lot of times I'll see a lot of people not do that, or not even acknowledge them and so I think it's important to do that. Everyone's on the same team, or everyone's only in there for the same thing – it's the patient. (Robert transcript #3, 2/2016, p. 8)

When he encounters another professional in the room that he has not yet established a strong relationship with yet, he tries "to build that for the patient" (Robert transcript #2, 1/2016, p. 9). "Overall it just makes your day better and the patient's as well" (Robert transcript #2, 1/2016, p. 8).

Empowerment

Daryl also mentioned the need for patient empowerment. He indicated the importance of letting his patients do tasks on their own, as it is important for a rehabilitation patient to learn or relearn basic skills. As he recalled in one interprofessional collaborative practice experience, Daryl found it challenging to encourage "self-confidence in the patient" who had experienced a challenging stay at the facility and who was "afraid to do a lot of things" (Daryl transcript #2, 1/2016, p. 7). He felt that having the nurses and therapists encourage the patient in front of the family helped to build the patient's confidence.

Similarly, Robert reflected on an experience in which the collaborative nature of the team of professionals motivated the patient to contribute to the overall goal, in a sense

empowering her to be an equal team member. In the example in which he had offered to enter a patient room with a physical therapist and student, they worked together to move the patient and then Robert completed this therapy. "So we kind of collaborated . . . and she, I think, appreciated it" (Robert transcript #2, 1/2016, p. 10). Not only was the physical therapist appreciative of Robert's help in moving the patient, but he felt as though it was beneficial for the patient to have them all enter and leave together, to reduce the amount of time the patient was "being bothered" (Robert transcript #2, 1/2016, p. 10). "Working together and caring for the patient's time, helping her out while we're in and out, having her understand that she's valuable. Her time's valuable" (Robert transcript #2, 1/2016, p. 12). He felt that the patient "was really appreciative of everyone working together" and he seemed very satisfied about the patient's experience (Robert transcript #2, 1/2016, p. 11).

> I think the highest point is she really worked, and she even told me that, she worked harder for me on the breathing therapy. I think just because of the way I am with her, but she saw the way I am with other healthcare workers . . . Some people don't like that certain therapy . . . It's tiring and it's not fun . . . But I think she performed really well and maybe it was a result of the way we kind of all worked together. She just thought, she's going to do her part. (Robert transcript #2, 1/2016, p. 12)

In his interactions with other healthcare professionals, Robert stated that he was "open to their time and their need for the patients", valuing everyone's contribution to the patient's care and being "very considerate of them" (Robert transcript #3, 2/2016, p. 1). "I think we all just have a piece and I think if healthcare workers are doing that, then the patient . . . sees that everyone's working together for that patient and it just makes them more at ease" (Robert transcript #2, 1/2016, p. 10).

Outcomes

Brad feels as though in his interactions with professionals from other disciplines, he has "seen the best and worst of people", both "a really good team atmosphere and then individual atmosphere" (Brad transcript #3, 3/2016, p. 1). During these experiences, Brad noted a direct effect on the patient. "I think it makes them more relaxed and not nervous if they feel like everybody knows what they're doing and everybody's working together for them" (Brad transcript #1, 3/2016, p. 12). He recalled a few of his clinical sites that did not reflect positive teamwork and noticed the effect on the patients.

> They wouldn't get in and out as fast if they weren't working together. I think the care they were getting probably wasn't as good. I think the patient feels that anxiety when workers are having anxiety between each other, then the patient feels it as well. They feel like maybe there's a discrepancy on how they should be cared [for]. (Brad transcript #2, 3/2016, p. 11)

Summary

Cross-analysis of participant responses resulted in the creation of three overall themes focused on the identification of roles and responsibilities, being a member of a team, and patient-centricity. Participants established their professional identities through their personal, educational, and professional experiences. This identity contributes to their role on the healthcare team and their need to build interdependent relationships, influenced by group dynamics, power differentials, and individual attributes of other professionals. The primary motivation behind this collaboration is the patient, serving as the common goal and contributing to participant job satisfaction through empathy, a positive environment, empowerment, and improved outcomes.

Chapter 5 will continue to explore these themes, relating them to the literature and interprofessional collaborative practice domains and competencies. Implications for

practice and future research will also be addressed, in addition to the limitations of the

study and general conclusions.

CHAPTER FIVE: FINDINGS AND DISCUSSION

Significance of Research Findings

The qualitative data gathered from participants has provided insight into the

experiences of students participating in interprofessional education and of new

professionals experiencing collaboration in the work setting. In an effort to continue

promoting research exploring the outcomes of interprofessional education and

collaborative practice, the Institute of Medicine (IOM) (2015) developed an

interprofessional learning continuum (IPLC) model (Figure 2) (p. 29).

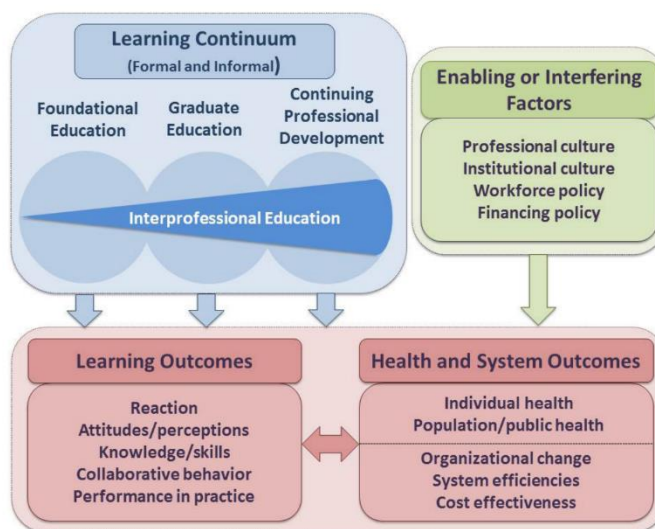**Figure 2**   **The Interprofessional Learning Continuum (IPLC) Model.**

This model addresses the complexities of the interrelationships between the

learning environment, enabling and/or interfering factors, and potential learning and

health and system outcomes. Interestingly, the themes and subthemes that emerged from

the participant interviews aligned well with several components of the model.

In addition to alignment with this model, participant responses reflected many of the core competencies for interprofessional collaborative practice identified by an Interprofessional Education Collaborative expert panel (2016). Although the model and competencies were not directly addressed in or an intended focus of the interviews, the alignment of themes provides further insight into the identified competencies and components of the IPLC model.

Learning Continuum

According to this model, the learning continuum begins within foundational education. However, the learning and experiences that happen before an individual is even enrolled in their professional program may contribute to their behaviors and abilities to collaborate with others. Robert mentioned that many interpersonal skills are based on the personality or upbringing of the individual, which could arguably mean that they cannot be taught. Brad also acknowledged that personalities matter in the ability to collaborate with others, and Kylie attributed much of that ability to an overall open mindset.

As previous studies have indicated that students can enter post-secondary education with preconceived ideas of different professions, opinions that can then influence their ability to effectively participate in interprofessional collaboration, I wanted to explore the personal background of the participants (Reeves, 2000; Tunstall-Pedoe et al., 2003). All participants indicated previous personal experience in healthcare, whether it was taking care of a loved one or acting as the patient. In addition, they all seemed to self-identify in a caretaker role. Daryl and Robert clearly indicated their role in caring for family members, Kylie reflected on personal experiences in healthcare that she

has shared with her husband who has a chronic illness, and although Brad served as the patient, his reflection on entering his current profession focused around his role as a caretaker and provider for his family. This may reflect the impact that personal experience has on the desire to go into healthcare, or it may indicate a general personality that is drawn to healthcare professions. It may also reflect the participants' willingness to be in the study, showing their desire to help and contribute. In addition, it is a factor that should be considered when addressing their interprofessional collaborative practice experiences, viewing their current positions as an opportunity to help others. As identified in the theme of professional identity, these personal experiences contributed to the participants' identities, as well their educational experiences.

Participants were each able to recall at least one interprofessional education experience, but overall, they were few and far between. Two participants recalled an interdisciplinary introductory patient skills course taken early in their academic career, two encountered interprofessional experiences in their clinical practicums, and all four had recollections of an interprofessional capstone course, with an indication of only one to three experiences per individual. Not only were few experiences offered, but they were at the beginning and end of the academic program with no focus on interprofessional learning experiences in the middle. The identification of the clinical practicums was interesting as although these do typically provide interaction with other disciplines, they are not set up intentionally to provide or promote interprofessionalism. For Daryl, this had a much more significant impact than the interprofessional capstone, enhancing his understanding of other healthcare disciplines and the composition and focus of the healthcare team. Brad used the opportunity to observe interdisciplinary teams in action,

shaping his view of effective collaboration, ineffective collaboration, and the impact each has on the patient. Regardless of intention, these participants recognized these informal experiences as valuable, contributing to their overall perception of their interprofessional education experiences and how those impacted their current ability to participant in interprofessional collaborative practice (Freeth et al., 2005).

There is still debate concerning when interprofessional education should be implemented, with some arguing for graduate school, when professional identities are more clearly identified and students have more experience and confidence, and others for immediately upon entrance to college or even earlier, when professional stereotypes are forming (Dombeck, 1997; Herzberg, 1999; Hoffman & Harnish, 2007; Leaviss, 2000). All participants in this study reflected on interprofessional education experiences within an undergraduate program, with three of the participants having gained acceptance into a professional health program, where many interprofessional education initiatives have been focused (Hoffman & Harnish, 2007). Even in the introductory patient skills lab taken during the first year of the program, these participants seemed to identify a sense of a professional identity and ability to serve as a representative of their discipline, an element some argue is necessary for effective interprofessional education (Barr, 2002; Dombeck, 1997). This contributed to their identification of roles and responsibilities, as identified in the first theme. One participant, Kylie, however, was not a part of a cohort professional program and did seem to struggle with this professional identity a bit more than the others. She struggled with finding a major in school, settling on a general health sciences program, a factor that may have contributed to a lack of a solid identity as a professional (Parsell & Bligh, 1998). Despite the variety of experiences and perceptions,

it seems as though all participants recognized at least some benefit to interprofessional education efforts at the undergraduate level. In relation to the IPLC model, most participants were able to engage in valued interprofessional learning experiences at this level of education, which may set the foundation for additional efforts at the graduate and professional development levels.

In participant recollections of interprofessional education experiences, the ones that were most valued included a hands-on laboratory, simulations, and clinical practicums. These are examples of learning experiences that highlight social-cultural and constructivist learning theories. Social cognitivism recognizes the need for humans to learn together in a social environment that allows opportunity for both observation and active engagement (Driscoll, 2005; Merriam et al., 2007; Siegler & Alibali, 2005). The combination of these varied experiences offers students the opportunity to participate in multiple communities of practice, helping students to internalize this practical experience of working collaboratively (Driscoll, 2005; Siegler & Alibali, 2005). Unfortunately, only one participant was able to fully participate in these multiple experiences. Participants felt that these experiences enhanced their confidence in working with other disciplines and types of personalities, and recommended that more opportunities be provided to expose students early on in their academic careers and push them beyond their comfort zone. This is an example of legitimate peripheral participation, starting the students at the peripheral of the interdisciplinary learning community and moving them towards the center with enhanced confidence, comfort, and sense of belonging (Lave & Wenger, 1991). According to the IPLC model, it is appropriate that this begin at the undergraduate

level, but that it continue to grow as individuals move into continued professional development (IOM, 2015).

Constructivism focuses on learning through experience, and these highlighted examples demonstrate practice-based and experiential learning (Piaget, 1955). These interactions between students, faculty, and clinical mentors provide meaning to the students and demonstrate patterns of practice within and between disciplines, contributing to their own identities, values, and norms, and their ideas of others (Curran et al., 2010; Hall, 2005). When asked for opinions of interprofessional education, each participant mentioned its value, but also provided recommendations for enhancement of its implementation within programs. These recommendations were consistently focused on providing applied, real-world experience through simulations and varied problem-based scenarios. This is consistent with adult learning and the desire for meaning, noting their need to connect their interprofessional educational opportunities directly with their current experiences in interprofessional collaborative practice, feeling as though participating in similar scenarios would be most beneficial (Knowles, 1973). This also highlights the recommendation that the industry work on better alignment between the educational institutions and healthcare organizations to ensure the learning continuum is consistent and progressive (IOM, 2015).

This alignment of the healthcare organizations and expansive continued professional development was not evident in participant responses. Although all participants felt that their organizations took interest in interprofessional collaboration, Brad was the only participant to indicate a clear focus on encouraging employees to practice this within regular team-based problem solving meetings. Interprofessional

education is traditionally thought to occur in the post-secondary education setting, but it can be continued in the workplace through interprofessional practice and organizational interventions (Goldman, Zwarenstein, Bhattacharyya, & Reeves, 2009). This includes implementation of a tool or intervention to promote collaboration (Reeves, Goldman, & Zwarenstein, 2009). The organizational commitment is an important element to interprofessional collaborative practice as the overall culture can serve as a barrier to effective communication and teamwork if it is not promoted (Goldman et al., 2009). Despite the lack of clear efforts to engage participants in active interprofessional collaboration interventions, this ability to demonstrate effective teamwork can be developed and practiced without specific organizational initiatives (Beyerlein, Johnson, & Beyerlein, 2004). It is also possible that the interprofessional collaborative practice efforts within these facilities has been sustained long enough to establish a culture of multidisciplinary inclusion, with professionals such as the participants naturally engaging other disciplines (Freeth, 2001). Even if this is the case, however, the recommendation is that the largest focus of the learning continuum occur through continued professional development (IOM, 2015). In addition, this supportive organizational culture has been identified as a necessary component of interprofessional collaborative practice and attributed as an enabling or interfering factor within the IPLC model (Cameron et al., 2012; Korner et al., 2015; Orchard et al., 2005; Regan et al., 2016).

Experiences Aligned with Identified Learning Outcomes and Enabling/Interfering Factors

As participants were asked to reflect on their interprofessional education and collaborative practice experiences, each did identify benefits and challenges aligned with potential outcomes mentioned in the literature. These emerged within the second theme,

of being a member of a team, and were primarily related to attitudes and perceptions, knowledge and skills, collaborative behavior, and performance in practice (IOM, 2015).

Attitudes and Perceptions

In contrast to previous studies that found students did not understand the value of interprofessional learning or found a negative impact on attitudes towards interprofessionalism after such experiences, all participants were favorable of interprofessional education and recommended more opportunities be provided (Carpenter & Hewstone, 1996; Cooke et al., 2003; Hammick et al., 2007; Tunstall-Pedoe et al., 2003). Interestingly, Tunstall-Pedoe et al. (2003) found that the younger students identified the interprofessional learning experiences as unnecessary, and only one participant, Kylie, was of traditional age. On the other hand, Pollard et al. (2004) indicated the more mature students had more negative perceptions of collaboration, a claim not reflected in this study. Although Brad recalled the most negative interprofessional collaborative practice experiences, he, Daryl, and Robert all reflected positively on the idea of interprofessional collaboration. Kylie feels that the most essential element of interprofessional collaborative practice is entering into situations with an open mind, and that the majority of these skills are learned on the job.

Knowledge, Skills, and Performance in Practice

One of the core competency domains centers around roles and responsibilities, with the ability to "use the knowledge of one's own role and those of other professions to appropriately assess and address the healthcare needs of patients and to promote and advance the health of populations" (IPEC, 2016, p. 10). In addition, one of the values and ethics competency statements identifies the ability to "maintain competence in one's own

profession appropriate to scope of practice" (IPEC, 2016, p. 11). Participants were able to identify their daily tasks and roles within the larger healthcare team, but did not emphasize a strong group identity within their own disciplines.

According to social identity theory, individual identities come from a social group, helping us to identify and clarify understanding and behaviors (Pecukonis, 2014; Tajfel, 1981). Within healthcare professions, this identity is further shaped by the norms and languages of each individual profession through education experiences and socialization, a process called "professionalization" (Hall, 2005). The participants in this study described their own roles within the healthcare facility, but did not elaborate on the roles and responsibilities of their different professions, did not emphasize the differentiation of their profession from others, and did not describe their relationships with others within their own professions. Overall, they did not show a high group identity, speaking primarily of their individual contributions within the interprofessional collaborative practice examples. Within the examples described, Brad was the only participant that described an experience that included another individual from his same discipline. Participants may have not felt the need to differentiate based on the questions of inquiry, or perhaps in the situations described, they saw the differentiation of disciplines as obvious, or too ambiguous to address. Rather, participants described their professional identities in terms of their personal healthcare, educational, and professional experiences and their role within the larger healthcare team. While it is essential to understand their own role, as identified in the core competencies, it is also important that healthcare professionals understand the roles and responsibilities of other disciplines.

Despite their lack of discussion of their own group identity, they did address their opportunities to learn about other professions. This relates to the teams and teamwork competency to "integrate the knowledge and experience of health and other professions to inform health and care decisions, while respecting patient and community values and priorities/preferences for care" (IPEC, 2016, p. 14). The descriptions of the patient skills lab included the exposure to other disciplines, enhanced understanding of professional boundaries, and opportunity to share one's own roles and responsibilities while practicing in a team setting (Areskog, 2009; Casto et al., 1994; Cooper et al., 2001; Hoffman & Harnish, 2007; O'Neill & Wyness, 2005). Some literature identifies an issue of team members not acknowledging, understanding, or respecting others' roles and contributions (Zwarenstein et al., 2009). The participants in this study actively spoke of their respect for the other disciplines and some emphasized their desire to learn more about others' roles and responsibilities. Brad specifically identified his role on the healthcare team as one of thoroughly knowing his own roles and responsibilities before learning those of the other disciplines, with a focus of learning how to assist others when needed. This relates to an ability to "engage diverse professionals who complement one's own professional expertise, as well as associate resources, to develop strategies to meet specific health and healthcare needs of patients and populations" (IPEC, 2016, p. 12). Participants did not indicate hesitation in sharing recommendations or processes with other disciplines for fear of defending their own profession (van Dongen et al., 2016; Reese & Sontag, 2001). Furthermore, research has indicated that "role blurring" can cause issues with overlapping responsibilities between disciplines causing some individuals to feel excluded or overburdened (Hall, 2005). Rather, participants in this study seemed to view

any overlap as complementary, helping to verify and support their course of treatment or recommendations. This collaborative attitude is an important consideration in the enabling or interfering factors of professional and institutional culture within the IPLC model.

Regardless of a defined professional role, many intended interprofessional education objectives are not specific to professional content or skills (Hoffman & Harnish, 2007; Tunstall-Pedoe et al., 2003). These objectives are focused on basic interpersonal skills, the ability to develop mutual respect and understanding, to communicate effectively, and to think critically and collectively (Areskog, 1988; Tunstall-Pedoe et al., 2003). In reference to the patient skills lab, Robert and Brad mentioned the appreciation of not only learning new technical skills, but having the ability to practice interpersonal skills with different types of personalities, and appreciating the confidence that brought them, a contributor to their current professional identities (Bandali et al. 2008; Cooper et al., 2005; Russell & Hyman, 1999).

Participants specifically mentioned respect and communication as essential to effective interprofessional collaborative practice. They seemed to be able to overcome communication issues, did not run into territoriality, and found adequate time to establish a coordinated team (Khalili et al., 2014; Zwarenstein et al., 2009; Zwarenstein & Reeves, 2007). The third interprofessional collaborative practice domain highlights the need for interprofessional communication, addressing the ability to "communicate with patients, families, communities, and professionals in health and other fields in a responsive and responsible manner that supports a team approach to the promotion and maintenance of health and the prevention and treatment of disease" (IPEC, 2016, p. 10). At least one

participant, Daryl, directly described the ability to "communicate information with patients, families, community members, health team members in a form that is understandable, avoiding discipline-specific terminology when possible" (IPEC, 2016, p. 13) in his example of an interprofessional collaborative practice experience. Others mentioned the importance of building their confidence to communicate their own knowledge and opinions within the team. In responding to their thoughts on interprofessional collaborative practice, all participants demonstrated the ability to "communicate the importance of teamwork in patient-centered care and population health programs and policies" (IPEC, 2016, p. 13). These interpersonal and communication skills are identified as necessary to the core competencies of interprofessional collaborative practice and should be considered as part of the knowledge and skills outcomes addressed in the IPLC model (IOM, 2016; IPEC, 2016).

Collaborative Behavior

There is a concern that students may be resistant to working with other disciplines as it is seen as a distraction from profession-specific competencies, but this was not indicated by participants in this study (Barton, 2009; Reeves & Freeth, 2002). In fact, the opportunities seemed welcomed and valued, when done in an experiential way. Brad felt as though his capstone helped improve his attitude toward group work and collaboration, and Robert identified the need for interprofessional education to set this expectation of collaborative practice in the workplace (Cooper et al., 2001; Dufrene, 2012; Glen & Reeves, 2004; Hammick et al., 2007).

As identified by best practices in interprofessional education, it is important that faculty have an understanding of group learning and that students practice interacting in a

variety of groups. Facilitating group work requires an understanding and oversight of group balance and group dynamics and stepping in to assist the students if conflicts arise, guiding them on how to handle such situations (Oandasan & Reeves, 2005; Russell & Hymans, 1999). As identified in the subtheme concerning group dynamics, issues within a group can impact the learning experience and produced outcome. In his recollection of the interprofessional capstone course, Daryl's group lacked an effective group mix, consisting primarily of his own discipline. The lack of other disciplines may have influenced his conclusion that there were no benefits to working in an interprofessional team in that course. Kylie also encountered issues in this class, with an interdisciplinary group that seemed to struggle with group dynamics, an issue that needs to be overcome before effective teamwork can take place. Her issues seemed related primarily to conflicting personalities as opposed to cultural, ethnic, generational, gender, educational, status, or disciplinary language differences (Barton, 2009; Hojat et al., 1997). This may have also been attributed to a lack of oversight by the instructor or an insufficient amount of time for the team to learn about each other to build value and appreciation for the different disciplines and personalities included (Russell & Hyman, 1999). She indicated that the group immediately divided tasks, rather than collaboratively engaging in a strategy to meet the course objectives. It may also be that the assigned project was not an effective form of problem-based learning, lacking enough structure to encourage students to discuss clinical problems together (D'Eon, 2005; Oandasan & Reeves, 2005; Tunstall-Pedoe et al., 2003). The experiences of the participants offer insight into considerations of collaborative behavior outcomes (IOM, 2015).

Despite some apparent issues with group dynamics in the interprofessional capstone course, each participant, without hesitation, identified as a member of the healthcare team. This statement did not vary by discipline, and each seemed to identify any other professional as part of the team as well, regardless of the profession. This relates to the final domain of interprofessional collaborative practice with the ability to "apply relationship-building values and the principles of team dynamics to perform effectively in different team roles to plan, deliver, and evaluate patient-/population-centered care and population health programs and policies that are safe, timely, efficient, effective, and equitable" (IPEC, 2016, p. 10). The subtheme of healthcare teams serving an essential function in patient care highlights the need to "work in cooperation with those who receive care, those who provide care, and others who contribute to or support the delivery of prevention and health services and programs" (IPEC, 2016, p. 11). Daryl and Kylie reflected on their interprofessional collaborative practice example with a description of equal contributions from team members, including themselves. Robert primarily spoke of his contributions, and in Brad's example he served in an observational role, but clearly indicated respect and value for all member contributions. This highlights the ability to "perform effectively on teams and in different team roles in a variety of settings" (IPEC, 2016, p. 14). Kylie did mention some conflict that arose in her example of an interprofessional collaborative practice experience, but ultimately those involved work together to resolve the issue. This refers to the ability to "engage self and others to constructively manage disagreements about values, roles, goals, and actions that arise among health and other professionals and with patients, families, and community members" (IPEC, 2016, p. 14). The subtheme of initiating relationships with other

professionals also ties into the competencies, mainly the ability to "forge interdependent relationships with other professions within and outside of the health system to improve care and advance learning" (IPEC, 2016, p. 11) and to "develop a trusting relationship with patients, families, and other team members" (IPEC, 2016, p. 10). Finally, Robert referred to his leadership style while in school, referencing his desire to bring the group together and empower individual members, referencing the ability to "apply leadership practices that support collaborative practice and team effectiveness (IPEC, 2016, p. 14). Based on participant experiences, these were all aspects identified as necessary for effective interprofessional collaborative practice. This does not exclude the competencies not listed, as they were not asked about specifically, but highlights the recognition of these competencies by active healthcare collaborators. This adds to the dialogue concerning the identified competencies and current practice needs and demands (IPEC, 2016).

Participants did not mention professional stereotypes or power hierarchies that influenced their interprofessional education experiences (Bradley et al., 2009; Cooke et al., 2003). This may be, however, due to the identified lack of power differential between the disciplines involved. Most widely recognized hierarchies involve the relationship between physicians and nurses, and between nurses and supportive disciplines like nursing assistants. Interestingly, as identified in the power and hierarchy subtheme, in the interprofessional collaborative practice examples provided by participants, only one mentioned the involvement of physicians. Although Brad did mention physicians involved in the emergency care situation he described, he offered no elaboration on their role in the experience. Rather, the professionals highlighted in the examples were those

that tend to be seen as equal in the hierarchy, including nursing, therapists, and radiologic technicians. When the physician was mentioned, particularly by Daryl, Robert, and Brad, the underlying power differential was apparent. Inherent to their profession and education, physicians hold the exclusive rights dictated by law, including that to practice medicine (Huq, Reay, & Chreim, 2017). Daryl and Robert mentioned positive interactions with physicians, as long as they were prepared and succinct. These descriptions indicated a more passive role on their part (Rice et al., 2010), although Robert mentioned that his recommendations were often used in the patient care plan. Overall Brad felt his interactions with physicians in his current position went well, but did run into issues if he questioned the physician's order for images. Previous studies have found that this inherent professional hierarchy can impact interprofessional communication and collaboration (Freeth, 2001; Rice et al., 2010). Rather than discussing stereotypical views of the different disciplines, participants were focused on the patient as the center of care, realizing the necessity of working with other disciplines despite preconceived notions of individual professions. This challenges the idea that the intentions of interprofessional education and collaborative practice cannot be realized due to established societal stereotypes of different professions (Tunstall-Pedoe et al., 2003). However, the perceived hierarchical difference should still be considered within the overall professional and organizational culture elements of the IPLC (IOM, 2015).

In recalling interprofessional collaborative practice experiences all participants described a relatively positive example. Daryl and Robert both clearly identified an overwhelmingly positive experience that led to improved patient outcomes. Kylie's example included some conflict, but in the end she indicated the value of the experience.

Although Brad mentioned previous observations of poor collaboration, his described example demonstrated an effective interprofessional experience. This commonality raises several questions. It may simply be related to recall, with participants reflecting on recent experiences. Brad's recollection, however, occurred during clinical practice. Daryl and Robert specifically focused on situations with a positive patient outcome, which may be the experiences they choose to remember or prioritize over more negative outcomes. It may also be due to their status as new professionals, without a wide variety of experiences to choose from. As new employees of their facilities, they may also be a bit more timid in collaborative situations, willing to step down if a conflict arises as to "keep the peace" with new coworkers. Another possibility may be that interprofessionalism has been engrained into the culture of the facilities, promoting collaboration between professionals. Finally, most of the situations described did not include physicians, an attribute that can contribute to conflict around power differentials, perhaps contributing to the view of a more positive experience. Thus, this study contributes to the discussions around positive collaborative behavior, but fails to further explore negative collaborative experiences.

Patient as the Focus of Collaborative Outcomes

As described in the World Health Organization's (WHO) definition of interprofessional collaborative practice, this interaction is focused on quality care with the inclusion of the patient, family, and community (IPEC, 2011). Other definitions include the mention of patient-centered care, identifying it as the main focus of the interprofessional team (Drinka, 1996; Hoffman & Harnish, 2007). The patient was clearly identified as the center of the healthcare team by study participants, as stated in the last

theme of patient-centricity. One of the values and ethics competency statements highlights the ability to "place the interests of patients and populations at the center of interprofessional health care delivery and population health programs and policies, with the goal of promoting health and health equity across the life span" (IPEC, 2016, p. 11). In addition, segments of other competencies were described, such as respecting the dignity of patients and standards of ethical conduct and quality of care. The majority of the interprofessional collaborative practice examples focused around a patient care scenario, and all participants identified the patient as the common goal of the team. Despite this, Robert was the only one to clearly identify the patient as a member of that team. Definitions of interprofessional collaboration regularly include the patient, or client, but often patients do not recognize this role and have even expressed frustrations with a lack of recognition of their contributions (Orchard, 2010). For Robert, identifying the patient as a member of the team was important in encouraging the patient to contribute to the team effort to improve their health outcomes. It is important that the patient be acknowledged as a contributor rather than just an outcome (IOM, 2015).

Consistent with the literature, participants reflected on the impact that interprofessional collaborative practice can have on the patient. Daryl saw his collaborative experiences as an opportunity to more easily transition patient care between professionals, providing that care in a more effective and efficient manner (Matziou et al., 2014). He also indicated that the healthcare team could serve as advocates on behalf of the patient when families are not fully aware of the patient's needs and limitations. This advocacy only works if the team is united in their recommendations. Robert mentioned the patient's participation in his interprofessional collaborative practice example, stating

that the patient appreciated the collegiality between professionals and worked harder during the therapies in order to meet their expectations as a team member. He and Brad also witnessed negative effects when conflict arose, feeling that the patients were more anxious and stressed, less confident in their care, and ended up staying in the hospital for a longer period of time (Zwarenstein & Reeves, 2007). In contrast, Brad felt that patients witnessing effective collaboration were more relaxed and empowered in their own care (Korner, 2015). Although little research has been done to verify the impact on patient outcomes, patient safety, and the cost of care, participant responses contribute to the general consensus that interprofessional collaborative practice interventions have promising outcomes concerning the individual health element of the IPLC model (IOM, 2015; Zwarenstein et al., 2009).

The one example that did not include a patient was the one described by the only non-clinical participant. Rather, Kylie described an experience with a co-worker set in the office, although she did identify that a portion of her role on the healthcare team is to ensure a quality experience for the patient. This raises an interesting question concerning the inclusion of non-clinical students and professionals in the interprofessional education and collaborative practice efforts. Does interprofessional collaborative practice include healthcare professionals collaborating on problems that are not patient-centered? By definition, it would appear that it does, as although it mentions patient inclusion, collaboration around providing quality patient care should include the supporting areas of the facility such as administration and performance improvement and quality assurance (Orchard, 2010). In fact, many of the interprofessional collaboration competency statements were expanded in 2016 to include disciplines even outside of healthcare, such

as architecture, business, education, engineering, law, and urban planning, calling

attention to their role in impacting population health (IPEC, 2016). Without the direct

link to the patient, however, it may be more difficult to identify the common goal and

how the collaborative efforts impact quality care. It may also be less obvious the benefits

of an interprofessional approach in problem solving efforts, recognizing the need for

multiple disciplines to be involved. This may be why Kylie identified the only non-

patient-centered collaboration example, one that was more focused on process than the

relationship or a common goal. This is an important consideration when including non-

clinical students in interprofessional education efforts, and may suggest that there needs

to be more effort to include non-clinical staff in interprofessional collaborative practice

initiatives. The participants of the learning continuum are not clearly identified in the

IPLC model and may need to be considered more broadly (IOM, 2015).

Implications for Future Research and Practice

The outcomes of this study raise additional questions for future research efforts.

The participants clearly identified a desire for case-based, hands-on, "real world"

learning experiences. As these continue to be developed and implemented, it will be

important to assess their ability to promote the core competencies of interprofessional

collaborative practice, evaluating which are the most effective. In relation to the

competencies, the identification of roles and responsibilities and communication skills

seem to be addressed in educational and collaborative experiences, and opportunities are

provided to practice teamwork skills. However, there appears to be more question

concerning the values and ethics competencies, and whether these are skills that are

taught, or qualities inherent to one's personality. In addition, these appear to be more

challenging competencies to assess. Future research may further investigate this set of competencies to evaluate the most effective way to address them in an educational setting.

This study focused on new graduates of undergraduate programs in health sciences, nursing, respiratory care, and radiologic sciences. Three of the four participants were nontraditional male students. Future research may explore differences in new graduates' interprofessional collaborative practice experiences and those of professionals who have been working in the industry for an extended period of time. The inclusion of the health sciences graduate created for some interesting comparisons, and it seems as though more could be learned about how to best integrate nonclinical students and staff in interprofessional education and collaborative practice activities, and to ensure they are active members of the healthcare team. There are also important disciplines missing, including physicians, therapists, social workers, and others. Exploring their experiences and perceptions would also be valuable. In addition, more information should be gathered on differences in experiences between traditional and nontraditional students, and male and female students and professionals.

Finally, there may be more to explore concerning location of interprofessional collaborative practice and the power differentials that exist in healthcare. Future research should address differences between patient settings, for example between a hospital and a clinic. Interprofessional collaborative practice opportunities could vary significantly. The power hierarchy can also vary, and it is important to address this in future research to learn more about overcoming this potential barrier.

In addition to implications for future research, this study highlights some potential implications for practice, particularly in educational settings. According to these participants, interprofessional education is still needed, warranting continued efforts towards these experiences for students. Participants clearly indicated that collaborative skills are necessary and relevant in healthcare today, and that these should be introduced as expected skills within the educational programs. In addition, it seems as though it is indeed appropriate to at least begin at the undergraduate level, although this may be further enhanced by integrating those students with graduate students to more accurately reflect modern healthcare teams. For example, creating opportunities for undergraduate nursing students to work with medical students. There seems to be a desire for more interprofessional experiences to be integrated throughout the curriculum with a wide variety of disciplines, allowing students repeated exposure to collaboration in a variety of situations as they continue to development their professional identity. Special consideration should be given to the inclusion of non-clinical disciplines such as public health, to ensure inclusive and mutually beneficial experiences. This particular population has not been widely included in studies of interprofessional education and collaborative practice interventions and outcomes, a potentially large gap in the efforts to improve population health and overall quality of care (Brandt, 2014). These opportunities should be offered in a variety of ways that simulate the work environment, engaging students in experiential, case-based, and problem-based learning scenarios. This type of learning experience can be very time consuming to create and thus expensive, ideally engaging multiple instructors and consisting of relatively small class sizes (Buring et al., 2009; Gilbert, 2005; Page et al., 2009). Accomplishing this type of integrated learning requires

support from administration in allowing flexible time for faculty, modifying workload, and providing financial support. Finally, many institutions have begun to address the roles and responsibilities, communication, and teamwork domains, but organizations need to identify how to address the values and ethics domain, promoting and assessing these competencies.

Healthcare facilities may want to consider extending these efforts beyond graduation, as has been proposed in the IPLC model (IOM, 2015). Participants felt that their organizations were interested, but have experienced few formal activities promoting interprofessional collaboration. Although it may feel inherent to the organization, offering team-based development activities could further enhance the benefits and efficiencies of collaborative practice. Offering these upon hiring and/or setting up a shadowing program could allow new professionals to develop these relationships more quickly, and continued efforts could help to deepen and enhance these relationships. Ultimately, these participants felt that effective collaboration led to better patient outcomes and more confidence in their contributions; providing opportunities to practice and enhance that collaboration could prove beneficial to both the healthcare team and the patients.

Delimitations, Limitations, and Assumptions

Using Campbell and Stanley's (2005) identified threats to internal validity, I recognize that there are limitations in this study. Retrospectively interviewing graduates about a course that was taken in the last year is prone to history and/or maturation effects. Participants did remember their interprofessional capstone experience, but also reflected on a variety of courses and experiences throughout their college career. It is possible that

some experiences identified were not unique to an interprofessional course. In addition, the graduates have matured professionally since participating in the interprofessional education opportunities. I view both as a positive, however, as the time provided helped graduates reflect on how their educational experiences impacted them professionally. The time lapse offered more opportunity for them to practice this self-reflection, and their experiences had more meaning to them after graduation than at the time the courses were taken.

There is also concern with instrumentation, as I used a researcher-constructed interview protocol, with a focus on participant experiences with their chosen career, previous interprofessional education activities, and interprofessional collaborative practice in the workplace. My interviewing technique may have impacted the data collected, with participants potentially influenced by my status at the university or prior history with the interprofessional capstone course (Gall, Gall, & Borg, 2007). I did, however, use Seidman's (2013) interview methodology to construct the questions and probes and piloted the questions with sample participants prior to data collection.

With the limitations, I have been careful about the implications that can be drawn from this study for the larger population. As with most qualitative protocols, the sample size is small, and my population is limited to graduates who completed a specific, one-credit course at one university. Participants self-identified interprofessional education and collaborative practice experiences after I provided a definition of each. This does, however, offer insight into how students and professionals interpret those definitions. In addition, they only represent four disciplines within healthcare, were predominantly male, and included only one traditionally aged student. Consequently, I understand that

results are not generalizable, but significant information has been gained from discussing these experiences.

In addition, I, as the researcher, have been intimately involved with this initiative and this course. I have taught two sections of the course in the year prior to the interviews, which afforded me a strong background in the structure, allowing me to better understand the graduate perception as it relates to course delivery. This is a component of qualitative research, as the researcher interacts with the phenomenon and/or people under study (Lincoln & Guba, 1985). It may have been limited by respondents' biases towards me, their instructor, or the institution. Participants may have felt compelled to provide responses that they perceived I desired, but I made every effort to assure they were able to be open and honest in their perceptions. Their participation and responses had and will have no impact on their relationship with the university.

Despite these limitations, I feel this study contributes a missing qualitative element to the interprofessional education and collaborative practice discussion, focusing specifically on the graduate voice. It also explores attitudes and perceptions of majors not included in many previous studies, such as health science and respiratory care. Overall it provides insight into the healthcare undergraduate student population and highlights the necessary areas of focus in interprofessional education, undergraduate curriculum, and interprofessional collaborative practice.

Conclusion

Four participants were interviewed using a phenomenological approach, engaging in three different interviews over a multi-week period. They were asked about their personal, educational, and professional experiences as they pertained to interprofessional

education and collaborative practice. Their responses provided insight into their professional identities, roles within the healthcare team, and focus on the patient.

Participants' professional identities are shaped through a variety of personal, educational, and professional experiences, impacting their views on and engagement in collaborative practice. Inherent to these identities are also personalities, dispositions, and interpersonal skills that were identified as important in these interactions. Although some may question whether these are traits that can be taught, providing opportunities for students and healthcare professionals to practice these interpersonal skills and work with a variety of personalities may improve confidence and overall attitude towards collaboration. Interprofessional education encourages students to engage in experiences outside of their comfort zone, providing this opportunity and exposure in a safe place before encountering such situations in the workplace.

Participants each identified themselves as part of the healthcare team, and reflected on initiating interdependent relationships, group dynamics, hierarchy and power, and other issues that can arise when working with a variety of professionals and personalities. These participants did not emphasize a strong group identity within their own discipline, which may be related to their new professional status. However, it may be a larger barrier to overcome at the professional development level and should be considered in continued interprofessional learning activities within the work setting. This may also be the case with societal stereotypes of healthcare professions, which were not indicated as a barrier by participants in this study. In describing their role on the team, experiences with teamwork, and best practices of collaboration, participants highlighted

many of the identified interprofessional collaborative practice competencies, promoting their confirmation by working professionals.

The common focus for all participants was the patient, encouraging feelings of empathy, contributing to their job satisfaction, and promoting an environment of empowerment and better patient outcomes. Participants indicated that in their experiences, collaborative efforts contributed to easier transition of patient care, more effort by the patient to be an active participant in their own care, and more relaxed patients. However, the patient was not actively recognized or acknowledged as a part of this healthcare team, a factor that should be included in interprofessional learning efforts. These insights into the student experience, and the experiences as a new healthcare professional, contribute to the discussion of interprofessional education and collaboration best practices and potential outcomes.

Within these experiences, there was generally a favorable attitude towards interprofessional education and collaborative practice, but a desire for more applied and practical learning opportunities both within school and the work setting. Students and staff may be more receptive to such opportunities when they are clearly related to their job functions and simulate a potential real-world example. Interprofessional competencies should be addressed throughout the curriculum, beginning at the undergraduate level, to promote a higher impact on students, and learning opportunities should continue into the work setting. This promotes an expectation and culture of collaboration and could assist in fostering interdependent relationships more quickly and beginning to address the power differential between the physicians and other staff. Providing these opportunities may require changes in traditional organizational structure

to encourage a more collaborative environment, addressing the structural barriers that exist, and a skilled facilitator with careful consideration in development and implementation. Even if the organizational culture promotes collaboration, it is important that continued professional development opportunities be provided as staff change positions and new individuals are hired. These opportunities must be intentional, with a focus on promoting particular competencies; collaboration is not automatic based solely on the structure of the group. In addition, efforts should be made to include supporting areas of healthcare, including those not directly related to patient care such as administration and public health. These individuals are also essential members of the healthcare community and impact the delivery of quality care.

For the individuals in this study, a focus on the patient at the center of the team is key, promoting a common goal for the team and encouraging substantial contributions by all members. Their interests in and efforts to collaborate have been driven by this common goal, viewing the healthcare team as an essential component of the healthcare organization and necessary element in providing quality patient care. In order to more effectively participate and build interdependent relationships in such teams, they desire additional opportunities to practice the skills and abilities necessary for collaboration. Such considerations are important in future efforts of providing and assessing interprofessional education and collaborative practice initiatives.

REFERENCES

Areskog, N. H. (1988). The need for multiprofessional health education in undergraduate studies. *Medical Education*, *22*(4), 251-252.

Areskog, N. H. (2009). Undergraduate interprofessional education at the Linköping Faculty of Health Sciences: How it all started. *Journal of Interprofessional Care*, *23*(5), 442-447.

Baldwin Jr, D. C. (2007). Some historical notes on interdisciplinary and interprofessional education and practice in health care in the USA. *Journal of Interprofessional Care*, *21*(S1), 23-37.

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

Banfield, V., & Lackie, K. (2009). Performance-based competencies for culturally responsive interprofessional collaborative practice. *Journal of Interprofessional Care, 23*(6), 611-620.

Bareil, C., Duhamel, F., Lalonde, L., Goudreau, J., Hudon, E., Lussier, M.-T., ... Lalonde, G. (2015). Facilitating implementation of interprofessional collaborative practices into primary care: A trilogy of driving forces. *Journal of Healthcare Management, 60*(4), 287-300.

Barr, H. (1998). Competent to collaborate: Towards a competency-based model for interprofessional education. *Journal of Interprofessional Care, 12*(2), 181-187.

Barr, H. (1996). Ends and means in interprofessional education: Towards a typography. *Education for Health, 9*(3), 341-352.

Bartlett, D., & Cox, P. D. (2002). Measuring change in students' critical thinking ability: implications for health care education. *Journal of Allied Health*, *31*(2), 64-69.

Barton, A. (2009). Patient safety and quality: An evidence-based handbook for nurses. *AORN Journal*, *90*(4), 601-602.

Beyerlein, M. M., Johnson, D. A., & Beyerlein, S. T. (2004). *Complex collaboration: Building the capabilities for working across boundaries*. Amsterdam: Elsevier JAI.

Blue, A. V., Mitcham, M., Smith, T., Raymond, J., & Greenberg, R. (2010). Changing the future of health professions: embedding interprofessional education within an academic health center. *Academic Medicine*, *85*(8), 1290-1295.

Blumer, H. (1969). *Symbolic interactionism: Perspective and method*. Englewood Cliffs, N.J.: Prentice-Hall.

Bradley, P., Cooper, S., & Duncan, F. (2009). A mixed-methods study of interprofessional learning of resuscitation skills. *Medical Education*, *43*(9), 912-922.

Brandt, B. F. (2014). Update on the US National Center for Interprofessional Practice and Education. *Journal of Interprofessional Care, 28*(1), 5-7.

Buring, S. M., Bhushan, A., Broeseker, A., Conway, S., Duncan-Hewitt, W., Hansen, L., & Westberg, S. (2009). Interprofessional education: definitions, student competencies, and guidelines for implementation. *American Journal of Pharmaceutical Education*, *73*(4), 1-8.

Cameron, S., Rutherford, I., & Mountain, K. (2012). Debating the use of work-based learning and interprofessional education in promoting collaborative practice in primary care: A discussion paper. *Quality in Primary Care, 20*(3), 211-217.

Campbell, D. T., & Stanley, J. C. (2005). *Experimental and quasi-experimental designs for research*. Boston, MA: Houghton Mifflin.

Campus Website. (n.d.). *CID and FF Course Design Tables*. Retrieved September 17, 2015.

Campus Website. (2015). *Facts and figures 2014-2015*. Retrieved September 17, 2015.

Campus Catalog. (2014). *2014-2015 Undergraduate catalog*. Retrieved September 17, 2015.

Carlisle, C., Cooper, H., & Watkins, C. (2004). "Do none of you talk to each other?": The challenges facing the implementation of interprofessional education. *Medical Teacher*, *26*(6), 545-552.

Carpenter, J. (1995). Interprofessional education for medical and nursing students: evaluation of a programme. *Medical Education*, *29*(4), 265-272.

Carpenter, J., & Hewstone, M. (1996). Shared learning for doctors and social workers: Evaluation of a programme. *British Journal of Social Work*, *26*(2), 239-257.

Casto, R. M., Julia, M. C., & Ohio State University (1994). *Interprofessional care and collaborative practice*. Pacific Grove, CA: Brooks/Cole.

Cooke, S., Chew-Graham, C., Boggis, C., & Wakefield, A. (2003). 'I never realised that doctors were into feelings too': Changing student perceptions through interprofessional education. *Learning in Health and Social Care*, *2*(3), 137-146.

Cooper, H., Carlisle, C., Gibbs, T., & Watkins, C. (2001). Developing an evidence base for interdisciplinary learning: a systematic review. *Journal of Advanced Nursing*, *35*(2), 228-237.

Cooper, H., Spencer-Dawe, E., & Mclean, E. (2005). Beginning the process of teamwork: design, implementation and evaluation of an inter-professional education intervention for first year undergraduate students. *Journal of Interprofessional Care*, *19*(5), 492-508.

Creswell, J. W. (2003). Research design: Qualitative, quantitative, and mixed methods approaches. Thousand Oaks, CA: Sage Publications.

Cruess, R. L., & Cruess, S. R. (2006). Teaching professionalism: general principles. *Medical Teacher*, *28*(3), 205-208.

Curran, V. R., Sharpe, D., Forristall, J., & Flynn, K. (2008). Attitudes of health sciences students towards interprofessional teamwork and education. *Learning in Health and Social Care*, *7*(3), 146-156.

Curran, V., Sharpe, D., Flynn, K., & Button, P. (2010). A longitudinal study of the effect of an interprofessional education curriculum on student satisfaction and attitudes towards interprofessional teamwork and education. *Journal of Interprofessional Care, 24*(1), 41-52.

D'Amour, D., Ferrada-Videla, M., San, M. R. L., & Beaulieu, M. D. (2005). The conceptual basis for interprofessional collaboration: Core concepts and theoretical frameworks. *Journal of Interprofessional Care, 19*(S1)*,* 116-131.

D'amour, D., & Oandasan, I. (2005). Interprofessionality as the field of interprofessional practice and interprofessional education: An emerging concept. *Journal of Interprofessional Care*, *19*(S1), 8-20.

Del Bueno, D. (2005). A CRISIS in critical thinking. *Nursing Education Perspectives*, *26*(5), 278-282.

Denzin, N. K., & Lincoln, Y. S. (1994). *Handbook of qualitative research*. Thousand Oaks: Sage Publications.

D'Eon, M. (2005). A blueprint for interprofessional learning. *Journal of Interprofessional Care*, *19*(S1), 49-59.

Dojeiji, S., Byszewski, A., & Wood, T. (2015). Development and pilot testing the Family Conference Rating Scale: A tool aimed to assess interprofessional patient-centred communication and collaboration competencies. *Journal of Interprofessional Care, 29*(5), 415-420.

Dombeck, M. T. (1997). Professional personhood: training, territoriality and tolerance. *Journal of Interprofessional Care*, *11*(1), 9-21.

Drinka, T. J. (1996). Applying learning from self-directed work teams in business to curriculum development for interdisciplinary geriatric teams. *Educational Gerontology: An International Quarterly*, *22*(5), 433-450.

Driscoll, M. P. (2005). *Psychology of learning for instruction*. Boston: Pearson Allyn and Bacon.

Dufrene, C. (2012). Health care partnerships: a literature review of interdisciplinary education. *The Journal of Nursing Education*, *51*(4), 212-216.

Eichelberger, R. T. (1989). Disciplined inquiry: Understanding and doing educational research. New York: Longman.

Elcin, M., Odabasi, O., Gokler, B., Sayek, I., Akova, M., & Kiper, N. (2006). Developing and evaluating professionalism. *Medical Teacher*, *28*(1), 36-39.

Epstein, R. M., & Hundert, E. M. (2002). Defining and assessing professional competence. *JAMA, 287*(2), 226-235.

Fineberg, I. C., Wenger, N. S., & Forrow, L. (2004). Interdisciplinary education: evaluation of a palliative care training intervention for pre-professionals. *Academic Medicine*, *79*(8), 769-776.

Fitzpatrick, M. A. (1996). Interdepartmental collaboration: focus on outcomes. *Seminars in Perioperative Nursing, 5*(1), 47-50.

Freeth, D. (2001). Sustaining interprofessional collaboration. *Journal of Interprofessional Care*, *15*(1), 37-46.

Freeth, D., Hammick, M., Reeves, S., Koppel, I., & Barr, H. (2005). *Effective interprofessional education – Development, delivery and evaluation*. Malden, MA: Blackwell Publishing.

Frenk, J., Chen, L., Bhutta, Z. A., Cohen, J., Crisp, N., Evans, T., ... Zurayk, H. (2010). Health professionals for a new century: transforming education to strengthen health systems in an interdependent world. *The Lancet, 376*(9756), 1923-1958.

Gall, M. D., Gall, J. P., & Borg, W. R. (2007). *Educational research: An introduction*. Boston: Pearson/Allyn & Bacon.

Gilbert, J. H. (2005). Interprofessional learning and higher education structural barriers. *Journal of Interprofessional Care*, *19*(S1), 87-106.

Glen, S., & Reeves, S. (2004). Developing interprofessional education in the pre-registration curricula: Mission impossible? *Nurse Education in Practice 4*(1), 45-52.

Glesne, C. (1999). Becoming qualitative researchers: An introduction. New York: Longman.

Goldman, J., Zwarenstein, M., Bhattacharyya, O., & Reeves, S. (2009). Improving the clarity of the interprofessional field: Implications for research and continuing interprofessional education. *Journal of Continuing Education in the Health Professions, 29*(3), 151-156.

Greiner, A. C., & Knebel, E. (2004). Health professions education: a bridge to quality. *Journal for Healthcare Quality, 26*(1), 54.

Grossmann, C., Institute of Medicine (U.S.), & National Academy of Engineering. (2011). *Engineering a learning healthcare system: A look at the future: Workshop summary*. Washington, D.C.: National Academies Press.

Guba, E. G. (1981). ERIC/ECTJ annual review paper: Criteria for assessing the trustworthiness of naturalistic inquiries. *Educational Communication and Technology*, *29*(2), 75-91.

Gucciardi, E., Mach, C., & Mo, S. (2016). Student-faculty team teaching: A collaborative learning approach. *Mentoring & Tutoring, 24*(5), 441-455.

Hale, C. (2003). Interprofessional education: the way to a successful workforce?. *British Journal of Therapy and Rehabilitation*, *10*(3), 122-127.

Hall, P. (2005). Interprofessional teamwork: Professional cultures as barriers. *Journal of Interprofessional Care*, *19*(S1), 188-196.

Hammar, M. F. M. (2000). Strategies and focus at an integrated, interprofessional training ward. *Journal of Interprofessional Care*, *14*(4), 337-350.

Hammick, M. (2000). Interprofessional education: evidence from the past to guide the future. *Medical Teacher*, *22*(5), 461-467.

Hammick, M., Freeth, D., Koppel, I., Reeves, S., & Barr, H. (2007). A best evidence systematic review of interprofessional education: BEME guide no. 9. *Medical Teacher*, *29*(8), 735-751.

Henneman, E. A., Lee, J. L., & Cohen, J. I. (1995). Collaboration: A concept analysis. *Journal of Advanced Nursing, 21*(1), 103-109.

Hepp, S. L., Suter, E., Jackson, K., Deutschlander, S., Makwarimba, E., Jennings, J., & Birmingham, L. (2015). Using an interprofessional competency framework to examine collaborative practice. *Journal of Interprofessional Care, 29*(2), 131-137.

Herzberg, J. (1999). Tribes or teams? The challenge of multiprofessional education. *Hospital Medicine*, *60*(7), 516-518.

Hewstone, M. E., & Brown, R. E. (1986). *Contact and conflict in intergroup encounters*. Oxford, UK: Blackwell.

Hoffman, S. J., & Harnish, D. (2007). The merit of mandatory interprofessional education for pre-health professional students. *Medical Teacher*, *29*(8), e235-e242.

Hojat, M., Fields, S. K., Rattner, S. L., Griffiths, M., Cohen, M. J., & Plumb, J. D. (1997). Attitudes toward physician-nurse alliance: comparisons of medical and nursing students. *Academic Medicine*, *72*(10), S1-S3.

Holland, K. (2002). Inter-professional education and practice: The role of the teacher/facilitator. *Nurse Education in Practice*, *2*(4), 221-222.

Hope, J. M., Lugassy, D., Meyer, R., Jeanty, F., Myers, S., Jones, S., ... & Cramer, E. (2005). Bringing interdisciplinary and multicultural team building to health care education: the downstate team-building initiative. *Academic Medicine*, *80*(1), 74-83.

Horsburgh, M., Lamdin, R., & Williamson, E. (2001). Multiprofessional learning: the attitudes of medical, nursing and pharmacy students to shared learning. *Medical Education*, *35*(9), 876-883.

Huq, J. L., Reay, T., & Chreim, S. (2017). Protecting the Paradox of Interprofessional Collaboration. *Organization Studies,* 7.

Husserl, E., & Gibson, W. R. B. (1962). *Ideas: General introduction to pure phenomenology*. New York: Collier Books.

IOM (Institute of Medicine). (2015). Measuring the impact of interprofessional education on collaborative practice and patient outcomes. Washington, DC: The National Academies Press.

Interprofessional Education Collaborative (IPEC) Expert Panel. (2011). *Core competencies for interprofessional collaborative practice: Report of an expert panel*. Washington, D.C.: Interprofessional Education Collaborative.

Interprofessional Education Collaborative (IPEC) Expert Panel. (2016). *Core competencies for interprofessional collaborative practice: 2016 update*. Washington, D.C.: Interprofessional Education Collaborative.

James, J. T. (2013). A new, evidence-based estimate of patient harms associated with hospital care. *Journal of Patient Safety*, *9*(3), 122-128.

Johnson, B., & Christensen, L. B. (2004). Educational research: Quantitative, qualitative, and mixed approaches. Boston: Allyn and Bacon.

Karim, R., & Ross, C. (2008). Interprofessional education (IPE) and chiropractic. *Journal of the Canadian Chiropractic Association*, *52*(2), 76.

Khalili, H., Orchard, C., Laschinger, H. K., & Farah, R. (2013). An interprofessional socialization framework for developing an interprofessional identity among health professions students. *Journal of Interprofessional Care, 27*(6), 448-453.

Kipp, J., Pimlott, J. F., & Satzinger, F. (2007). Universities preparing health professionals for the 21st century: Can something new come out of the traditional establishment?. *Journal of Interprofessional Care*, *21*(6), 633-644.

Knowles, M. (1973). *The adult learner: a neglected species*. Houston: Gulf Publication Company.

Körner, M., Wirtz, M. A., Bengel, J., & Göritz, A. S. (2015). Relationship of organizational culture, teamwork and job satisfaction in interprofessional teams. *BMC Health Services Research, 15*(1), 1-12.

Körner, M., & Wirtz, M. A. (2013). Development and psychometric properties of a scale for measuring internal participation from a patient and health care professional perspective. *BMC Health Services Research, 13*(1), 1-11.

Kotter, J. P. (1996). *Leading change*. Boston: Harvard Business School Press.

Krefting, L. (1991). Rigor in qualitative research: The assessment of trustworthiness. *American Journal of Occupational Therapy*, *45*(3), 214-222.

Kreitner, R., & Kinicki, A. (1998). *Organizational behavior*. Boston: Irwin/McGraw-Hill.

Laschinger, H. K. S., & Smith, L. M. (2013). The influence of authentic leadership and empowerment on new-graduate nurses' perceptions of interprofessional collaboration. *Journal of Nursing Administration, 43*(1), 24-29.

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge: Cambridge University Press.

Leape, L. L., Lawthers, A. G., Brennan, T. A., & Johnson, W. G. (1993). Preventing medical injury. *QRB - Quality Review Bulletin*, *19*(5), 144-149.

Leaviss, J. (2000). Exploring the perceived effect of an undergraduate multiprofessional educational intervention. *Medical Education*, *34*(6), 483-486.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage Publications.

Lofland, J. (1971). Analyzing social settings: A guide to qualitative observation and analysis. Belmont, CA: Wadsworth Pub.

Margalit, R., Thompson, S., Visovsky, C., Geske, J., Collier, D., Birk, T., & Paulman, P. (2009). From professional silos to interprofessional education: Campuswide focus on quality of care. *Quality Management in Healthcare*, *18*(3), 165-173.

Matziou, V., Vlahioti, E., Perdikaris, P., Matziou, T., Megapanou, E., & Petsios, K. (2014). Physician and nursing perceptions concerning interprofessional communication and collaboration. *Journal of Interprofessional Care, 28*(6), 526-533.

McLaughlin, M. (1976). Implementation as mutual adaptation: Change in classroom organization. *The Teachers College Record*, *77*(3), 339-351.

McNair, R. P. (2005). The case for educating health care students in professionalism as the core content of interprofessional education. *Medical Education*, *39*(5), 456-464.

Mead, G. H., & In Morris, C. W. (1962). *Mind, self and society from the standpoint of a social behaviorist*. Chicago, IL: University of Chicago Press.

Merriam, S. B., Caffarella, R. S., & Baumgartner, L. M. (2007). *Learning in adulthood: A comprehensive guide*. San Francisco: Jossey-Bass.

Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research: A guide to design and implementation*. San Francisco: Jossey-Bass.

Miller, C., Freeman, M., & Ross, N. (2001). Interprofessional practice in health and social care: Challenging the shared learning agenda. London: Arnold.

Miller, K. H., Hermann, C. P., Jones, V. F., Ostapchuk, M., Patel, P. D., & Rowland, M. L. (2013). Maximizing co-training opportunities on a traditional health sciences campus. *Journal of Nursing Education and Practice*, *3*(12), p151.

Moustakas, C. (1994). *Phenomenological research methods*. Thousand Oaks, CA: Sage Publications.

Mu, K., Chao, C. C., Jensen, G. M., & Royeen, C. B. (2004). Effects of interprofessional rural training on students' perceptions of interprofessional health care services. *Journal of Allied Health*, *33*(2), 125-131.

Norsen, L., Opladen, J., & Quinn, J. (1995). Practice model: Collaborative practice. *Critical Care Nursing Clinics of North America, 7*(1), 43-52.

Oandasan, I., & Reeves, S. (2005). Key elements for interprofessional education. Part 1: The learner, the educator and the learning context. *Journal of Interprofessional Care*, *19*(S1), 21-38.

O'Neill, B. J., & Wyness, M. A. (2005). Student voices on an interprofessional course. *Medical Teacher*, *27*(5), 433-438.

Orchard, C. A., Curran, V., & Kabene, S. (2005). Creating a culture for interdisciplinary collaborative professional practice. *Medical Education Online*, *10*(1), 4387.

Orchard, C. A. (2010). Persistent isolationist or collaborator? The nurse's role in interprofessional collaborative practice. *Journal of Nursing Management, 18*(3), 248-257.

Page, R. L., Hume, A. L., Trujillo, J. M., Leader, W. G., Vardeny, O., Neuhauser, M. M., ... & Cohen, L. J. (2009). Interprofessional education: Principles and application a framework for clinical pharmacy. *Pharmacotherapy*, *29*(7), 879.

Parsell, G., & Bligh, J. (1998). Interprofessional learning. *Postgraduate Medical Journal*, *74*(868), 89-95.

Parsell, G., & Bligh, J. (1999). The development of a questionnaire to assess the readiness of health care students for interprofessional learning (RIPLS). *Medical Education*, *33*(2), 95-100.

Parsell, G., Spalding, R., & Bligh, J. (1998). Shared goals, shared learning: evaluation of a multiprofessional course for undergraduate students. *Medical Education*, *32*(3), 304-311.

Patton, M. Q. (1990). *Qualitative evaluation and research methods*. Newbury Park, CA: Sage Publications.

Pecukonis, E. (2014). Interprofessional education: A theoretical orientation incorporating profession-centrism and social identity theory. *The Journal of Law, Medicine & Ethics*, *42*(S2), 60-64.

Piaget, J. (1955). *The child's construction of reality*. London: Routledge and Kegan Paul.

Pollard, K. C., Miers, M. E., & Gilchrist, M. (2004). Collaborative learning for collaborative working? Initial findings from a longitudinal study of health and social care students. *Health & Social Care in the Community*, *12*(4), 346-358.

Pollio, H. R., Henley, T. B., & Thompson, C. J. (1997). *The phenomenology of everyday life: Empirical investigations of human experience*. Cambridge, UK: Cambridge University Press.

Pratt D. D. (1998). Five perspectives on teaching in adult and higher education. Malabar, FL: Krieger.

Prochaska, J. O., & Norcross, J. C. (2001). Stages of change. *Psychotherapy, 38*(4)*,* 443-448.

Purden, M. (2005). Cultural considerations in interprofessional education and practice. *Journal of Interprofessional Care, 19*(S1)*,* 224-234.

Reese, D. J., & Sontag, M. A. (2001). Successful interprofessional collaboration on the hospice team. *Health & Social Work, 26*(3), 167-175.

Reeves, S. (2000). Community-based interprofessional education for medical, nursing and dental students. *Health & Social Care in the Community*, *8*(4), 269-276.

Reeves, S., & Freeth, D. (2002). The London training ward: An innovative interprofessional learning initiative. *Journal of Interprofessional Care*, *16*(1), 41-52.

Reeves, S., Goldman, J., & Oandasan, I. (2007). Key factors in planning and implementing interprofessional education in health care settings. *Journal of Allied Health*, *36*(4), 231-235.

Reeves, S., Goldman, J., & Zwarenstein, M. (2009). An emerging framework for understanding the nature of interprofessional interventions. *Journal of Interprofessional Care, 23*(5), 539-542.

Reeves, S., & Pryce, A. (1998). Emerging themes: an exploratory research project of an interprofessional education module for medical, dental and nursing students. *Nurse Education Today*, *18*(7), 534-541.

Reeves, S., Zwarenstein, M., Goldman, J., Barr, H., Freeth, D., Koppel, I., & Hammick, M. (2010). The effectiveness of interprofessional education: Key findings from a new systematic review. *Journal of Interprofessional Care, 24*(3), 230-241.

Regan, S., Laschinger, H. K., & Wong, C. A. (2016). The influence of empowerment, authentic leadership, and professional practice environments on nurses? Perceived interprofessional collaboration. *Journal of Nursing Management, 24*(1), e54-e61.

Rice, K., Zwarenstein, M., Conn, L. G., Kenaszchuk, C., Russell, A., & Reeves, S. (2010). An intervention to improve interprofessional collaboration and communications: A comparative qualitative study. *Journal of Interprofessional Care, 24*(4), 350-361.

Rodehorst, T. K., Wilhelm, S. L., & Jensen, L. (2005). Use of interdisciplinary simulation to understand perceptions of team members' roles. *Journal of Professional Nursing*, *21*(3), 159-166.

Rodger, S., Mickan, S., Marinac, J., & Woodyatt, G. (2005). Enhancing teamwork among allied health students: Evaluation of an interprofessional workshop. *Journal of Allied Health*, *34*(4), 230-235.

Rogoff, B. (1990). Apprenticeship in thinking: Cognitive development in social context. New York: Oxford University Press.

Rossman, G. B., & Rallis, S. F. (2003). *Learning in the field: An introduction to qualitative research*. Thousand Oaks, CA: Sage Publications.

Rudland, J. R., & Mires, G. J. (2005). Characteristics of doctors and nurses as perceived by students entering medical school: implications for shared teaching. *Medical Education*, *39*(5), 448-455.

Russell, K. M., & Hymans, D. (1999). Interprofessional education for undergraduate students. *Public Health Nursing, 16*(4), 254-262.

Salvatori, P. S., Berry, S. C., & Eva, K. W. (2007). Implementation and evaluation of an interprofessional education initiative for students in the health professions. *Learning in Health and Social Care*, *6*(2), 72-82.

Seidman, I. (2013). Interviewing as qualitative research: A guide for researchers in education and the social sciences. New York: Teachers College Press.

Selle, K. M., Salamon, K., Boarman, R., & Sauer, J. (2008). Providing interprofessional learning through interdisciplinary collaboration: The role of "modelling". *Journal of Interprofessional Care*, *22*(1), 85-92.

Siegler, R. S., & Alibali, M. W. (2005). *Children's thinking*. Upper Saddle River, NJ: Pearson Education/Prentice Hall.

Silver, I. L., & Leslie, K. (2009). Faculty development for continuing interprofessional education and collaborative practice. *Journal of Continuing Education in the Health Professions*, *29*(3), 172-177.

Soothill, K., Mackay, L., & Webb, C. (1995). *Interprofessional relations in health care*. London: E. Arnold.

Steinert, Y. (2005). Learning together to teach together: Interprofessional education and faculty development. *Journal of Interprofessional Care*, *19*(S1), 60-75.

Sullivan, T. J. (1998). *Collaboration: A health care imperative*. New York: McGraw-Hill.

Tajfel, H. (1981). Human groups and social categories: Studies in social psychology. Cambridge, UK: Cambridge University Press.

Taylor, S. J., & Bogdan, R. (1984). Introduction to qualitative research methods: The search for meaning. New York: Wiley.

Tesch, R. (1990). Qualitative analysis: Analysis types and software tools. New York: Falmer Press.

Toner, J. A. (2009). Effective interprofessional education – argument, assumption & evidence. *Journal of Interprofessional Care, 20*(2), 217-218.

Tunstall-Pedoe, S., Rink, E., & Hilton, S. (2003). Student attitudes to undergraduate interprofessional education. *Journal of Interprofessional Care, 17*(2), 161-172.

van Dongen, J. J., Lenzen, S. A., van Bokhoven, M. A., Daniels, R., van der Weijden, T., & Beurksens, A. (2016). Interprofessional collaboration regarding patients' care plans in primary care: A focus group study into influential factors. *BMC Family Practice, 17*(1), 58.

Whelan, J. J., Spencer, J. F., & Rooney, K. (2008). A 'RIPPER' project: Advancing rural inter-professional health education at the University of Tasmania. *Rural and Remote Health*, *8*(1017), 1-9.

Whelan, K., Thomas, J., Cooper, S., Hilton, R., Jones, S., Newton, T., & ... Gill, E. (2005). Interprofessional education in undergraduate healthcare programmes: The reaction of student dietitians. *Journal of Human Nutrition & Dietetics, 18*(6), 461-466.

Williams, B., Brown, T., McCook, F., Boyle, M., Palermo, C., Molloy, A., ... & McCall, L. (2011). A pilot study evaluating an interprofessional education workshop for undergraduate health care students. *Journal of Interprofessional care*, *25*(3), 215-217.

World Health Organization. (2010). Framework for action on interprofessional education & collaborative practice. Geneva: World Health Organization.

Zwarenstein, M., Atkins, J., Barr, H., Hammick, M., Koppel, I., & Reeves, S. (2009). A systematic review of interprofessional education. *Journal of Interprofessional Care*, *13*(4), 417-424.

Zwarenstein, M., & Reeves, S. (2007). Knowledge translation and interprofessional collaboration: Where the rubber of evidence-based care hits the road of teamwork. *Journal of Continuing Education in the Health Professions, 26*(1), 46-54.

APPENDIX A

Interview Guides

This research was conducted under the approval of the Institutional Review Board at Boise State University, protocol #193-SB15-190.

Interview #1 - Past Experiences

- *Healthcare experience*
    - o What influenced you to go into healthcare?
    - o Have you had any personal healthcare experiences that stand out to you?
        - ▪ What about it/them stands out?
            - • Do any healthcare professionals involved stand out? Why?
        - ▪ How did the experience affect you?
- *Discipline experience*
    - o How did you decide on the *[Health Science Studies/Nursing/Radiologic Sciences/Respiratory Care]* major?
        - ▪ Did you consider other majors? What was the deciding factor?
    - o What did your family think of you choosing this major?
- *Student experience*
    - o Tell me about being a *[Health Science Studies/Nursing/Radiologic Sciences/Respiratory Care]* student.
        - ▪ What experiences stand out for you?
        - ▪ What people (classmates, faculty, etc.) stand out for you?
        - ▪ How did your student experience affect you? What changes in yourself do you see or feel as a result of this experience? What would you say you got out of the experience?
        - ▪ How did your experience as a student influence your desire to become a *[current job]*?
- *IPE experience*
    - o Do you recall interacting with students from other majors in your program courses? What were these experiences like?
        - ▪ What about these experiences stands out to you?
            - • What people (classmates, faculty, etc.) stand out to you?
        - ▪ How did these experiences affect you? What changes in yourself do you see or feel as a result of these experiences? What would you say you got out of these experiences?
        - ▪ What feelings were generated by these experiences?
    - o Thinking back on your program, what were your impressions of the program's commitment to interprofessional education? Was it evident in classes? Was it modeled by faculty?
    - o Do you recall your interprofessional capstone course?
        - ▪ What about this course stands out to you?
            - • What people (classmates, faculty, etc.) stand out to you?
        - ▪ How did this course affect you? What changes in yourself do you see or feel as a result of the course? What would you say you got out of the experience?
        - ▪ What feelings were generated by this course?

- What do you see as the important parts of the course?
  - What did you learn?
- What was the high point of the course for you? What was the low point?
- How do you think the experience would have been different if you were in a single-discipline group?
  - What other opportunities did you have to learn from, with, and about other disciplines in school?
  - What is your opinion of interprofessional education?

Interview #2 - Current Experience

- *Job experience*
  - Tell me more about what you do at work.
  - What do you enjoy most about your job? What makes a great day at work?
  - What has been the biggest challenge for you thus far? How have you addressed this challenge?
  - How have you seen yourself change since graduating?
- *Interprofessional collaboration experience*
  - Now that you are working, how would you describe your experience of working with other disciplines?
    - How does it compare to your expectations of such interactions?
  - Tell me about a time when you've worked in an interdisciplinary team, or have had to work directly with someone from another discipline to accomplish a work task.
    - What other disciplines did you work with?
    - What was your role on the team?
    - What about that experience stands out to you?
      - What people stand out for you?
    - How did the experience affect you? What changes in yourself do you see or feel as a result of this experience? What would you say you got out of the experience?
    - What would you describe as the highest point of that experience?
    - What was most challenging about that experience?
    - What feelings were generated by this experience?
  - What do you see as your role in the healthcare team?
  - How do your coworkers view interprofessional collaboration?
  - What are some of the barriers to working with other professionals? What are some of the benefits?
  - What is your impression of your facility's interest in interprofessional collaboration?
    - What kind of support is available to encourage communication and teamwork?
  - How do you feel about promoting interprofessional education in school?

Interview #3 - Meaning

- How prepared were you, after graduating, to interact with professionals from other healthcare disciplines?
- How would you describe your relationships with coworkers from other disciplines?
- How would you finish this sentence: In my interactions with professionals from other disciplines, I ____?
- If you had to think about your successes and challenges at work concerning interprofessional collaboration, what do you think contributed to your successes? What would you describe as your biggest challenges?
- How would you characterize your interprofessional collaboration experience?
- What did your education teach you about interprofessional collaboration?
    - Are there any particular experiences or classes from school that stand out to you?
    - If you could say anything to the program about the preparation needs, what would you say?
- What did your interprofessional capstone course teach you about interprofessional collaboration?
    - Do you feel it had any effect on your current relationships with other professional groups? Do you think it enabled you to work more effectively as a member of a healthcare team?
    - If you were to speak to the interprofessional capstone class, what advice would you give them?
- Should interprofessional education be required in undergraduate curriculum?