

The Student Experience of Team During an “Interdisciplinary” Clinical Practicum

by

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at

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DALHOUSIE UNIVERSITY

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## Table of Contents

|  |      |
|--|------|
| Abstract.....  | viii |
| List of Abbreviations Used.....                            | ix   |
| Acknowledgements.....                                      | x    |
| CHAPTER I Introduction.....                                | 1    |
| 1.1 Inter-professional Health Care Teams.....              | 1    |
| 1.2 Inter-professional Education.....                      | 2    |
| 1.3 Interdisciplinary Clinical Education.....              | 4    |
| 1.4 Researcher Location.....                               | 4    |
| 1.5 Purpose.....   | 5    |
| CHAPTER II Literature Review.....                          | 7    |
| 2.1 Definitions.....                                       | 8    |
| 2.1.1 Inter-professional.....                              | 8    |
| 2.1.2 Interdisciplinary.....                               | 9    |
| 2.1.3 Multi-disciplinary.....                              | 10   |
| 2.1.4 Inter-professional Collaborative Practice.....       | 10   |
| 2.1.5 Professional.....                                    | 11   |
| 2.2 Historical Background of Inter-professional Care.....  | 12   |
| 2.3 Inter-professional Practice Outcomes.....              | 14   |
| 2.3.1 Organizational benefits.....                         | 15   |
| 2.3.2 Team benefits.....                                   | 18   |
| 2.3.3 Individual team member benefits.....                 | 20   |
| 2.3.4 Patient benefits.....                                | 21   |
| 2.3.5 Summary of inter-professional practice outcomes..... | 24   |
| 2.4 Attributes of Effective Inter-professional Teams.....  | 25   |

|             |   |    |
|-------------|---|----|
| 2.4.1       | Respectful Attitudes.....                                       | 25 |
| 2.4.2       | Communication.....  | 27 |
| 2.4.3       | Creative Work Habits .....                                      | 28 |
| 2.4.4       | Egalitarian Attitudes .....                                     | 29 |
| 2.4.5       | Summary of inter-professional team attributes.....              | 30 |
| 2.5         | Inter-professional Education.....                               | 30 |
| 2.5.1       | Definitions.....  | 31 |
| 2.5.2       | Historical context of inter-professional education.....         | 32 |
| 2.5.3       | Inter-professional Education Learning Outcomes .....            | 34 |
| 2.5.4       | Barriers to Inter-professional Education.....                   | 34 |
| 2.6         | Intra-professional teams.....                                   | 35 |
| 2.6.1       | Intra-professional Communication .....                          | 36 |
| 2.6.2       | Respectful interpersonal relationships .....                    | 38 |
| 2.6.3       | Summary of intra-professional teams .....                       | 39 |
| 2.7         | An Interdisciplinary Student Team.....                          | 40 |
| 2.7.1       | Interdisciplinary collaborative clinical education project..... | 42 |
| 2.7.2       | Highlights of ICCEP research.....                               | 43 |
| 2.8         | Chapter Summary .....   | 44 |
| CHAPTER III | Methodology.....  | 47 |
| 3.1         | Qualitative Methodology .....                                   | 47 |
| 3.2         | Qualitative Descriptive Methodology.....                        | 48 |
| 3.3         | Setting .....   | 49 |
| 3.4         | Sampling .....  | 49 |
| 3.5         | Saturation.....   | 51 |
| 3.6         | Participant Recruitment and Consent.....                        | 51 |

|   |     |
|---|-----|
| 3.7 Data Collection .....                             | 53  |
| 3.8 Trustworthiness.....                              | 55  |
| 3.9 Data Analysis.....                                | 57  |
| 3.10 Ethical Considerations .....                     | 58  |
| 3.11 Risk-Benefit Discussion.....                     | 58  |
| 3.12 Permission to Use Quotes .....                   | 60  |
| 3.13 Conflict of Interest.....                        | 60  |
| 3.14 Chapter Summary .....                            | 61  |
| CHAPTER IV Findings .....                             | 62  |
| 4.1 Clinical Instructor Mentoring .....               | 63  |
| 4.1.1 Creating a positive learning environment.....   | 64  |
| 4.1.2 Modeling team work.....                         | 67  |
| 4.1.3 Encouraging co-operative learning.....          | 70  |
| 4.1.4 Promoting learner participation .....           | 79  |
| 4.2 Peer Attitudes of Respect and Acceptance .....    | 82  |
| 4.2.1 Positive attitudes.....                         | 82  |
| 4.2.2 Acceptance.....                                 | 86  |
| 4.3 Mutual Sharing of Knowledge and Skill .....       | 90  |
| 4.4 Chapter Summary .....                             | 97  |
| CHAPTER V Discussion.....                             | 99  |
| 5.1 Clinical Instructor Mentoring .....               | 99  |
| 5.2 Peer Attitudes of Respect and Acceptance .....    | 102 |
| 5.3 A Mutual Sharing of Knowledge and Skill.....      | 103 |
| 5.4 Findings in Relation to Learning Frameworks ..... | 104 |
| 5.5 Study Team Nomenclature .....                     | 110 |

|      |  |     |
|------|--|-----|
| 5.6  | Limitations .....  | 111 |
| 5.7  | Implications for Education.....                                  | 112 |
| 5.8  | Implications for Practice .....                                  | 113 |
| 5.9  | Implications for Research .....                                  | 113 |
| 5.10 | Chapter Summary .....  | 114 |
| 5.11 | Conclusion .....   | 115 |
|      | References.....  | 117 |
|      | APPENDIX A: Participant Information Letter.....                  | 129 |
|      | APPENDIX B: Consent Form .....                                   | 134 |
|      | APPENDIX C: Participation Reply .....                            | 135 |
|      | APPENDIX D: Script for Research Assistant .....                  | 136 |
|      | APPENDIX E: Interview Questions followed by possible probes..... | 141 |

## Abstract

Changes to healthcare delivery models such as the promotion of an interdisciplinary team approach to patient care and increased hiring of unlicensed care providers have resulted in the need for knowledge about effective interdisciplinary teams. The purpose of this study was to describe student experiences in the development of team during an “interdisciplinary” clinical practicum. Participants were in first and third year of the Dalhousie baccalaureate nursing program, first year of the Nova Scotia Community College practical nursing diploma and at the end of the Nova Scotia Community College Continuing Care Assistant certificate program. Using a qualitative descriptive methodology, in-depth interviews were conducted with the eight participants to understand their experience of what made the team during an “Interdisciplinary” Collaborative Clinical Education Project (ICCEP) practicum. Thematic analysis revealed three themes; clinical instructor mentoring, peer attitudes of respect and acceptance, and mutual sharing of knowledge and skill.



## List of Abbreviations Used

|        |  |
|--------|--|
| AIPHE  | Accreditation of Inter-professional Health Education       |
| BScN   | Baccalaureate of Science in Nursing                        |
| CAPNE  | Canadian Association of Practical Nurse Educators          |
| CCA    | Continuing Care Assistant                                  |
| CIHAHL | Cumulative Index to Nursing and Allied Health Literature   |
| CLPNNS | College of Licensed Practical Nurses of Nova Scotia        |
| CMA    | Canadian Medical Association                               |
| CNA    | Canadian Nurses Association                                |
| ICCEP  | Interdisciplinary Collaborative Clinical Education Project |
| LPN    | Licensed Practical Nurse                                   |
| MOCINS | Model of Care Initiative in Nova Scotia                    |
| NSAHO  | Nova Scotia Association of Health Organizations            |
| NSCC   | Nova Scotia Community College                              |
| PN     | Practical Nursing (students)                               |
| RN     | Registered Nurse   |
| RNAO   | Registered Nurses Association of Ontario                   |
| WHO    | World Health Organization                                  |

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## **Chapter I Introduction**

Interdisciplinary or inter-professional collaboration within health care teams and how best to support and implement such models is of interest to many organizations including federal, provincial and community governments, educational institutions, employers and health care professionals themselves. The interest and support of interdisciplinary or inter-professional and collaborative projects by researchers, organizations, governments, regulatory bodies and institutions have all contributed to the continued development of knowledge related to interdisciplinary/inter-professional practice.

### **1.1 Inter-professional Health Care Teams**

Ambiguity plagues the concept of inter-professional practice. The concept of various health care providers working together to provide client care has a documented history extending from the early nineteenth century to present day. Numerous terms, such as “inter-professional”, “interdisciplinary”, and “multidisciplinary” have been used to describe care provided in collaboration by a variety of professionals, disciplines, and care providers. Overtime these terms have been used interchangeably and have contributed to a lack of clarity. The definitions of the concepts inter-professional and interdisciplinary are very closely aligned; later, these concepts are defined and discussed in detail. The two terms are used interchangeably here to reflect the state of the literature, however for the purposes of this study the term “interdisciplinary” became the default in the face of such ambiguity.

The lack of clarity in definitions and conceptualizations are factors influencing the research on the outcomes both inter-professional learning and inter-professional team

practice can make to health care (Reeves, et al., 2008). Though positive health outcomes have been documented, authors have highlighted the limitations in the generalizability of the findings and challenge researchers to further explore topics such as validity of measurement tools and the replication of various outcome measurements (Reeves, et al., 2008; Thannhauser, Russell-Mayhew, & Scott, 2010; Zwarenstein, Goldman & Reeves, 2009).

The research surrounding inter-professional teams suggested a number of factors contributed to team effectiveness such as positive communication patterns, supportive and respectful team members, discouraging hierarchy and allowing creative, innovative team work (Daiski, 2004; Drew, Jones & Norton, 2004; Molyneux, 2001; Yeatts, & Seward, 2000). Strong inter-professional teams resulted in more positive working relationships, greater team cohesion and improved team characteristics such as communication and collaboration (Drew, et al., 2004; Molyneux, 2001; Ross, Rink & Ferne, 2000; Rubin, Balaji & Barcikowski, 2009; Vazirani, Hays, Sahpiro & Cowan, 2005; Yeatts, & Seward, 2000).

## **1.2 Inter-professional Education**

Inter-professional education is “essential to the development of a “collaborative practice-ready” health workforce” (World Health Organization [WHO], 2010, p. 13) and is a necessary component of any inter-professional care model. Arguably the roots of effectively functioning inter-professional teams are formed in the education of health care providers, and in recent years there has been wide support for inter-professional education. Incorporating inter-professional knowledge, skills and attitudes into the curriculum of health care providers and in continuing education opportunities for current

practitioners is suggested for developing effective inter-professional teams (Daiski, 2004; Oandasan & Reeves, 2005; Suter, et al., 2009).

Successful implementation of an inter-professional education program requires a number of potential challenges be expected and planned for; considerations such as learner characteristics, faculty characteristics, curriculum outcomes, and a multitude of system factors all interact and impact not only each other but also outcomes (Lorente, Hogg & Ker, 2006; Reeves, Goldman & Oandasan, 2007). Application of any such endeavour requires commitment and support of various stakeholders through-out, including the design, planning, implementation and evaluation of inter-professional goals and learning outcomes.

As restructuring occurred in the Canadian health care system inter-professional teams became increasingly common, and can be found across all health care sectors, including acute care, long-term care, community and home care (Registered Nurses Association of Ontario [RNAO], 2006). Changes to care delivery models included redefining of care provider roles and increased hiring of unlicensed care providers resulted in a demand for information on the development and functioning of effective interdisciplinary teams (Canadian Nurses Association [CNA], 2005; Government of Nova Scotia, 2008; RNAO, 2006). In addition to the research conducted on inter-professional teams research also exists on the collaborative teams that provide direct patient care. This research has highlighted the importance of communication and respectful interpersonal relationships. One strategy to develop desirable team dynamics in interdisciplinary health care teams is interdisciplinary education (Daiski, 2004).

Current research looking at inter-professional education has predominantly occurred with practicing health care professionals of university-based educational programs such as medicine, nursing, occupational therapy and pharmacy programs. The experiences of diploma and certificate educated care providers (such as Licensed Practical Nurses and Continuing Care Assistants) are missing from the literature (Kenney, 2001; Pringle, Green & Johnson, 2004).

### **1.3 Interdisciplinary Clinical Education**

In 2009, a collaborative clinical and research project was initiated between Dalhousie University School of Nursing and the Nova Scotia Community College School of Health and Human Services to create opportunities for students to experience early exposure to an interdisciplinary team approach. The implementation of the first Interdisciplinary Collaborative Clinical Education Project (ICCEP) occurred in the spring of 2009. Preliminary pilot study findings from research with ICCEP participants indicated that the students who participated in the interdisciplinary clinical experience developed an understanding and appreciation for the expertise, values and beliefs of team members, and developed foundational interdisciplinary skills in the areas of teamwork, communication and leadership. Activities such as a welcome session, project presentation, diverse team membership, and student leadership roles were implemented to foster a positive team dynamic (ICCEP, 2009).

### **1.4 Researcher Location**

My interest in this area of research stems from my employment at the Nova Scotia Community College as a faculty member in the practical nursing diploma program; responsibilities include teaching theory portions of the curriculum as well as

approximately 10 weeks of clinical instruction annually. In the spring of 2009, the implementation of the first ICCEP occurred and I was selected as one of the project's clinical instructors. I believe in the benefits of interdisciplinary collaboration and preparing students to work in interdisciplinary teams; I am interested in exploring ways to incorporate interdisciplinary education into curricula and the clinical experiences of all health care providers.

### **1.5 Purpose**

The purpose of the study was to explore students' perspectives of factors that facilitated the development of positive team dynamics during an interdisciplinary collaborative clinical education practicum. A qualitative descriptive methodology was used to explore this topic. The purpose of qualitative descriptive studies is to provide a thorough summary of events in everyday terms (Sandelowski, 2000). Brink and Wood (2001) refer to this level of qualitative research as exploratory. Since the perspectives of the diploma educated professional and unregulated health care provider are absent in current literature (Kenney, 2001; Pringle, et al., 2004), this research permitted the perspectives and experiences of these participants to be documented and analyzed.

Various stakeholders including decision makers in public-policy, health and human resource planners, health professional educators, health administrators and professional regulatory bodies support the implementation of inter-professional education and encourage its inclusion in the curricula of health care providers (Canadian Medical Association[CMA], 2010; Canadian Nurses Association [CNA], 2005; RNAO, 2006; WHO, 2010). Stakeholders have been using existing research to guide planning and implementation of inter-professional education interventions despite the identified

limitations of the research. As initiatives of the smaller patient care team represent a microcosm of the inter-professional team; further research with a focus on the “interdisciplinary” nursing care team can inform planning of future interdisciplinary collaborative practices as well as contribute to the current body of inter-professional knowledge.



## Chapter II Literature Review

A literature review on the topic of inter-professional education began with a search of literature from 2000 to 2010 using the electronic databases Cumulative Index to Nursing and Allied Health Literature (CINAHL), ProQuest Dissertations and Theses, the Cochrane Library and scholar.google.ca, with search words focused on inter-professional education, care, and collaboration. Terms used for the search included inter- and intra-professional, inter-, intra-, and multi- disciplinary, collaborative teams, and team effectiveness. In addition, the Journal of Inter-professional Care was hand-searched for the years 2009 to 2011 and reference lists of included studies were reviewed.

A search of additional literature included the World Health Organization, websites of professional nursing associations, federal and provincial government web sites (Health Canada, Government of Nova Scotia, RNAO) and websites focused on inter-professional education (Centre for Inter-professional Education from the University of Toronto, Canadian Inter-professional Health Collaborative, Inter-professional Health Education and the Office of Interprofessional Health Education and Research from the University of Western Ontario).

Topics covered in the following literature review include: definitions, the background of inter-professional practice, inter-professional practice outcomes, attributes of inter-professional teams, inter-professional education, inter-professional learning outcomes, barriers to inter-professional education, intra-professional teams, interdisciplinary clinical education, the Dalhousie and Nova Scotia Community College initiative; Interdisciplinary Collaborative Clinical Education Project (ICCEP) and research highlights from an ICCEP experience. Terms such as such as “inter-

professional”, “interdisciplinary” and “multidisciplinary” are often used interchangeably in the literature (Baldwin, 2007; Xyrichis & Lowton, 2008) and in order to illustrate this, and to provide the reader with some clarity the review begins with a definition of terms.

## **2.1 Definitions**

Many different terms are used to describe client-care provided in collaboration with various professionals, disciplines, care providers and others. Terms such as “inter-professional”, “interdisciplinary” and “multidisciplinary”, are often used in the literature to describe the same phenomenon or process (Baldwin, 2007; Xyrichis & Lowton, 2008). Xyrichis and Lowton suggested that use of any one of these terms is arguable and that the term chosen may be considered appropriate based on values, beliefs, and knowledge of the user. This variation in terms may account for the lack of consistency in the healthcare literature describing the collaboration occurring in clinical and research settings. Xyrichis and Lowton suggested researchers conducting literature searches ensure multiple key words to capture the variety of terms used to describe situations where individuals from varying disciplines work together in the delivery of health care.

### **2.1.1 Inter-professional**

In 1975, Rosalie Kane’s *Inter-professional Teamwork* gave rise to the increasing use of the term inter-professional (Baldwin, 2007). The Inter-professional Care Steering Committee defined inter-professional care as the “provision of comprehensive health service to patients by multiple health caregivers who work collaboratively to deliver quality care within and across settings” (Ontario, Ministry of Health and Long-Term Care, 2007, p. 11). The definition referred to health caregivers as regulated and unregulated health care providers as well as volunteers, families and support workers.

Baldwin observes that although the term inter-professional has gained in popularity, terms such as interdisciplinary and multidisciplinary are still used and often interchangeably. Initially it seemed that this concept was a likely fit for the purposes of this study with both regulated and unregulated caregiver students, however once the definition of professional was reviewed as presented later, a decision was made to refer to the team in this study as interdisciplinary. The use of the concept of “interdisciplinary” in studying this clinical practicum group is contested and this is acknowledged.

### **2.1.2 Interdisciplinary**

Petri (2010) wrote of the concept of interdisciplinary collaboration and its development; defining interdisciplinary collaboration as:

an interpersonal process characterized by healthcare professionals from multiple disciplines with shared objectives, decision-making, responsibility, and power working together to solve patient care problems; the process is best attained through an inter-professional education that promotes an atmosphere of mutual trust and respect, effective and open communication, and awareness and acceptance of the roles, skills, and responsibilities of the participating disciplines (p. 80).

Of note, is that in Petri’s definition the terms interdisciplinary and inter-professional are used interchangeably and the team members are referred to as “healthcare professionals from multiple disciplines” (Petri, 2010, p. 80). Definitions in the literature do not distinguish between inter-professional and interdisciplinary, and as noted in Petri’s definitions, the terms are used interchangeably. The definition failed to clarify if team membership is exclusive to those professionals who belong to professional associations

or if the definition included a broader membership including both regulated and unregulated health care providers.

### **2.1.3 Multi-disciplinary**

Clark's (1993) taxonomy of multidisciplinary and interdisciplinary are used to inform the University of Toronto Centre for Inter-professional Education definitions. The Centre for Inter-professional Education's (2010, "An education continuum", para. 3) definitions differentiates multi-professional from inter-professional, in that multi-professional refers to care provided by more than one discipline but would not necessarily describe a collaborative relationship, for example a patient is cared for by a registered nurse, unlicensed care provider and physician. Planning, goal setting, interventions and progress is done independently and in an autocratic fashion. Inter-professional would on the other hand denote a collaborative relationship.

According to Baldwin (2007), until the mid-1970s, the terms 'multidisciplinary' or 'interdisciplinary' were used interchangeably and described the work of healthcare teams comprised of health care providers from more than one discipline, a physician, nurse and social worker working at a community health center, for example. By the late 1970's the term inter-professional had gained in popularity, though all three terms are still found in the literature (Baldwin, 2007).

### **2.1.4 Inter-professional Collaborative Practice**

The Canadian Inter-professional Health Collaborative defines inter-professional collaborative practice as:

the continuous interaction of two or more professions or disciplines, organized into a common effort, to solve or explore common [patient] issues...[It] provides

mechanisms for continuous communication among caregivers, optimizes staff participation in clinical decision-making within and across disciplines, and fosters respect for the disciplinary contributions of all professionals (Health Canada, 2008, p. 1).

In this definition, the use of the term “professionals” is not fully explained, though the document focused on the regulated health care professional and inter-professional education in the university setting, there is no reference to the diploma prepared regulated health care professional or the unregulated or unlicensed caregiver.

The definition of collaborative practice provided by the WHO Study Group on Inter-professional Education and Collaborative Practice (2010) is as follows.

Collaborative practice happens when multiple health workers from different professional backgrounds work together with patients, families, carers and communities to deliver the highest quality of care. It allows health workers to engage any individual whose skills can help achieve local health goals (p. 7).

In their definition of collaborative practice, the authors qualify the type of health care worker as having a professional background, including a variety of health care providers. Later in the document, the term “health care workers” is defined more broadly as a “regulated or non-regulated, conventional or complementary” care provider (WHO, 2010, p. 13). Once again the clarity surrounding the term profession is vague.

### **2.1.5 Professional**

Richard Halls’ professional model identifies five characteristics of a profession, many of which are rooted in self-regulation through a professional organization (Chitty & Black, 2005). Professionals join the organization or association and upon completing

certain licensing requirements, become “registered” or “licensed” and are permitted the use of the profession’s designation. For example Registered Nurses use the designation RN, Licensed Practical Nurses use LPN. The term discipline has fewer qualifiers and is defined by Oxford Dictionaries as “a branch of knowledge, typically one studied in higher education” (n.d., para 2). The term discipline would not necessarily imply the need for licensure with a self-regulating body.

In summary the definitions of inter-professional, interdisciplinary, and multidisciplinary have not consistently addressed the place of un-regulated health care providers on the patient care team however, they all contain the message that patient care requires the expertise of more than one discipline as well as assistance beyond the disciplines. Inter-professional and interdisciplinary definitions also highlight the importance of collaboration of all involved in the delivery of patient care. Considering the connotations of the term professional, the term interdisciplinary offers a broader, more inclusive definition and has therefore been used in this study involving a team of individuals representing regulated professions as well as unregulated care providers, all providing patient care.

## **2.2 Historical Background of Inter-professional Care**

The concept of health care providers working together to provide client care has a history rooted in community settings, as inter-professional outreach teams have been documented to provide care to rural communities as early as the 1800s in India (Baldwin, 2007). Baldwin conducted historical research of inter-professional practice and noted an increase in the development of community based primary health care teams through the

early 1900's across the globe in Great Britain, South Africa, Israel, and later in the eastern United States.

The World Health Organization (WHO) Declaration of Alma-Ata (1978) recognized health as a human right and encouraged countries to ensure primary healthcare for all citizens. A primary health care perspective contains the following elements: a) a broad definition of health, b) the appropriate use of skills, technology and resources, and c) comprehensive, integrated, collaborative practices (WHO, 1978). In Canadian health policy, the federal government referred to these principles and committed to their implementation in documents such as the First Ministers' communiqué on health in 2000. In follow-up to the First Ministers' Accords, the Pan-Canadian Health Human Resource Strategy was launched to support collaborative health human resources planning across the country (Advisory Committee on Health Delivery and Human Resources, 2007). Funding was made available to support twenty projects. One of the five focus areas was inter-professional practice (Health Canada, 2008). The World Health Organization's commitment to collaborative practice was re-iterated in 2010 when they recognized inter-professional collaboration as a necessary educational component of every health professional.

The continued funding of inter-professional and collaborative projects by governments and institutions has contributed to an increase in inter-professional knowledge (Baldwin, 2007; Cote, Lauzon, & Kyd-Strickland, 2008; Glasser & Pathman, 2009; Reeves, 2006). Literature reviewed on inter-professional teams demonstrates an increase in research over the past decade contributing to more knowledge generation on the topic in the last five years. Inter-professional collaboration and the outcomes of this

practice is of interest to various stakeholders including decision makers in public-policy, health and human resource planners, health professional educators, health administrators and regulatory bodies.

### **2.3 Inter-professional Practice Outcomes**

The WHO Study Group on Inter-professional Education and Collaborative Practice (2010) developed a variety of value statements on inter-professional practice including a belief that care provided by inter-professional collaborative teams results in stronger health systems and improved health outcomes and a belief that inter-professional collaborative practice will positively impact the global health workforce crisis. The WHO study group suggested that inter-professional collaborative teams are required to provide solutions for global health concerns such as the diagnosis, treatment, and prevention of chronic as well as global diseases such as congestive heart failure, HIV/AIDS, tuberculosis and malaria. Inter-professional collaborative teams need to include a variety of health care workers to monitor surveillance, track trends, implement prevention and education programs, provide disease management for individuals and their families, and to tailor responses based on local community needs and resources (WHO, 2010).

A Cochrane review of the inter-professional research (Zwarenstein, Goldman & Reeves, 2009) looked at outcomes for practice based inter-professional interventions and found five studies that met their inclusion criteria. The authors concluded that inter-professional interventions can improve healthcare processes and outcomes, but caution readers that the ability to generalize the findings is weak due to limited sample sizes, inconsistency in conceptualizations, limited settings and lack of valid measurement tools.



Mickan (2005) conducted a literature review of outcomes related to inter-professional teams. Outcomes were categorized by 1) organizational benefits, 2) team benefits, 3) benefits for individual team members and 4) patient benefits. When viewed holistically, the outcomes were intrinsically linked. Outcomes which benefit patients, increase staff satisfaction and create more effective teams, ultimately positively impacting the organization. While recognizing the complexity of inter-professional outcomes, Mickan's categories provide a logical framework to discuss studies referenced in the above mentioned reviews (Mickan, 2005; Reeves, et al, 2009; Zwarenstein, Goldman & Reeves, 2009) and other research.

### **2.3.1 Organizational Benefits**

Specific outcomes benefiting health care organizations would be those that increase system efficacy, decrease organizational costs or address health human resource concerns. Research that has demonstrated organizational benefits included decreased hospital stays, lower health care costs, more efficient care, and improved health human resources (Brown, Tucker & Domokos, 2003; Curley, MacEachern & Spuroff, 1998; Raftery, et al., 1996; Wild, Nawaz, Chan, & Katz, 2004).

Brown, Tucker and Domokos (2003) used a non-randomised comparative design, to contrast a variety of health and social outcomes for seniors living in the United Kingdom. Participants were either provided care by the traditional, non-integrated model or cared for by an integrated community health and social care team. Outcomes were evaluated for both groups after 18 months of care. Outcomes which had statistical significance included: 1) increased self-referrals for clients on the integrated team, and 2) fewer days between date of referral and date of assessment for the integrated team.

Findings from this study demonstrated an improved system response demonstrated by decreased wait-times from date of referral to assessment in the integrated community health and social care teams.

Curley, et al. (1998) carried out a randomized controlled trial with 1102 patients over a six month period in the United States. Patients admitted to a medical floor were randomly assigned to an intervention group with interdisciplinary rounds or the control group with the traditional model of rounds. Findings from this study demonstrated two statistically significant differences. Patients assigned to the intervention group had decreased lengths of stay, 5.46 days compared with 6.06 days and the costs to the health system were lower for those in the intervention group. Curley, et al. attribute some of their significant findings to the larger sample size studied. Though Wild, et al. (2004) were unable to demonstrate similar finding in their randomized control trial the authors acknowledged tools used in their study were not specific enough to detect a difference of 1.5 days or less. Regarding hospital stays, Wild, et al. (2004) suggested a reduction in patients' length of stay of even 0.5 days would be clinically and financially significant to the health care system.

Addington-Hill, et al. (1992) conducted a randomized control trail studying the effects of implementing coordinated services for palliative cancer patients. The researchers were unable to demonstrate statistically significant improvements in service, patient or family outcomes. Using the same data from the randomized control study, Raftery, et al. (1996) analyzed the cost-benefit ratio between patients cared for under the coordinated versus the traditional model. From their analysis, the authors concluded that

the coordinated care team had provided care at a cost less than the traditional model; therefore the coordinated team intervention had decreased health system costs.

Wild, et al. (2004) conducted a randomized controlled trial involving 84 patients admitted to a telemetry in-patient unit over a 2 month period in the United States. Patients were randomly assigned to an intervention group with interdisciplinary rounds or the control group where patients received standard care. Researchers collected data on length of hospital stay and satisfaction using questionnaires. Data analysis showed no statistically significant difference in patients' length of hospital though they found that inter-professional rounds improved satisfaction.

Yeatts and Seward (2000) studied the self-managed work teams in long-term care facilities in the United Kingdom made up of registered nurses and unlicensed care providers through staff and manager interviews. The authors looked at interdisciplinary care teams described by managers as highly effective and those described as less effective. Overall, the teams identified as highly effective demonstrated reduced staff turnover (Yeatts, & Seward, 2000). Improved staff satisfaction and reduced staff turnover are outcomes which suggest a positive impact on health human resource issues such as recruitment and retention.

Tomblin-Murphy, Alder, MacKenzie and Rigby (2010) used a mixed methods approach to evaluate the effectiveness of alternate care delivery models in 14 showcase units implemented in Nova Scotia. The evaluation data indicates that on units where care was more coordinated there were improved health system outcomes such as shorter lengths of hospital stays, fewer repeat admissions, and fewer shifts missed due to injury among providers.

Literature provides evidence for the development of inter-professional teams benefiting the organization or health care system through reduced health costs, improved efficiency in assessment times and benefits to health human resource concerns through improved staff satisfaction and reduced staff turn-over.

### **2.3.2 Team Benefits**

The literature on inter-professional outcomes contains a strong body of evidence related to improved team effectiveness. Authors who have studied effective teams describe characteristics such as effective communication, and positive, respectful partnerships (Drew, et al., 2004; Molyneux, 2001; Rubin, et al., 2009; Yeatts, & Seward, 2000). Research within inter-professional teams documented benefits including improved communication (Ross, et al., 2000; Vazirani, et al., 2005), and a correlation between effective inter-professional teams and positive team characteristics (Drew, et al., 2010; Yeatts & Seward, 2000).

Ross, et al. (2000) conducted an evaluation of nursing teams in the United Kingdom using a mixed method approach with diaries, the Primary Care Teamwork Questionnaire, and semi-structured interviews. Nurses working on an inter-professional team described it as a chance to improve awareness of the roles and skills of others, improve communication, and develop better working relations (Ross, et al., 2000). Dreachslin, Hunt, and Sprainer (1999) studied unit teams at two American hospitals, teams were comprised of registered nurse and unlicensed care providers. Authors held focus groups with staff to compare characteristics of effective nursing care teams with staff experiences. In their conclusions, the authors suggested leadership and communication skills education for the development of successful patient care teams.

Vazirani, et al. (2005) noted improved communication and collaboration using a multidisciplinary model, which included nurse practitioners, nurses and physicians. Medical units in an American hospital served as control and intervention groups. The intervention group included the hiring of a unit nurse practitioner, medical director and the implementation of daily multidisciplinary rounds. Based on communication and collaboration surveys administered to 279 staff over a two year period, the authors concluded that the multidisciplinary intervention resulted in better communication and collaboration between professional groups. The authors suggested further research into factors contributing to nurses reporting limited improvement in communication, but suggested that overall, characteristics of improved communication and collaboration occurred in the multidisciplinary intervention group.

Yeatts and Seward (2000) studied the self-managed work teams in long-term care facilities in the United Kingdom made up of registered nurses and unlicensed care providers through staff and manager interviews. The authors looked at teams described by managers as highly effective and those described as less effective. When compared to the less effective teams, the highly effective teams described themselves as having shared decision models and greater team cohesion and were more likely to demonstrate respect and trust, and empower other team members (Yeatts & Seward, 2000).

Drew, et al. (2010) conducted their qualitative research using a semi-structured interview guide to collect data from primary health care teams in Alberta, Canada, comprised of physicians, Registered Nurses, Licensed Practical Nurses, Physiotherapists and administration personnel. Teams who described themselves as effective also described attributes such as solid partnerships, and a shared vision and purpose; teams

who rated themselves low on an effectiveness scale, voiced concerns related to buy-in and poor team interaction (Drew, et al., 2010).

Morey et al. (2002) conducted a quasi-experimental study using pre- and post-test measurements and observational data collected at 16 civilian and military emergency departments in the United States. The study involved the implementation and study of a teamwork training curriculum focusing on the processes of teamwork and working as an effective team. The inter-professional training took place with 684 physicians, nurses and unspecified technicians. Staff attitudes towards teamwork and the quality of the teamwork significantly improved in the intervention group (Morey et al., 2002).

Based on the literature, strong inter-professional teams allow for teams to experience more positive working relationships, greater trust, team cohesion and improved team characteristics such as communication and collaboration.

### **2.3.3 Individual Team Member Benefits**

As a direct or indirect consequence of team benefits are individual benefits. Individual benefits of inter-professional and collaborative relationships include increased job-satisfaction, (Eliadi, 1990; Yeatts & Seward, 2000) and positive feelings of success and confidence (Baker, Egan-Lee, Leslie, Silver, & Reeves, 2010).

Yeatts and Seward (2000) studied self-managed work teams of high and low efficacy in long-term care facilities. Qualitative data analysis revealed that teams identified as highly effective described more collaborative practices and also reported more favourable job satisfaction ratings (Yeatts & Seward, 2000).

Baker, Egan-Lee, Leslie, Silver, and Reeves (2010) used a case study design to explore the interaction of factors related to a faculty focused inter-professional education

program. Faculty involved in the inter-professional development program included those from medicine, nursing, pharmacy, physical therapy, speech-language pathology and social work. Findings demonstrated more positive feelings about faculty development, and demonstrated significant improvement in feelings of success and confidence. Though the research didn't look at a broad based inter-professional intervention, it provided evidence to support individual team member benefits related to positive feelings following an inter-professional education session.

Eliadi (1990) studied the relationship between how nurses and physicians rated their degree of collaboration and nurse reported job stress. The author used a number of survey tools to measure collaboration and job stress; the sample included 100 nurses and 50 physicians from a Massachusetts hospital. Eliadi demonstrated a statistically significant inverse relationship between nurse satisfaction with nurse-physician collaboration and reported job stress. The study also demonstrated a positive correlation between nurse-physician conflict and job stress. Though the researchers did not look at a broad inter-professional team, they provided evidence to support individual team member benefits when nurses work in collaborative relationships.

Professionals working on inter-professional teams in collaborative relationships described improved job-satisfaction, and positive feelings of success and confidence indicating evidence that working on inter-professional teams improves the work-life of individual team members.

#### **2.3.4 Patient Benefits**

Benefits for patients would be those that either decreased incidence or risk of morbidity, or mortality or improved quality of life. Wheelan, Burchill and Tilin (2003)

demonstrated decreased patient mortality when care was provided in an inter-professional model. Patient benefits demonstrated by Brown, Tucker and Domokos (2003) included decreased assessment wait-times, and Morey et al. (2002) demonstrated reduced clinical errors in the emergency room when inter-professional training was implemented.

Wheelan, Burchill and Tilin (2003) studied 394 inter-professional team members working in intensive care units in the United States. Staff completed questionnaires to assess the team's level of collaboration and teamwork. Other data collected included facility and staff demographics and patient mortality rates on the various units. The authors demonstrated a significant correlation between a unit's stage of collaboration and teamwork and patient mortality rates. Results demonstrated that intensive care units that rated themselves higher in terms of collaboration and teamwork, experienced fewer deaths than predicted. The authors of this study acknowledged that patient outcomes were affected by a number of factors and that interdisciplinary team work is a complex intervention, they recommended further research to confirm their results.

Brown, Tucker and Domokos (2003) used a non-randomised comparative design, to compare a variety of health and social outcomes for seniors living in the United Kingdom. Participants included in the intervention group were cared for by an integrated community health and social care team. Outcomes which demonstrated patient benefits and had statistical significance included: 1) increased self-referrals for clients on the integrated team, 2) fewer days between date of referral and date of assessment for the integrated team, and 3) some evidence that over time, quality of life for the integrated care client's improved while the clients cared for by the traditional model remained unchanged. While findings from this study demonstrated an improved system response,



the benefits would directly impact the patient as demonstrated through fewer delays between referral to program and intake assessments, increased self-efficacy evidenced through increased self-referrals and improved quality of life.

Morey et al. (2002) conducted a quasi-experimental study using pre- and post-test measurements and observational data collected at 16 civilian and military emergency departments in the United States studying the implementation of a teamwork training curriculum focusing on the processes of teamwork and working as an effective team. The inter-professional training took place with 684 physicians, nurses and unspecified technicians. Findings from this study reported a significant reduction in clinical errors in the intervention group; examples included the failure of multiple providers to report a significantly high blood pressure to the attending physician, failure to communicate the need for contact precautions, physicians and nurses being unaware patients were in rooms awaiting assessment and medication errors. Errors reported during the study were errors that potentially or actually caused patient harm. The study demonstrated that a unit educational session based on inter-professional team building improved patient outcomes in the emergency room.

Dreachslin, et al. (1999) studied unit teams at two American hospitals, teams were comprised of registered nurse and unlicensed care providers. Authors held focus groups with staff to compare characteristics of effective nursing care teams with staff experiences. Authors found the resistance to role changes, role overlap and ineffective interpersonal communication divided the team and resulted in what participants described as lack of patient centered care

Tomblin-Murphy, Alder, MacKenzie and Rigby (2010) evaluated the effectiveness of alternate care delivery models in 14 patient care units in Nova Scotia. The evaluation data indicates that on units where care was more coordinated, there were improvements in all 15 measures of patient experience, including patient satisfaction, health teaching, and being treated with respect.

Effective inter-professional teams positively impacted the outcome for patients. Reduction in clinical errors, decreasing mortality, improving wait-times and improving patient-centered care all directly impacted the health and well-being of patients.

### **2.3.5 Summary of Inter-Professional Practice Outcomes**

Inter-professional care is a complex intervention that has demonstrated positive outcomes for organizations, individual team members, patients and contributed to effective teams. Inter-professional interventions have demonstrated increased system efficacy, decreased wait-times, and reduced staff turnover. Collaborative teams demonstrate positive team characteristics such as improved interpersonal communication and positive working relationships. Improved professional job satisfaction, and feelings of success and confidence have also been demonstrated on inter-professional teams. Benefits to patients when care is provided by inter-professional teams included reduced clinical errors, decreased patient mortality and evidence of greater patient-centered care. Though such positive outcomes have been documented and display merit, Cochrane reviews of the inter-professional research and inter-professional interventions (Reeves, et al., 2009; Zwarenstein, Goldman, & Reeves, 2009) caution readers that the ability to generalize findings is weak due to limitations in the number of studies, small sample sizes, and inconsistent conceptualisations and measurements. Authors call for increased

outcome measurements including randomized control trials and emphasized the need for valid and reliable measurement tools (Thannhauser, Russell-Mayhew, & Scott, 2010).

## **2.4 Attributes of Effective Inter-professional Teams**

Molyneux (2001), explored attributes of an effective inter-professional team comprised of occupational therapists, physiotherapists, a speech and language therapist and a social worker. The research sought to describe how and why positive working relationships and practices developed within one inter-professional health care team. Themes Molyneux identified were: 1) respectful attitudes, 2) effective communication, 3) creative work habits, and 4) egalitarian attitudes. Similar themes have been identified by other authors who have researched effective inter-professional teams (Drew, et al., 2004; Rubin, et al., 2009; Yeatts & Seward, 2000). These themes will serve as a framework to discuss attributes of effective inter-professional teams.

### **2.4.1 Respectful Attitudes**

Personal characteristics identified as contributing to effective inter-professional teams and associated with respectful attitudes included co-operative, and committed (Daiki, 2004; Drew, et al., 2004; Molyneux, 2001; RNAO, 2006; Yeatts & Seward, 2000). Molyneux (2001), using semi-structured interviews and participant focus groups, explored attributes of an effective inter-professional team. Characteristics used to describe team members included co-operative and supportive; “a multidisciplinary type of person” (Molyneux, 2001, p. 30). Team members recognized and valued the other members on the team, which the participants believed led to a greater sense of trust and confidence in each other.

Daiski (2004) interviewed Canadian nurses; both baccalaureate and diploma prepared from either hospital schools of nursing or community colleges, to explore their experience of health care restructuring. Participants suggested change in inter-professional relationships with other professionals needs to begin with changes to the relationships within nursing with the hopes of developing nursing communities rooted in mutual respect and caring.

Yeatts and Seward (2000) researched self-managed work teams of registered nurses, licensed practical nurses and nursing aides in nursing homes in Texas; methods included team observation, team member interviews followed by further in-depth interviews. While their purpose was to explore the relationship between self-managed teams and staff turnover, they identified individual factors contributing to high-performing self-managing teams including attitudes of valuing team members and respectful interpersonal relationships. Rubin, et al. (2009) used narrative interviews, focus groups and job satisfaction surveys to explore communication barriers between nursing supervisors and nursing aides in a long-term care facility in Ohio.

In Molyneux's (2001) study, team members described each other as having a high level of commitment and motivation. Some of the findings related to the participant's commitment and passion may have influenced study findings as the individuals studied had volunteered to be on the team and had self-identified as being interested in participating on an inter-professional team. However, Drew, et al. (2004) were able to support these findings when they examined the characteristics of effective inter-professional primary health care teams in Alberta. They found that teams who rated themselves lower on an effectiveness scale, voiced concerns related to buy-in and team

interaction, demonstrating consistency with Molyneux's finding related to the need for individual commitment and passion to interprofessional team work.

#### **2.4.2 Communication**

The second theme Molyneux (2001) identified as contributing to an effective inter-professional team was communication patterns within the team. This included having a small number of members, holding weekly case conferences, and having central case notes. The importance of communication to an effective inter-professional team was also identified by Drew, et al. (2004), Ross, et al. (2000) and Bokhour (2006).

Drew, et al. (2004) examined characteristics of effective inter-professional primary health care teams in Alberta and also identified the importance of communication. When participants were asked to identify strategies that improved their team's effectiveness, the most common strategy was frequent, regular team meetings as a means of communication to address information sharing, issues and concerns.

Ross, et al. (2000) looked at nurses' views following implementation of intra-professional nursing care teams in the United Kingdom. Authors used a mixed-methods design using quantitative survey data assessing items such as workload, and team effectiveness and qualitative data from semi-structured interviews. Participants identified frequent meetings and improved communication for better teamwork. Data analysis demonstrated that characteristics that may have led to a higher scoring on the team effectiveness scale included strong leadership and effective facilitation.

Bokhour (2006) suggested communication is the critical skill to successful inter-professional teams and to providing patient-centered care. This author identified that traditional communication patterns at inter-professional team meetings, "giving report"

and “writing reports”, contributed to a fragmented team where each professional simply shares and documents their own view and patient plan. Bokhour offered an alternative of deeper collaboration where team members engage in collaborative discussion, jointly determined plans and implementation strategies.

### **2.4.3 Creative Work Habits**

The third attribute of an effective inter-professional team identified by Molyneux (2001) was the development of creative working habits. Participants believed that because there were no similar inter-professional teams to model their work after, the team felt free to explore new ways to work. This freedom allowed them to establish their own guidelines and methods of working. Drew, et al. (2004) examined characteristics of effective inter-professional primary health care teams in Alberta and noted a similar theme. When asked to describe strategies that improved team effectiveness, the teams, who rated themselves higher on the effectiveness scale, also emphasized the importance of innovative service delivery.

Suter, et al. (2009) interviewed 60 health care providers from various disciplines to study what front-line health care providers considered the most relevant competencies for collaborative practice. Descriptions of disciplines interviewed were broad and vague and described as nursing, allied health, physicians and other professions. Those interviewed saw inter-professional collaboration as a way to introduce a new way of working, they cautioned that non-collaborative practice has an “inherent danger in doing things just one way” [Rehabilitation Assistant] and never making an attempt to change, “it’s easy to get like stuck in a box” [Occupational Therapy Assistant]. They saw participation in the project as an opportunity to introduce change” (Suter, et al., 2009, p.

43). There is limited reference to the creative working habits of effective inter-professional teams in the literature; the importance of inter-professional teams being able to deliver services in creative and innovative ways requires further exploration.

#### **2.4.4 Egalitarian Attitudes**

Authors Molyneux (2001) and Daiski (2004) referred to attitudes of respect and equal status among team members as contributing to effective teams. These attributes speak to perceptions of egalitarian attitudes. Lindqvist, et al. (2005), Gilbert (2005a, 2005b), Oandasan and Reeves (2005) discussed the damage hierarchical attitudes have on inter-professional teams. Lindqvist, et al. theorized that negative perceptions developed into negative inter-professional attitudes and hindered collaboration skills.

Molyneux (2001), explored attributes of an effective inter-professional team comprised of occupational therapists, two physiotherapists, a speech and language therapist and a social worker. All participants described the equality of working relationships between team members and noted how this differed from previous teams where some professions were perceived as superior. Team members described relationships as egalitarian, with no one member or profession dominating the team.

Barrett, Dort and White (2006) described an evolution of hierarchical health care culture where professions have created boundaries to differentiate one profession from another. Students entered the education setting with attitudes concerning their professional role and the role of others; these attitudes are further developed as students are educated in various campus-based and clinical educational settings (Gilbert, 2005a; Lindqvist, et al., 2005). Gilbert (2005b) suggested that changing existing attitudes is both a challenge and an opportunity and is perhaps the most significant barrier to any attempt

at interdisciplinary practice. Oandasan and Reeves (2005) theorized that inter-professional education incorporated into healthcare curricula, will diminish early negative stereotypes and positively influence the development of more positive attitudes.

#### **2.4.5 Summary of Inter-Professional Team Attributes**

The research surrounding effective inter-professional teams suggested a number of factors to consider when planning or implementing an inter-professional model of care. Inter-professional teams required the use of various strategies such as; effective communication models, team members who demonstrated supportive and respectful attitudes in an egalitarian environment, and an atmosphere which allows for creative and innovative service delivery. Authors such as Daiski (2004), Oandasan and Reeves (2005) and Suter, et al. (2009) suggested that the acquisition of inter-professional knowledge, skills and attitudes begin in the educational experiences of health care students and be a focus of continuing competencies in health care providers. The following section will explore the topic of inter-professional education, including a discussion of definitions, historical roots, learning outcomes and barriers to inter-professional education.

### **2.5 Inter-professional Education**

Inter-professional education is a paradigm shift from a traditional pattern of learning, a change from where learning occurs in isolation within the perspective of the student's own discipline to a setting in which learning can occur with, from, and about members of other disciplines (Colyer, Helme, & Jones, 2009; WHO, 2010). The WHO Study Group on Inter-professional Education and Collaborative Practice strongly supports inter-professional education stating that inter-professional education is not only preferable but is "essential to the development of a 'collaborative practice-ready' health



workforce” (WHO, 2010, p. 13). Inter-professional education is a necessary component of any inter-professional care model and is supported by nursing best practice guidelines (RNAO, 2006) and position statements of organizations such as the Nova Scotia Health Professions Regulatory Network (2008), Canadian Nurses Association (2005), Canadian Physiotherapy Association (2009), the World Health Organization (2010), and the Canadian Medical Association (2010).

### **2.5.1 Definitions**

The definition of inter-professional education offered by the Centre for the Advancement of Inter-professional Education (n.d.) and used by the WHO Study Group on Inter-professional Education and Collaborative Practice (2010) states inter-professional education happens when “two or more professions learn with, from and about each other to enable effective collaboration and improve health outcomes” (WHO, 2010, p. 7).

The Accreditation of Inter-professional Health Education (AIPHE) Steering Committee developed an inter-professional education document outlining principles and implementation guidelines (AIPHE, 2009). The AIPHE committee defined inter-professional education as the active engagement of students from different professions demonstrated as exchanges among and between learners that changes how they perceive themselves and others. The AIPHE committee is limited in representation focusing on the six university educated professions of physiotherapy, occupational therapy, medicine, nursing, pharmacy and social work, however their definitions and work are congruent with the work of other authors and committees, and there is no evidence to suggest that their work cannot be applied across various disciplines.

The Centre for Inter-professional Education from the University of Toronto (2010) defined the terms uni- multi- and inter- professional learning. Uni-professional education refers to education when students from the same discipline or profession learn together, multi-professional education includes various disciplines being brought together to learn about a specific issue or phenomenon. The centre clarifies that in this type of learning, students learn alongside one another but do not interact with one another, nursing and nutrition students taking the same anatomy class for example. The Centre for Inter-professional Education uses the Centre for the Advancement of Inter-professional Education's definition for inter-professional education, defined as "occur[ing] when two or more professions learn with, from and about each other to improve collaboration and the quality of care" (Centre for the Advancement of Inter-professional Education, "Defining IPE", para. 1).

Petri (2010) defined inter-professional education as facilitating a "shared commitment to interdisciplinary collaboration by fostering a group dynamic in a non-competitive atmosphere [with the goal of developing] role awareness, effective communication, and mutual trust and respect...[it] may be delivered in either the pre-licensure academic setting or the post-licensure practice setting" (Petri, 2010, p. 76).

### **2.5.2 Historical Context of Inter-Professional Education**

An increased interest in inter-professional practice and education through the latter part of the twentieth century in North America was evidenced by increased funding of inter-professional training projects, grants for inter-professional curriculum development as well as provision of fellowships designed to enhance inter-professional education and collaboration (Baldwin, 2007; Cote, et al., 2008). Baldwin described the

beginning of inter-professional academic and clinical experiences as occurring through the late-1960's and 1970's in British Columbia, Colorado and Nevada universities, though such projects were short-lived due to increasing budget pressures and restraints, "collaborative education and practice was not easy and often was regarded as an expensive luxury" (Baldwin, 2007, p. 28). Oandasan and Reeves (2005) identified the impact financial support has played in inter-professional education projects, and highlighted the importance of gaining academic and political support from administrators in order to ensure continuation of projects.

Canadian support for inter-professional education and practice gained attention through Romanow (2002); the report emphasized the importance of inter-professional education for professionals who would ultimately be practicing and working together in a team environment. The development of the Primary Health Care Transition Fund in 2000 and First Ministers' Accords on Health Care Renewal in 2003 and 2004 continued with financial commitment to inter-professional team building through the funding of educational and professional development programs and primary health care initiatives which included inter-professional collaborative endeavours (Cote, et al., 2008).

### **2.5.3 Inter-professional Education Learning Outcomes**

"The goal of inter-professional education is to prepare health professional students with the knowledge, skills and attitudes necessary for collaborative inter-professional practice" (Centre for Inter-professional Education, 2010, "Why do we need Inter-professional Education", para 2). Knowledge refers to the understanding of roles of other health professionals, the acquisition of skills includes foundational inter-professional teamwork skills such as communicating with others, and the development of

attitudes includes those desirable for effective team functioning; demonstrate mutual respect, a willingness to collaborate, and an openness to trust (Oandasan & Reeves, 2005). RNAO (2006) best practice guidelines suggest educators explore innovative clinical practicums that promote and demonstrate inter-professional team effectiveness.

Thistlethwaite and Moran (2010), described three general learning outcomes of inter-professional education: 1) profession specific outcomes that relate only to a particular profession which the authors suggest are few because of the overlap of knowledge, skill and attitudes on inter-professional teams, 2) generic outcomes achieved by two or more professions learning skills such as blood pressure taking, developing attitudes such as client-centred practice or knowledge such as anatomy and physiology and, 3) generic outcomes that should be met by all professions such as effective communication, teamwork and collaborative practice.

#### **2.5.4 Barriers to Inter-professional Education**

Authors frequently identified inter-professional education as a complex intervention (Gilbert, 2005a, 2005b; Reeves et al., 2010), meaning that it is difficult to identify the one causative factor of the intervention that is responsible for the outcome. Aspects such as learner characteristics, faculty characteristics, curriculum outcomes, and a multitude of system factors all interact and impact not only each other but also outcomes (Reeves, et al., 2010; Gilbert, 2005b). Gilbert (2005b) analyzed barriers including: 1) language, 2) psychosocial impacts of change, 3) legislative, and 4) educational system. Gilbert (2005b) further described the educational system barriers as: 1) differences in program prerequisites, 2) various program durations, 3) differing clinical education sites, 4) timing incompatibility, 5) faculty and 6) organizational conflicts.

Cashman, Reidy, Cody and Lemay (2004) identified health systems and organizational barriers that must be overcome in order to see the success of educational changes that include: 1) differences within the team, 2) role conflict, 3) organizational constraints, 4) funding limitations, and 5) lack of knowledge and skills related to team development.

Clearly, to successfully implement an inter-professional education intervention, a number of potential challenges should be expected and planned for. The literature suggested a number of areas where planners could anticipate problem solving including funding, timing and clinical education sites. The literature also highlighted the importance of involving multi-levels of decision makers including faculty and program co-ordinators to plan and organize timing and course outcomes. Academic and clinical administrators are required to ensure the provision of necessary faculty and staff time, and the flexibility required to implement change. Support beyond educational institutions such as local and provincial government, nursing organizations and research funders ensure the continuation and sustainable funding of inter-professional education and associated research. The review of literature to date has focused on the nature and benefits of the inter-professional or interdisciplinary team. I will now turn to examining the concept of intra-professional teams.

## **2.6 Intra-professional teams**

Daiski (2004) suggested that improving the broader inter-professional team begins with improving the smaller intra-professional nursing team, with the hopes of developing caring, respectful nursing communities. An intra-professional team can be defined as referring to a team *within* a specific profession or discipline. Registered nurses, licensed practical nurses and assistive personnel such as continuing care

assistants, make up the care team providing direct patient-centered care in many long-term, acute care and rehabilitation facilities as well as community settings (Government of Nova Scotia, 2008). This patient care team is referred to as an intra-professional nursing team by some authors (Daiski, 2004; Smith & Seeley, 2010).

Research that specifically involves the intra-professional practice of registered nurses, licensed practical nurses and continuing care assistants is limited. Existing research related to intra-professional nursing care teams highlights the importance of communication and respectful interpersonal relationships (Daiski, 2004; Dreachslin, et al., 1999; Ross, et al. 2000; Rubin, et al., 2009). The research on intra-professional nursing teams will now be described using communication and respectful relationships to frame the discussion.

### **2.6.1 Intra-professional Communication**

Rubin, et al. (2009) used narrative interviews, focus groups and job satisfaction surveys to explore communication between nursing supervisors and nursing aides in a long-term care facility in Ohio. A focus group was held to identify potential solutions and a job satisfaction survey was completed. Nursing supervisors in the study were primarily Licensed Practical Nurses but did include Registered Nurses. Results highlighted concerns related to communication barriers, lack of mentoring, and the display of empathy and respect. “Narrative interviews voiced pervasive themes of profound anger, mistrust and ambivalence, especially perceived by many nursing aides in their interactions with nurse supervisors, both RN and LPN”, (Rubin, et al., 2009, p. 826). The authors suggested a communication model built on a “culture of listening, empathy,

legitimation and support” (Rubin, et al., 2009, p. 830) to improve job satisfaction and reduce staff turnover.

Yeatts and Seward (2000) researched self-managed work teams of registered nurses, licensed practical nurses and nursing aides in nursing homes in Texas described by managers as either low-performing or high-performing. Methods included team observation, team member interviews followed by further in-depth interviews. The high-performing team described frequent and efficient communication including collaborative decision making. The authors suggested implementing high-performing self-managed work teams required a continued investment in staff training, support and coaching.

Dreachslin, et al. (1999) looked at unit teams at two hospitals comprised of registered nurses and unlicensed care providers. Authors characterized effective patient care teams as experiencing: 1) role clarity, 2) effective interpersonal communication, and 3) belief in a shared purpose, and patient-centered care. In their conclusions, the authors suggested the development of leadership and communication skills for successful patient care teams.

Ross, et al. (2000) looked at intra-professional nursing care teams in the United Kingdom. Nursing designation differs in the United Kingdom when compared to Canadian designations, with no obvious comparison to the Licensed Practical Nurse. Ross, et al. included practice nurses, district nurses and health visitors. The National Health Service of the United Kingdom describes practice nurses as nurses who were degree or diploma prepared registered nurses, district nurses who in addition to being a registered nurse, complete a degree-level specialist practitioner program and health visitors who are registered nurses or midwives who have done further training in a

degree-level training program (National Health Service Careers, “explore by career”, “nursing”, n.d.). As participants began working within a new intra-professional model of care, they identified the importance of communication as a key factor in successful intra-professional nursing teams (Ross, et al., 2000).

### **2.6.2 Respectful Interpersonal Relationship**

Yeatts and Seward (2000) researched self-managed work teams described as either low-performing or high-performing and were made up of registered nurses, licensed practical nurses and nursing aides. The low-performing teams described lower levels of trust and less support from team members. Members on the low-performing team described strained interpersonal relationships between the care aides and nurse supervisors. Authors draw attention to the need for administrators to support and model positive interpersonal relationships between all levels of staff, where staff assists one another and team member opinions are valued.

In 2004, Daiski interviewed 20 Canadian nurses to explore their experience of health care restructuring. Daiski interviewed both baccalaureate and diploma nurses but does not distinguish between the diploma prepared registered nurse from hospital schools of nursing and community colleges and it is not clear if the college prepared nurses included Licensed Practical Nurses. Participants identified that nurses need to be included in the decision made about health care changes, and recognized hierarchical relationships between professions and also *within* the nursing profession. At some point during their interviews, all participants suggested that ‘nurses eat their young’ referring to unsupportive relationship often seen between student nurses, or nurses recently hired, and more experienced nurses. The hierarchical nursing relationships were displayed through



lack of support for new graduates or new employees, resisting the ideas of new hires and bullying.

Duddle and Boughton (2007) used an explanatory, multiple case study design to explore the way in which registered nurses related to and interacted with each other in the workplace. Newly hired nurses described feeling ignored, belittled and intimidated. The authors suggested that change needs to occur to ensure new graduates and newly hired nurses are made to feel welcome with an increased focus on developing strong, positive interpersonal relationships.

Rubin, et al. (2009) explored communication barriers between nursing supervisors and nursing aides in a long-term care facility in Ohio. Lack of empathy and respect contributed to decreased job-satisfaction and ineffective intra-professional teams. Rubin, et al. suggested implementing multidisciplinary educational opportunities both in educational curricula and as a professional development topic to improve intra-professional communication and collegiality, thereby improving job satisfaction and reducing staff turnover.

### **2.6.3 Summary of Intra-Professional Team**

Findings from broader, inter-professional team studies identified teamwork, communication and role clarity as positively contributing to effective teams and lack of communication and lack of buy-in as contributing to ineffective inter-professional teams (Drew, et al., 2004; Suter, et al., 2009). Similar findings have been reported when researching intra-professional nursing care teams, highlighting the importance of communication, and respectful interpersonal relationships (Daiski, 2004; Dreachslin, et al., 1999; Ross, et al. 2000; Rubin, et al., 2009).

As the intra-professional patient care team makes up part of the broader inter-professional team, as suggested by Daiski (2004), improving the smaller intra-professional nursing team would positively influence the broader inter-professional team. Kenney (2001) advocated for further intra-professional education experiences for Registered Nurses, Licensed Practical Nurses and Care Aides, and Gilbert (2005a) recommended that students would benefit most from interdisciplinary clinical education.

## **2.7 An Interdisciplinary Student Team**

While Baldwin (2007) notes that the terms interdisciplinary and inter-professional are seen to be used interchangeably, the term inter-professional, or even intra-professional, could be interpreted as representing a team made up of only those care providers with professional designations. The term interdisciplinary offers a broader, more inclusive meaning that is it extends beyond the profession of registered nursing, to include licensed practical nursing and continuing care assistants and will be used to describe the collaborative patient-care team in the following discussion.

The focus of this current research was the “interdisciplinary” student team, made up of students from baccalaureate nursing, practical nursing and continuing care assistant programs. In reviewing the histories of nursing education in Canada, Pringle, et al. (2004) noted inter-professional content in curricula is missing and collaboration is lacking between educational programs for Registered Nurses and Licensed Practical Nurses. A literature review yielded no results for interdisciplinary education that included Registered Nurses (RN), Licensed Practical Nurses (LPN) and Continuing Care Assistants (CCA). Next is a description of entry to practice educational requirements for each of these groups.

Entry to practice for Registered Nurses in most Canadian provinces, including Nova Scotia, requires a baccalaureate in nursing (CNA, n.d., table) and successful completion of a national registration exam. Baccalaureate programs in Nova Scotia are offered through universities and take four years of full time study to complete; though there are alternate accelerated programs for students entering with non-nursing, university credits (Dalhousie University, 2009). Upon successful completion of the program and writing of the national examination, the applicant then applies for registration through the provincial regulatory body.

Entry to practice for Licensed Practical Nurses in Canada includes completion of theoretical and clinical education from an approved one to two-year post-secondary education program (Pringle, et al., 2004). In Nova Scotia, the College of Licensed Practical Nurses of Nova Scotia has approved the Nova Scotia Community College (NSCC) to deliver a two-year diploma program in practical nursing (CLPNNS, n.d., “Education”). Upon successful completion of the program and writing of the national examination, the applicant then applies for registration through the provincial regulatory body.

The educational and training requirements for unlicensed care providers vary across Canada. The Nova Scotia Department of Health requires unlicensed care providers employed in defined care settings to have a Continuing Care Assistant certificate (Nova Scotia Association of Health Organizations [NSAHO], n.d.). A variety of educational providers are approved to provide the Continuing Care Assistant program in Nova Scotia including the Nova Scotia Community College (NSAHO, n.d.). The full-time, on-campus delivery of the Continuing Care Assistant program at the NSCC runs for

one academic year (NSCC, 2011), though there are alternate accelerated programs offered as requested by industry. Upon successful completion of the program, students are then eligible to write a provincial certification examination administered from the Nova Scotia Department of Health (NSAHO, n.d).

### **2.7.1 Interdisciplinary Collaborative Clinical Education Project**

In 2008 discussions began between Dalhousie University School of Nursing and NSCC School of Health and Human Services to introduce a collaborative clinical educational experience (Interdisciplinary Collaborative Clinical Education Project [ICCEP], 2011). This collaboration was supported in the literature as authors advocated for further inter-professional education experiences for Registered Nurses, Licensed Practical Nurses and Care Aides in their educational experiences and specifically the benefits of interdisciplinary clinical education (Gilbert, 2005a; Kenney, 2001). Health system changes such as the Models of Care Initiative in Nova Scotia (MOCINS) and incorporation of interdisciplinary outcomes in academic programs, prompted interest in creating opportunities to introduce interdisciplinary content into student experiences. The implementation of the first ICCEP occurred in the spring of 2009 in a long-term care setting and involved three distinct categories of students; baccalaureate nursing students in their first and third year of study, practical nursing students in their first of two years of study and continuing care students at the end of their program (ICCEP, 2011). The first ICCEP was offered to four clinical groups involving 32 students. A second ICCEP experience was planned and implemented in the acute care setting in the spring of 2010; in the spring of 2011 the project expanded to include 14 teams in three separate communities, at various settings and involved more than 70 students (ICCEP, 2011).

The goal of the project was to create an “interdisciplinary” clinical experience that provided students with early exposure to an “interdisciplinary” team approach in all healthcare settings (Canadian Association of Practical Nurse Educators [CAPNE] Presentation, 2009). The ICCEP planning committee drafted a number of student learning outcomes for the project that included: 1) increased understanding of the unique and shared expertise that each profession brings to client care, 2) increased understanding of the role of client and family as members of the health care team, 3) understanding and appreciation for the values, beliefs and attitudes that differentiate the roles of team members, 4) increased understanding of team dynamics, communication and conflict resolution skills within the context of a well-functioning interdisciplinary team, and 5) opportunity to develop leadership skills in an interdisciplinary team (ICCEP, 2011).

### **2.7.2 Highlights of ICCEP Research**

Data collected as part of a pilot study during the first “interdisciplinary” clinical experience, involved 24 student participants; data were collected from pre- and post-surveys, participants’ daily journals, and a faculty focus group. Data analysis of the pre- and post-clinical surveys indicated that participants had an increased understanding and respect for their own practice and the practice of other disciplines as a result of the experience (ICCEP, 2011). Themes generated by the analysis of the participants’ journals applicable to interdisciplinary education included: 1) leadership, 2) team, 3) professional growth, and 4) learning with, from and about each other (ICCEP, 2011). These themes confirmed those skills the literature described as fundamental to inter-professional collaboration such as becoming a team, team support, respect and

communication (Drew, et al., 2004; Molyneux, 2001; Ross, et al., 2000; Rubin, et al., 2009; Vazirani, et al., 2005; Yeatts & Seward, 2000). One participant wrote “It seems like we are all teaching each other and our team is stronger for having varying levels of experience to draw from” (ICCEP, 2010, p. 23). Participants described looking forward to future interdisciplinary clinical projects and had high praise for their teams, “the entire team has interacted and worked together so much already – there are no strangers on the team” (ICCEP, 2010, p. 10).

In summary, the preliminary findings from the “interdisciplinary” collaborative clinical education research pilot project described an overall transformation in areas such as understanding of roles, professional growth and leadership. The project succeeded in meeting objectives in understanding and appreciation for the expertise, values, beliefs and attitudes of various team members, developing foundational interdisciplinary skills and developing an “interdisciplinary” team.

## **2.8 Chapter Summary**

The interest in interdisciplinary practice and education is mounting. An extensive review of the literature demonstrated that terms such as “inter-professional”, “interdisciplinary” and “multidisciplinary”, are often used interchangeably suggesting that use of any one specific term is based on values, beliefs, and knowledge of the author (Xyrichis & Lowton, 2008). The term interdisciplinary was chosen purposely for this research project as it was seen to be more inclusive of the team providing direct client-care. In Nova Scotia the team is made up of Registered Nurses, Licensed Practical Nurses and assistive personnel such as Continuing Care Assistants (Government of Nova Scotia, 2008). For the purpose of this research study, the term “interdisciplinary clinical

education” is used to describe interdisciplinary education that happens when two or more providers, learn with, from and about each other to enable effective collaboration and improve client outcomes in a clinical practicum setting.

Interdisciplinary care is complex and has demonstrated positive outcomes for organizations, teams, team members, and patients. Despite some promising findings to date the ability to generalize findings is limited by the number of studies, small sample sizes, and inconsistent conceptualisations and measurements.

Inter-professional education is recommended as a necessary component in the programs of health care providers and researchers agree that the strengthening of interdisciplinary teams begins in program curricula. As registered nurses, licensed practical nurses and continuing care assistants, make up the care team in many patient care settings, research informing how best to incorporate interdisciplinary skill development in educational curricula is needed. Research related to inter-professional learning to date has primarily taken place with practicing health care professionals in university-based educational programs such as medicine, nursing, occupational therapy and pharmacy programs. The literature on intra-professional teams, interdisciplinary education as well as the perspective of paraprofessional or diploma educated professionals is limited.

A collaborative clinical “interdisciplinary” clinical education project occurred between Dalhousie University School of Nursing and the Nova Scotia Community College School of Health and Human Services. This was an ideal opportunity to expand the research on the findings of the pilot reported earlier. Conducting research with students who participated in this collaborative clinical project provided an opportunity to

fill the gap in knowledge related to team development during an “interdisciplinary” clinical education practicum and was the focus of this study.



## **Chapter III Methodology**

The purpose of this study was to describe baccalaureate nursing, practical nursing and continuing care assistant students' experience of team development during an "interdisciplinary" clinical practicum. A qualitative descriptive methodology was used to explore this topic. This chapter will describe qualitative methodology followed by further discussion on qualitative descriptive methodology aspects of sampling, saturation, participant recruitment, consent, and data collection as they applied to this study. Components of trustworthiness will then be discussed. The chapter concludes with an examination of ethical and risk-benefit considerations as well as a statement on any conflict of interest issues.

### **3.1 Qualitative Methodology**

Qualitative methodologies are rooted in the social sciences and are used to describe and interpret human phenomena, what an experience means to people, how it affects them and what they think about it (Denzin & Lincoln, 2005; Patton, 2002; Speziale, Streubert, & Carpenter, 2010). Qualitative approaches are used when researchers want to attempt to understand an experience; to "enter their world" of their participants (Speziale, et al., 2010, p. 3). "Qualitative researchers stress the socially constructed nature of reality, the intimate relationship between the researcher and what is studied, and the situational constraints that shape inquiry" (Denzin & Lincoln, 2005, p. 10).

Speziale, et al. (2010) describe six common characteristics of qualitative research: 1) the existence of multiple realities, 2) a commitment to multiple ways of understanding, 3) a commitment to the participants' viewpoints, 4) the use of methods that limit the

disruption to the phenomena, 5) a belief that the role of the researcher enriches the data, and 6) a commitment that the findings be reported in a rich literary style, from the perspectives of the participants.

My own ontological position is consistent with that of qualitative methodologies. I believe that knowledge is created from experience and that those experiences form the foundation for our understandings and beliefs. Therefore, I value the subjective nature of knowledge and its creation, and seek to learn about phenomena through listening to the experiences of others. I am aware of the impact a researcher's own biases, experiences and even presence can have on the participants and the data. I have a strong belief in the strengths and knowledge of participants. Their ideas and observations can offer valuable insight into the planning, design and implementation of the student team during an "interdisciplinary" clinical practicum.

### **3.2 Qualitative Descriptive Methodology**

According to Sandelowski "qualitative descriptive studies have as their goal a comprehensive summary of events in the everyday terms of those events" (Sandelowski , 2000, p. 334); Brink and Wood (2001) refer to this level of qualitative research as exploratory. Giorgi described the intent of the researcher, "describe what is there, however it may present itself" (Giorgi , 1992, p. 121). Sandelowski (2000) suggests that this fundamental qualitative methodology is less interpretive, less abstract than other qualitative methodologies and has the goal of a straight description. Rather than focusing on the building of theory, qualitative descriptive studies seek to describe the data absent of a priori assumptions, hypothesis or theory (Giorgi , 1992).

Qualitative methods are used within naturalistic inquiry because such methods are compatible with “human-as-instrument” (Denzin & Lincoln, 2005, p. 266). Qualitative designs are naturalistic in that the research takes place in the phenomenon’s natural setting, the researcher does not attempt to alter or manipulate the setting, phenomenon, or experiences and the researcher *discovers* the outcomes through data collection and analysis (Patton, 2002). Qualitative descriptive research has roots in naturalistic inquiry (Sandelowski, 2000, 2010).

### **3.3 Setting**

In the spring of 2011 there were 14 ICCEP practicums implemented in Nova Scotia involving Dalhousie University School of Nursing and three campuses of the Nova Scotia Community College; more than 70 students participated in these practicums (ICCEP, 2011). In order to be included in study recruitment students had to have participated in one of the two ICCEP sites selected for the study. Both practicum sites selected for the study took place in rural Nova Scotia at long-term care facilities. This was the first time either site had been involved in the implementation of an ICCEP practicum.

### **3.4 Sampling**

Many purposeful sampling techniques can be used in qualitative descriptive studies (Sandelowski, 2000); though it is suggested that researchers maximize variation in the sampling to allow for not only the discovery of common themes but the unique themes as well. The goal is to “obtain cases deemed information-rich for the purpose of study” (Sandelowski, 2000, p. 338). Patton (2002) has suggested that purposeful sampling allows for the selecting of information-rich cases. “Information-rich cases are

those from which one can learn a great deal about issues of central importance to the purpose of the inquiry, thus the term purposeful sampling” (Patton, 2002, p. 273).

Sandelowski has not referred to a specific number of cases required for sampling, instead she described the outcome of a qualitative descriptive study by stating, “there is no mandate to produce anything other than a descriptive summary of an event, organized in a way that best contains the data collected and that will be most relevant to the audience for whom it was written” (Sandelowski, 2000, p. 339). Magilvy and Thomas (2009) contend that a qualitative descriptive design is one that is limited in scope including sample size, and interpretation. Guest, Bunce and Johnson (2006) provided researchers with a number of participants a research study would require to reach saturation. Saturation means that despite further data collection no new themes are derived from the data. The authors wanted to quantify the number of interviews needed to get a reliable sense of thematic saturation; their findings suggested that data saturation, both in terms of themes and frequency, occurred within the first twelve interviews.

In previous research involving students participating in a similar “interdisciplinary” clinical practicum, 90% of students participated in the research component according to N. Edgecombe (personal communication, March 16, 2011). For the purpose of this study, I was limited by the number of students enrolled in the interdisciplinary clinical project and willing to participate in the research. In order to be a participant, students had to have participated in one of the 2011 ICCEP sites selected for the study. The clinical practicum included a convenience sample of 16 students from two ICCEP sites in rural Nova Scotia; eight baccalaureate students, six from first year, and

two from third year; six practical nursing students and two continuing care assistant students. Eight of these potential participants consented to participate in this study.

### **3.5 Saturation**

Saturation refers to the point in qualitative research when data collection can stop, this is when key themes in the analysis have been fully developed, repetition of data occurs, and previous themes are confirmed (Speziale, et al., 2010; Whittemore & Knafl, 2005). Guest, et al. (2006) reviewed methodology texts and published articles for content regarding saturation for qualitative research, but found no published recommendations. After analysis of saturation data in published literature, their findings suggested that data saturation, both in terms of themes and frequency, occurred within twelve interviews (Guest, et al., 2006).

### **3.6 Participant Recruitment and Consent**

Prior to initiating participant recruitment, approval was obtained from the Dalhousie Research Ethics Board and the Nova Scotia Community College Research Ethics Board. Requests were then sent to the Dalhousie University School of Nursing research committee and NSCC Academic Chairs for Health and Human Services to seek permission to contact and invite their students to participate in the research project.

The clinical practicum included a convenience sample of 16 students (eight baccalaureate students, six from first year, and two from third year; six practical nursing students and two continuing care assistant students each from two sites). All potential participants were invited to participate in the research by way of an invitation package. The package contained: 1) a written overview of the research, including the introduction of myself, as researcher (Appendix A), 2) an invitation letter, inviting students to

participate in the research project (Appendix A), 3) a reply card and stamped self-addressed return envelope (Appendix C), and 4) the study consent, so that the students could make an informed decision regarding their participation in the study (Appendix B). The ICCEP planning committee mailed out the invitation package to students who participated in the two ICCEP sites following the completion of the clinical practicum and entry of student marks.

The invitation letter contained three options for the participants to indicate their interest: 1) complete a reply card to indicate their interest in participating (a stamped self-addressed return envelope was included in the information package), 2) a contact number was provided for those students who wished to indicate their interest in participation by phone, and 3) an e-mail address was provided for those students who wished to indicate their interest in participating by e-mail. Students were also asked to indicate their preferred method of communication and contact information so that a meeting date and time could be arranged to review and sign the informed consent and complete the interview, if they were still agreeable to participating.

Using the recruitment process as originally planned; only two out of a potential 16 participants were recruited over an eight week time frame. As suggested in the literature, the goal was to reach saturation with an expected 10 to 12 participants. Having recruited less than 20% of the goal, an alternate plan for recruitment was requested and approved by the Dalhousie University Social Sciences and Humanities research ethics board. Using a specific script (appendix D), a research assistant called potential participants who had been sent invitation packages, and invited them to participate in the research study.

While this strategy did increase recruitment of participants, due to a number of factors such as a delay in the start of recruitment, and conflicting schedules, a total of eight participants agreed to take part in the research study, and were interviewed. Efforts were made to ensure representation from at least one student from each of the three programs; first and third year (Baccalaureate of Science in Nursing) BScN students, first year Practical Nursing (PN) students and Continuing Care Assistant (CCA) students at the end of their one year program. Participants ranged in age from 21 to 46 years with an average age of 32. All participants described previous team experience ranging from organizing sports teams and community volunteer groups such as 4-H to employment in areas such as customer service and working on a team in long-term care facilities. All students had taken part in one of the two 2012 ICCEP sites selected for the study, both practicum experiences took place in long-term care facilities in rural Nova Scotia.

Once a student's expression of interest to participate was received, they were contacted to review the information letter and consent and to answer any questions. An interview was then arranged within or near their community of residence, at a site negotiated between the participant and researcher; the intention was to decrease travel time and costs incurred by the participant. At the beginning of each interview, the consent form was reviewed; any further questions answered and then the participant was invited to sign the consent form.

### **3.7 Data Collection**

Participants were asked to partake in one-on-one interviews. The interviews were digitally recorded to allow for accurate transcription of participants answers. The recording was transcribed by the researcher. Hard copies of transcripts were stored in a

locked filing cabinet in the researcher's office, and kept for a period of five years according to Dalhousie University ethics requirements and will then be destroyed using secure shredding services. All digital copies of interviews were stored in a secure, encrypted file on the researcher's computer, and were destroyed after interviews were transcribed.

Minimally to moderately structured, open-ended, conversation-like interviewing is a data collection technique common to qualitative descriptive methodologies (Patton, 2002; Sandelowski, 2000, Caelli, Ray & Mill, 2003). Semi-structured individual interviews provided an opportunity for the participants to elaborate on their experiences (McNeill & Chapman, 2005). The interview guide (Appendix E) with broad, open-ended questions allowed for rich descriptions of participants personal histories, perspectives, and experiences (Caelli, et al., 2003; McNeill & Chapman, 2005). All participants were asked all questions, and probed on key responses. The interview guide was divided into the following sections: 1) demographic information, 2) participant description of their ICCEP team, 3) a description of how the sense of team was enhanced, 4) a description of any time the members perceived they were not practicing as an effective team, 6) development of teamwork skills, 6) perceptions of factors that enhanced development of teamwork skills, and 7) suggested improvements that would have enhanced the development of teamwork skills.

Participant literacy was considered in the development of interview questions. BScN and PN educational programs involved in this study required a high school diploma with specific academic credits prior to admission, entry into the NSCC, CCA program requires completion of grade 12 or equivalent, though an applicant may be



considered if they meet alternative requirements for mature students. To help ensure ease of reading and understanding, an attempt was made to use everyday language and minimize the use of abstract, high literacy terminology. The participant interview guide and invitation letter were written to achieve a Flesch-Kincaid grade seven reading level using the built-in software in Microsoft Word 2010. The Flesch-Kincaid reading level, as calculated by software in Microsoft Word 2010, has been shown to be consistent with hand-calculations using the formula (D'Alessandro, Kingsley, & Johnson-West, 2001).

### **3.8 Trustworthiness**

The issue of rigor or what is known as trustworthiness in qualitative research, was addressed by attending to; credibility, transferability, dependability and confirmability (Creswell, 2007; Denzin & Lincoln, 2005). For the novice researcher, Koch and Harrington (1998) recommend peer debriefing to strengthen trustworthiness and credibility. This included collaboration between researcher and thesis supervisors, weekly e-mails, regular feedback and guidance particularly through the arranging and re-arranging of codes to complete thematic analysis. Concerns and questions arising from the data collection were discussed through weekly e-mails, phone calls and monthly meetings.

Credibility refers to the activities that increase the probability of credible results (Speziale, et al., 2010) captured in part by the building of trusting relationships (Creswell, 2007) and engaging participants in a way that allows for the researcher to “tap the participants experience” (Speziale, et al., 2010, p. 93). As a way to establish credibility, each interview took place in a location selected by the participant; interviews lasted an

average of 90 minutes, allowing for engagement with the participants and topic reflection.

Transferability refers to the ability for those reading the findings to make a determination as to their usefulness in other situations and is based on the quality and detail of the presented findings (Speziale, et al., 2010). Detailed explanations of the study sample, data collection, analysis and interpretation have been provided in this work, including participant quotations, in order to enhance transferability.

Dependability is met when credibility is demonstrated (Speziale, et al., 2010). Qualitative descriptive researchers seek “descriptive validity or an accurate accounting of events that most people (including researchers and participants) observing the same event would agree is accurate” (Sandelowski, 2000, p. 336). In addition to assuring credibility, authors suggest triangulation of methods to strengthen dependability (Speziale, et al., 2010). Patton (2002) described four types of triangulation: 1) data, 2) investigator, 3) theory, and 4) method triangulation. For this research study, both data and investigator triangulation were used. Participant data from differing educational programs were purposefully sought to ensure data were not biased towards a particular student group. Each group of students (BScN first and third years, PN, CCA) was represented by at least one participant. Students across all four programs described like experiences of team building. Using investigator triangulation, the experience and expertise of thesis supervisors was relied on when developing and applying codes, analysing data and creating themes.

Patton (2002) suggested an “audit trail” (p. 93) to support data confirmability and a description of the researcher’s values and preconceptions. Speziale, et al. (2010)

described the purpose of the audit trail as a document which describes, as clearly as possible, the thought processes that led to the researchers' conclusions. Self-reflection and questioning occurred through frequent e-mails, phone calls and meetings with thesis supervisors. Researcher reflexivity was supported through supervision as supervisors guided the research process through reflective questions, requiring additional readings, and feedback.

### **3.9 Data Analysis**

Authors have recommended that researchers conducting qualitative descriptive studies need to stay close to the data, words and events (Coffey & Atkinson, 1996; Sandelowski, 2000). A characteristic of qualitative descriptive studies is to produce findings as close as possible to the data given by participants (Sandelowski, 2010). The edited transcripts were read and re-read prior to coding to increase familiarity with the data. Simultaneous collection and thematic analysis of data occurred.

Magilvy and Thomas (2009) have used the analogy of opening a gift that is wrapped in multiple boxes to describe the thematic analysis of data for the researcher using qualitative descriptive methods:

[c]odes are the repeated words or phrases of the participants found within and across the individual texts (Thomas, 2006). The next step in the analysis process involves "opening the boxes". These boxes are your categories. Categories are similar code words and phrases that have been grouped ("larger box") and regrouped ("smaller box") together to include related concepts. Looking for relationships, the categories are then resorted into groups of similar content and

meaning. This final small box contains your gift or theme(s). (Magilvy and Thomas, 2009, p. 300)

Coding offers a way to organize qualitative data, identifying relevant concepts then collecting examples of those concepts (Coffey & Atkinson, 1996). Data were coded to identify similarities and differences; then searched for themes, (Coffey & Atkinson, 1996; Sandelowski, 2000). Chunks of similar data were differentiated by highlighted colors. Codes were applied to the data, and themes identified. Support and feedback from my thesis supervisors and committee was very important as I worked through the task of developing and applying codes then generating themes.

### **3.10 Ethical Considerations**

The human rights of participants were protected in several ways. The proposal received approval from the Social Sciences and Humanities Research Ethics Board In accordance with the policy of Dalhousie University and the NSCC Research Ethics Board. Support for the research was obtained from NSCC Health and Human Services schools and the School of Nursing at Dalhousie University. Participants had the opportunity to review the study information and consent prior to agreeing to participate in the study. When participants arrived for interviews, the consent information was reviewed and questions answered by the researcher prior to the participant signing the consent.

### **3.11 Risk-Benefit Discussion**

There were no direct benefits to participants who participated in the study. There was the possibility that the findings may influence the nature of clinical experiences for future students.

The researcher recognized that students are a potentially vulnerable population and the study design mitigated this risk so that students were protected and felt safe and free to either participate or not without risk. Russell (2005) an ethnographer who conducted research with students in Australia spoke of the importance of trust and building relationships in order to obtain data that represented participants. The notion of trust and building relationships is congruent with qualitative descriptive philosophies.

This study minimized any risk to students by: 1) recruiting students after completion and submission of course marks for clinical courses, 2) student names and information provided by participants was not shared with any students, faculty or staff at any of the academic or clinical facility sites, 3) names and identifying information were removed from student interview transcripts, 4) data, including student names, were not shared with any course or clinical instructors at any of the academic sites, 5) the researcher transcribed the interview recordings, and 6) transcripts were stored in a locked cabinet and will be kept for five years before being destroyed in keeping with Dalhousie University ethics requirements.

Due to the small number of students who participated in the two ICCEP sites selected for the study, while course and clinical instructors will not know which students have participated in the research, they will know which students have participated in the ICCEP project and therefore *may* have participated in this research. No information regarding students' participation or any information shared during interviews was shared with or accessed by faculty or staff at any of the educational institutions.

An informed consent was obtained from each participant (Appendix B). This consent described the study and the expectations of the participants. I also provided a

verbal explanation of the study and an opportunity for questions at the time of obtaining the consent. As part of the informed consent process, participants were made aware of strategies implemented to diminish any impact their participation could have on their educational experience.

Participation was voluntary and the participants were free to withdraw at any time up until the time that data were coded. Participants were given information on various ways to withdraw from the study, by contacting the researcher by email, phone or in person. Participants were also given contact information for the Director of Dalhousie University's Office of Human Research Ethics Administration in case they had any concerns. If a participant chose to withdraw following the coding of data, their transcripts would have been removed from the analysis.

### **3.12 Permission to Use Quotes**

Individual interviews with the researcher were digitally recorded and then transcribed; examples, stories or ideas shared by participants could potentially be included in written or oral reports, presentations and publications. Participants were made aware of this through the information letter and on the informed consent. All identifying information was removed and pseudonyms were assigned to participants to ensure their confidentiality.

### **3.13 Conflict of Interest**

The researcher had no conflict of interest and did not gain financially from this study. While I was a faculty member in the practical nursing program at the Nova Scotia Community College, at the time of the research, I had no official role at either site which functions, academically, as an independent campus.

### 3.14 Chapter Summary

A qualitative descriptive methodology was used to explore students' experience of team development during an "interdisciplinary" clinical practicum. Recognizing that students are a potentially vulnerable population, a number of safeguards were included in the study design to mitigate this risk so that students were protected and were able to participate or not without risk.

Following approval from Dalhousie University Social Sciences and Humanities Research Ethics Board and the NSCC Research Ethics Board, students were mailed packages inviting them to participate in the study. Follow-up phone calls were then made by a research assistant. Recruitment resulted in eight participants who agreed to take part in the research study. Efforts were made to ensure representation from at least one student from each of the education programs.

In-depth interviews took place after consent forms were reviewed and signed by participants. Interviews were transcribed by the researcher, data were coded and themes were identified. The following chapter will provide a comprehensive description of the themes.

## Chapter IV Findings

The purpose of this qualitative descriptive study was to explore and describe the team experiences of students in baccalaureate nursing (BScN), diploma practical nursing (PN) and certificate continuing care assistant (CCA) education programs during an “interdisciplinary” clinical practicum. Participants were in their first and third year of the Dalhousie BScN program, first year students in the NSCC PN program and CCA students’ at the end of their one year Continuing Care Assistant program. A qualitative descriptive methodology was used to explore this topic.

Eight participants agreed to take part in the research study, with at least one student from each of the three representative programs; first and third year BScN students, first year PN students and CCA students at the end of their one year program. Participants ranged in age from 21 to 46 years with an average age of 32 years. All participants described previous team experience ranging from organizing sports teams and community volunteer groups such as 4-H to employment in areas such as customer service and working on care teams in long-term care facilities.

All eight interviews were transcribed and coded. Thematic analysis was applied to the data and three themes were identified; *clinical instructor mentoring, peer attitudes of respect and acceptance, mutual sharing of knowledge and skill*. Participants emphasized how *mentoring by their clinical instructor* contributed to the development of an effective team. They described *peer attitudes of respect and acceptance* and highlighted the importance of positive attitudes of individual team members. Participants also identified the significant amount of learning and growth that occurred among them through, *a mutual sharing of knowledge and skill*. The three themes are closely related



and overlap in the data exemplifying that “interdisciplinary” learning is a complex intervention where a multitude of interpersonal as well as system factors interact and impact each other in these experiences (Reeves, et al., 2010; Gilbert, 2005b).

In this chapter I will describe the findings from the thematic analysis of data collected during in-depth interviews held with eight students across the three educational programs. I will describe the experiences of participants from their perspectives using data to illustrate the identified themes. Across all programs, study participants described the experience positively, using terms such as “wonderful”, “fantastic” and “awesome”. Participants showed a high degree of reflection when describing their experiences of team development and offered great insight into factors that influenced the development of team. Participants described a positive sense of team that developed quickly, a participant commented “that was probably the most memorable spot, the fact that we were coming together that fast, no one could believe it”. The integrated, and unique, perspectives of participants are described through the three themes in the following chapter. As I present the findings I include relevant literature and explain how these findings support or extend existing knowledge and where new knowledge has been generated. I have assigned study participants pseudonyms to respect their confidentiality and to facilitate the explanation of the perspectives of all involved in the study.

#### **4.1 Clinical Instructor Mentoring**

Participants in this study described the importance of the clinical instructor to the team building experience and explained how instructors mentored them during this “interdisciplinary” learning experience by *creating a positive learning environment, modeling teamwork, encouraging co-operative learning and promoting learner*

*participation*. Clinical instructors play various roles during the clinical education experience, one of which is mentor. Participants sought guidance and direction from their instructors and role modeled the attitudes, behaviours and skills of their instructors. “The instructor role is important for how the team develops” shared Gloria.

#### **4.1.1 Creating a Positive Learning Environment**

In participant interviews, the sense created was that of a positive atmosphere. A positive atmosphere can be explained using terms such as friendly, helpful; an environment that participants enjoyed and in which they felt they were respected. Andrea used the word “fun” to describe their team, when asked to describe the ICCEP team Bridget says “It was a fantastic I smile every time I think about it”. Gloria thought the “sense of team was actually amazing”. The following excerpts tell how the clinical instructor helped set a positive tone for the group. Participants described the presence of respect, positive interpersonal relationships, openness, acceptance and receiving appropriate direction.

Elizabeth described how the instructor set a respectful tone for her group:

We were taught right from the beginning we are a team, and also I think that was from the help of our instructor. She has an effect on everybody. Right from the very beginning, we had that respect that came from the instructor... I can't say enough about our instructor

Bridget commented on how rapidly she developed a relationship with her instructor though she wasn't able to explain why, “for some reason I got to know [the clinical instructor] a lot quicker for some reason”, quicker than in the traditional clinical experiences. Andrea attributed the speed in which her team came together to the sense of

“openness and open communication between the clinical instructor and the...rest of the students”. Gloria talked about an attitude of acceptance showed by her clinical instructor “making people- well, letting that person be who they are”. Fran appreciated that her instructor was available to answer questions, “if we had questions we could just go ask ... she was wonderful”. Gloria also appreciated how the instructor kept the team focused:

I think definitely it takes a good instructor too, to keep everyone together and on the same page, unfortunately you will have personalities that clash at times, and I think that’s where the instructor plays a key role, kind of keeping the group together, doing things together.

When asked to describe factors that influenced team development, participants commented on the role of the instructor in creating a positive learning environment; the instructor was modelling expected behaviours. When the instructor modeled respect and openness, the participants felt comfortable to learn, ask questions and move forward; they could begin to form a sense of team.

A positive learning environment is important for adult learners and is described as supportive and encouraging (Rothwell, 2008). McBrien (2006) suggests that for nursing students, the clinical education experience can be stressful; creating a negative environment that can impair concentration and the student’s ability to process information. Comments by participants indicated that clinical instructors acted in respectful ways, accepting students for who they were. Hohler (2003) described the importance of a learning environment where learners feel accepted and welcomed. Instructors, who display positive behaviours such as acceptance and openness, contribute to a positive learning environment (Hohler, 2003; Rothwell, 2008). “A climate that

supports the process of learning in clinical practice is dependent on a caring relationship between teacher and student” (Gaberson & Oermann, 2010, p. 83) and part of the interpersonal relationship is having a clinical instructor who is approachable and available to answer questions and provide guidance when needed.

Research conducted in 1994 by Campbell et al. with 50 Canadian baccalaureate nursing students found that clinical instructors who were described as having positive characteristics were viewed as more effective. Effective instructors were described as “encouraging, outgoing, had good relationships with students, patients and staff, and practised nursing in an ideal and caring manner” (Campbell, et al., 1994, p. 1127). More recently, Kelly (2007) interviewed a total of 30 nursing students in British Columbia to describe student’s perceptions of effective clinical teachers. In addition to clinical knowledge and ability to provide feedback, Kelly’s exploratory descriptive study emphasized the importance of students’ feeling accepted by instructors, and the clinical instructor’s ability to listen and provide a sense of calm.

There is agreement in the literature that clinical instructors, who demonstrate positive characteristics, create friendly, respectful atmospheres resulting in effective learning environments. Current literature often examines homogeneous education programs within university education settings, for instance baccalaureate nursing students (Campbell, et al., 1994; Kelly 2007). The current study involved participants who experienced learning in an interdisciplinary student group and findings are consistent with literature emphasizing the importance of positive instructor interpersonal skills and a positive environment created by clinical instructors for the development of a positive learning environment. This study suggests that the influence of a positive learning

environment extends to influencing the development of an interdisciplinary group's sense of team.

#### **4.1.2 Modeling Team Work**

Participants in the current study described how their instructors, role modeled effective teamwork skills, they told how instructors helped the team with various tasks, demonstrated flexibility when initial plans were not successful and provided guidance on how to handle interpersonal conflicts. Following their instructors' lead of helping out students and showing flexibility, participants then proceeded to model these behaviours.

Andrea shared how her clinical instructor helped the students on the unit and how she joined in with the instructor, "[The third year BScN student and instructor] just joined in with the groups, [the instructor] would pop around and check on everyone...do bed baths...helped with tub baths". Darla explained how when team members, including instructors helped out, that encouraged team members to help each other:

I think it's the small things that count, so if someone is in the room with you, even if it's the instructor, and if that person takes that yucky stinky bedpan and empties it for you, you know you have respect for them; you want to do something nice for them next time.

During her interview, Darla shared how an interaction with a staff member left her feeling embarrassed and feeling inexperienced, she sought out her instructor to ask advice on how to deal with the situation:

I was quite upset, after a while I approached my instructor and I was like, "This is what happened, I am really frustrated, I am really embarrassed, I don't know what to do. It's not right", and [the instructor] was like "Maybe you need to approach

him”...[so I did that] and it was great because it cleared the air between us, because from then on I wasn’t like ducking my head every time I saw him.

Andrea described how her instructor demonstrated flexibility and creativity in altering the plan they had developed for their first day. Having spent time preparing an orientation session and client assignments, the instructor and the team leader expected to be providing a significant amount of guidance and instruction, particularly around assisting the first year BScN students with personal care, however some of the students in the clinical group arrived with personal care experience as well as experience working in the facility:

Myself and [the clinical instructor] went in with this plan...we are going ...to have to do an orientation, and then we will be really busy for the first few days, you know demonstrating personal care. And then you get there and [the other students] are like, “Oh yeah, I am going to go do this now”. So our plan, our original plan....didn’t go as planned...We found things to do, but we had to rework our plan. (Andrea)

Instructors modelled positive team skills when they helped with tasks such as personal care and bathing, demonstrated flexibility when they developed new plans when initial plans were not successful and provided advice and guidance on how to handle interpersonal conflicts when tensions arose. Following their instructors’ lead, participants then proceeded to model these behaviours that in turn positively influenced the development of the team.

Merriam-Webster dictionary (n.d.) defined a role model as “a person whose behavior in a particular role is imitated by others”. Perry (2009) suggested clinical

instructor role modeling goes beyond imitation of skills and includes role modeling of interactions and attitudes. “Clinical educators model professional conduct in everything students observe, students learn most from observing the actions and understanding the reasoning processes of their role models” (McAllister, et al., 1997, p. 54). Rose and Best (2005) described the many roles of the clinical instructor and suggested that the aspects of role model and colleague have an important impact on the other more task related roles such as teacher and evaluator.

Campbell, et al. (1994), in interviewing 50 baccalaureate nursing students, found that effective clinical instructors, role modeled positive relationships with colleagues and students and that student nurse’s own actions are modelled on those they witness in the clinical setting. Donaldson and Carter (2005) interviewed 42 nursing students in degree and diploma nursing programs about their clinical experiences, findings supported the view that role modelling is valuable as students adopted the standards displayed by exemplary models and compared their own performance to those models.

Beyond role modelling professional and helpful behaviours, participants gave examples of instructors role modelling positive team building characteristics, Molyneux (2001) identified the characteristics of effective inter-professional teams as; committed and supportive team members, effective communicators, and creative work habits. Perry (2009) conducted a phenomenological study with 8 new nursing graduates to identify characteristics of clinical instructors who were considered positive role models.

Participants identified characteristics such as paying attention to the little things, actively role modeling positive behaviours, and acknowledging positive work. While there is little information in the health professions literature on specific traits of effective clinical

instructors, in the athletic training education literature, which has a clinical practicum component that involves a student instructor relationship, similar parallels can be drawn. Laurent and Weidner (2001) surveyed 206 athletic training students, and found instructors viewed as helpful by students, consistently modeled professional behavior and demonstrated a positive attitude (Laurent & Weidner, 2001). Ford and Velasquez (2010) described effective athletic training instructors as demonstrating a high degree of communication and interpersonal skills, describing attitudes such as friendly, helpful and approachable.

This study adds to the existing evidence on the importance of clinical instructor role modelling in two ways. First these findings describe the role in relation to experiences involving baccalaureate nursing students, practical nursing students and certificate continuing care assistant students. Second this study highlights the important role clinical instructors played in the specific role modelling of teamwork skills as participants were able to identify the impact these behaviours had in the forming of an effective interdisciplinary team and modeled these behaviours themselves in their team.

#### **4.1.3 Encouraging Co-operative Learning**

As participants reflected on what activities contributed to their coming together as a team, they described co-operative learning activities required of them as part of the clinical experience; student pairing, post-conferences and care mapping. When participants described co-operative learning they talked about doing things in teams, working on problems together and sharing their joint and individual knowledge to work on projects and in post-conferences.



In a pre-clinical meeting, clinical instructors decided that for the ICCEP experience, the students would work in pairs. The students were paired based on clinical experience with the goal of encouraging peer-to-peer learning. Students in the ICCEP group were paired with peers of different experiences, for example the first year BScN student who was on a first clinical experience was paired with a PN student who was at the mid-point of their program and on their third clinical experience or a CCA student who was at the end of their program and had previously completed approximately 8 weeks of clinical education experience.

This was a new experience for students; Bridget explained how in previous clinical experiences students had individual client assignments,

This was the first time I was ever paired up with anyone...and it was phenomenal, and we just got along really well. ... Sure I was leery as well, and we paired up that first week, I was paired up [with] a first year [BScN student] but we got along great, we got along absolutely wonderful.

Participants identified this intention pairing as one factor in helping to break down barriers and build a sense of team.

Our instructor paired each NSCC student with a first year Dal student, so right away we were divided. ... We had to form a bond with this person, we were working together ... we had to figure out how to work together right away (Darla).

The partnership design created a situation where students could support each other,

It actually worked out wonderfully because our instructor suggested pairing up the [BScN year one students] and the PN [students]- since it was the [BScN year one students] first clinical ever, [the BScN year one students ] could learn from

the PN students and they have had multiple clinical experiences and they already had long term care clinical, so it wasn't as huge, they had done this kind of work before so it wasn't as huge. So [the] two of us would go and care for our residents and that worked really well because they knew what they were doing and we had no idea (Hannah).

Post-conference is a term participants used to describe a time usually near the end of the students' clinical day when all the students and the instructor gathered together to discuss their day, usually in a meeting room or quiet place off the unit, participants often referred to this as a time to "debrief". Participants interviewed for this study, valued post-conference debriefing, Andrea described it as "the biggest thing" for team building. Post-conference activities included things such as sharing journal themes, group care-mapping and doing client presentations. For the ICCEP experience, each student kept a journal where they recorded their impression of the day, reflected on new learning and commented on the experience of the interdisciplinary team. Students passed their journals in to their clinical instructor weekly. Journals were not evaluated or marked; instructors wrote comments and replies as necessary and encouraged deeper reflection. One post-conference activity was for instructors to use the themes from the student journals to initiate post-conference discussions. A second post-conference activity was a care mapping exercise where a client case is presented and the students brainstormed connections from medical diagnosis and signs and symptoms to nursing interventions and care planning. During the ICCEP, students worked on care mapping in groups; sometimes as part of the larger clinical group, sometimes in partners or trios. A third activity used during post-conference was the presentation of client cases. In this task, a

pair of students (a first year BScN with a PN or CCA student, or a PN and CCA student), would present their client to the group and included for example, relevant history, medical diagnosis, client abilities, nursing interventions, care needs and preferences.

When asked to give an example of when she felt like a part of the team, Darla said post conferences, “I think there were many moments when I felt like part of the team, like the...post conference meetings, ...because we all contributed to the notes that were made and the ideas”. Hannah described what happened at a typical post-conference,

We would have our post conference, and we would talk about what was going on, we’d talk about our feelings, what we could do differently, what should have been done differently, and like that, we were really good at supporting each other

Gloria described post-conferencing as one way to debrief at the end of the day,

It gave people the opportunity, like a debriefing for some people, you know bad things happen on the unit and you want to talk about it. And not everybody had the same experience, and I think it is important to learn from each other by doing that post conference. It was an opportunity to share, so if someone got to do something great or something that someone else didn’t have the opportunity to do. So yeah, it’s definitely an important piece.

For the ICCEP experience, each student was asked to keep a daily reflection journal which was shared with their clinical instructor. The impact of the journaling extended beyond the individual benefits of having a chance to “help you debrief at the end of the day” explained Bridget, to being used as a tool in shared discussion to help build the team in reflection and sharing “as a way to bring us together” shared Andrea.

[instructor name] would just take them home every couple of nights...they weren't marked, they were just to write our thoughts, feelings, and then if she thought there was something she wanted to share...then sometimes at post conference she would say "one of you felt this" or "well, let's all think about that" and we could all talk about it.... Yeah, she used them in a therapeutic way."

(Andrea)

Another activity students participated in during post conferences was concept care mapping, sometimes as a large group, sometimes in pairs. During care mapping, students brainstormed about a client's condition, symptoms, medications, nursing interventions and care needs. Elizabeth described care-mapping in the following way:

in post conference we would meet down stairs and we'd have to pick different things that might be wrong with a patient, and we wouldn't use their name or anything, but we'd just pick out their health problems, and figure out like this patient gets dizzy- why might that be, lack of oxygen, well why is there lack of oxygen. It was kind of like a web, we'd have to work through it together. And it was interesting because that's the way we would sit, I would sit with my [student] partner and we would chat together.

Andrea illustrated how during the care mapping activities, all disciplines contributed, "here's our patient and [we'd] pick something that each discipline can work at with...the CCA- here is the information about his personal care, the PN student- here is the physical assessments and ...we all work[ed] together. ...It built trust in each other."

These quotes illustrate how participants perceived the co-operative learning strategies such as pairing of students, post-conferences and group care-mapping as

creating a base for their team building. Participants described how these activities helped break down barriers, creating an atmosphere where support and trust could develop. Based on the number of times that participants spoke of this issue, group learning activities were an important strategy used to help build a sense of team.

Co-operative learning experiences are learning methods that focus on academic learning as well as social skills; skills such as leadership, decision-making, trust-building, and communication (Hancock, 2004). Cooperative learning involves small groups of students who contribute to each other's learning (Baghcheghi, Koohestani, & Rezaei 2011). Eng (2009) suggested that clinical instructors who use cooperative learning strategies have more engaged students who are able to learn theoretical and practical application and in addition gain valuable team working skills. Gumbs (2001) recommended cooperative learning strategies as they move beyond content and improve higher level social skills such as leadership, decision making, trust, communication and conflict management. Reeves, et al. (2007) outline a variety factors to ensure successful inter-professional education including small group, interactive learning and using practice based or problem-focused activities.

The specific strategy of pairing students during clinical education experiences has met with positive educational and socialization results (Van Horn & Freed, 2008; Ruth-Sahd, 2011). Sixty-four sophomore nursing students were interviewed, as well as patients and preceptors, to explore the impact of cooperative learning strategies in a clinical setting (Ruth-Sahd, 2011). In the study, students were paired during a clinical education experience based on a number of factors including age, work experience, clinical experience and ethnicity. Findings from Ruth-Sahd's study indicated the pairing

of students helped to create a supportive learning community that fostered transition into practice, enhanced socialization, greater accountability and responsibility, and development of self-confidence.

Van Horn and Freed (2008) reviewed journaling data of 39 nursing students during a clinical experience; approximately half the group were paired with another student to deliver care, the other students were not. The benefits of student “dialogue pairs” included emotional support and shared learning (Van Horn & Freed, 2008).

Chojewski et al. (2010) found similar results when pairing second year nursing students to care for pediatric clients and their families. Participants described the pairing of students as advantageous as the pairing fostered learning and provided emotional support (Chojewski et al., 2010).

Literature on the pairing of students of different professions (Street, et al., 2007) compared uni-professional learning with inter-professional learning of medical and nursing students on a community-family assignment. Findings with statistical significance included positive attitude changes, increased confidence and feelings of empowerment experienced by the nursing students (Street, et al., 2007). Jelley, Larocque and Patterson (2010) analysed data from student interviews and journals during a five week clinical education experience involving three third-year physiotherapy students and three second-year physiotherapy assistant students using interdisciplinary pairing. Findings demonstrated that the pairing of students improved communication skills, increased confidence and developed a better understanding of roles. Students also attributed the pairing to the development of team, faster than experienced in other clinical

experiences, possibly due to the increased feeling of comfort with having the other student with them (Jelley, et al., 2010).

Post-clinical or student group debriefings occur during nursing clinical education experiences and are used as a time to do group discussion about the general experience or specific cases. Arafeh, Hansen and Nichols (2010) defined clinical debriefing as a re-examining of a clinical experience or incident through reflection for the development of critical thinking and judgment skills. There is a lack of literature examining the emotional and social impacts of clinical post-conferences although evidence is available which describes the academic benefits of this activity, primarily related to the development of critical thinking skills. Khosravani, Manoochehri and Memarian's (2005), quasi-experimental study determined the effectiveness of holding interactive group sessions during a community health clinical experience of baccalaureate nursing students. Half of the students had weekly sessions where topics and issues were explored and discussed. Analysis of critical thinking scores showed a significant difference between the control and experimental groups. The authors suggested that the activities of thinking and practicing are not separable and instructors who provided opportunities for students to understand and analyze their clinical experiences enhanced students' abilities for deeper thinking. Hsu (2007) observed 20 clinical post-conferences and interviewed students, findings suggested that post-conferences gave students the chance to share knowledge gained through practice, encouraged discussion and developed critical thinking skills.

One teaching method that was used during the present study's post-conference sessions was a group care mapping activity, Karns (2010) defined a concept map nursing

care plan as a visual diagram that represents important concepts of a client and how those concepts are related; it is meant to reflect a student's understanding of the client and care required. Molaison, et al. (2009), conducted a quasi-experimental study with dietetic interns and found that students who took part in the concept mapping exercises demonstrated greater evidence of critical thinking and abilities to understand relationships of medical and nutrition concepts. There is limited research on the usefulness of care mapping as a teaching strategy in clinical nursing education, and similar to research on post-conferencing, existing literature examined the development of learning and critical thinking skills (Karns, 2010; Molaison, et al., 2009).

This study adds to the literature on the potential benefits of co-operative learning strategies such as interdisciplinary pairing of students, post-conferencing and group care-mapping. Participants in this study indicated that the pairing of students from BScN, PN and CCA education programs to complete client care together was beneficial. Specifically, the pairing of students was described as positively influencing the fast pace that the sense of team developed, and encouraged teamwork amongst the disciplines. Literature supports the use of activities such as clinical experience debriefing and concept care mapping to enhance student learning and critical thinking skills. Data from the current study suggest that those same activities may also contribute to a sense of team. Jelley, et al. (2010) hypothesised that pairing students increased their comfort level therefore hastening feelings of inclusion and sense of team, this may also be true for the students in the ICCEP experience, although participants did not identify this explicitly .

Existing literature on co-operative learning strategies such as pairing of students, post-conferences and care-mapping studied students enrolled in university based



education programs such as baccalaureate nursing students (Eng, 2009; Gumbs, 2001; Karns, 2010; Khosravani, et al., 2005; Ruth-Sahd, 2011; Street, et al., 2007). This study involved students from university and college programs who experienced learning in an interdisciplinary student group. Findings are consistent with literature promoting the pairing of students with different clinical education experience. Findings from the current study suggest small group care-mapping and post-conference debriefing should be considered as appropriate cooperative learning activities that improve team building in “interdisciplinary” groups.

#### **4.1.4 Promoting Learner Participation**

Participants in this study commented on the impact that clinical instructors had on developing the team by encouraging learner participation. When questioned about team building, participants described how instructors encouraged students to try new roles such as team leader and to practice new skills including physical assessment and wound care. As instructors assigned these roles, participants described a sense of having a place on the team.

Clinical instructors encouraged the development of delegation and client assignment skills, participants explained how this was different than other clinical experiences:

My instructor gave me a role that was a lot different from my other clinical experiences where I was appointed the kind of team leader of the group. I was more in charge, in the sense that I was responsible for creating their assignments, providing constructive feedback; I was the go to person, whereas in other clinical

groups I am one of eight, and you go to your clinical instructor for those things (Gloria).

Some of the students had recently completed skill theory courses that included dressing changes and physical assessment; during this clinical experience they had an opportunity to practice these skills:

we ended up having a couple of patients having wounds, and I had a couple of dressings and [the clinical instructor] would say “Well, I know you can do it, so get a tray and go show them how you would do it”. (Andrea)

My instructor... really pushed me. Every so often [unit staff] would check everyone’s ears, so I got to do that and I had learned that in my course (Bridget).

As clinical instructors gave students responsibilities such as developing the client assignments for the teams, and at times pushed them to practice to apply their theoretical learning, participants appeared to have a sense of pride and appreciated the roles assigned to them. As participants had the opportunity to practice leadership and teaching skills, they described a growing sense of team. When clinical instructors were adding responsibilities to students in their groups, they were practicing an invitational style of teaching. In addition to, or in combination with the other things the clinical instructors did, the invitational teaching style contributed to the sense of team participants experienced.

Invitational learning theory has an “underlying belief that students are able, valuable and responsible” (Frank, 2004, p. 15). Invitational teaching is based on concepts of perception and self-concept; in that when educators perceive that students are capable and valuable, they offer students opportunities to develop mastery, positively

impacting the self-concepts of students, ultimately improving education success (Zeeman, 2006). Cook (2005) studied the impact of invitational clinical behaviours and found that students who had instructors rated with high levels of intentional inviting behaviours displayed less anxiety in the clinical setting. In Cook's study, intentional inviting behaviours were those interactions that expressed trust and respect, and purposely encouraged students to participate in skills. Pape (2007) applied invitational learning theory to the perioperative setting and described positive results in using techniques that encourage learner participation such as recognizing individual learning needs, suggesting skills to practice, as well as expecting learner achievement and success. Students who experienced this style of clinical education described the experience as positive and told researchers that they learned more than they thought they would have during the experience (Pape, 2007).

Literature available related to invitational teaching and clinical education focused on baccalaureate nursing programs and reported outcomes such as anxiety and student learning (Cook, 2005; Pape, 2007). When the clinical instructors in the current study involved participants in decision making and encouraged the practice of skills, the participants expressed pride and satisfaction and described these activities as contributing to team building. The current study adds to the literature in that invitational teaching styles were described as positive by participants in an "interdisciplinary" clinical group and attributed these to the team building, perhaps because participants were valued team members with recognized skills to contribute.

## 4.2 Peer Attitudes of Respect and Acceptance

Participants described the importance of peer attitudes of respect and acceptance in building a sense of team and highlighted the importance of positive attitudes of individual team members. The *Clinical Instructor Mentoring* sub-theme of *creating a positive learning environment* is closely linked to this theme in that it highlights the importance of feeling respected; however in the previous theme, participants described an atmosphere of respect set by the clinical instructor. For this theme, participants spoke of two elements that created the space that Darla described as “safe”; *positive attitudes* and *acceptance*. The positive attitudes of the team members helped create a sense of team leading some participants to raise the notion of a team selection process based on attitudes and level of interest. Participants also talked about the importance of belonging and feeling accepted by others; the need to be accepted by the team.

### 4.2.1 Positive Attitudes

Participants described things that contributed to the sense of team created in the clinical groups. They used the terms “personalities” and “attitudes” interchangeably. Overall, participants were describing one aspect of teammates’ personalities; their outlook, the way they looked at things, which is more closely aligned with the term “attitude”. A positive attitude is defined in Merriam-Webster as “a mental position with regard to a fact or state, a feeling or emotion toward a fact or state. Example: *She’s friendly and has a good attitude*” (n.d.).

When asked to talk more about why Carrie described her group as “bonding quickly”, she explained, “I think it was the personalities”. Elizabeth had a similar experience, “Honestly I have to say, because we talked about this over and over, we did

come together...and part of it was the personalities”. When questioned further about what factors helped to build the interdisciplinary team in a short period of time participants across all programs highlighted the role of positive attitudes; they described each other as “considerate and caring”, “upbeat”, “respectful”, and “professional”.

Bridget explained her experience,

[the] group of people just clicked... one of my first journal entries was “I wonder if everyone is just on their best behaviors, or is this how we are going to be” and by the end of the second week, we realized, no this is really who we are and it’s not a fake thing. So I think we just had a really good team, good support and good spirit, and everyone just fed off that, and I think if there had been some negative input, it would have ruined the whole thing.... It was kind of magical.

Other participants commented on being like-minded, Carrie said “I really think we all had that same mindset”, Elizabeth made a similar statement; “I think it is partially the mindset we went in with”. When asked to expand on what they believed the mindset was that contributed to the sense of team, Darla explained what she thought a positive mindset was:

I think there are a few basic things...respect, pride in yourself and what you’re doing, and I think consideration and respect are huge... you know, in reflection, if you don’t have respect, the team can’t work together and it brought our team closer.

Many participants mentioned they believed one of the reasons for the sense of positivity on the teams was because students had to apply and be selected to attend the experience; they believed to ensure the right group of people and to ensure the “like

mindedness” that students need to be selected based on their attitudes or level of interest. “It really is a positive experience, and I think that one of the things that made a good experience is that the people wanted to be there, it wasn’t just random” (Bridget). “I think that is a huge part of it...Everybody that was there had an interest in being there...and I think that made a difference”. (Gloria)

Fran felt the ICCEP members should be chosen based on attitudes, If it had been other students it would have been a different dynamic. ...we had a good group of individuals that came together in our group. I don’t think we had any negative nellyies in our group; we had a really good group. ...What type of person [does it take]? I think every one of us was willing to learn, we could all take feedback [and] help ...we didn’t have strong negative personalities, they were all upbeat. We didn’t have any negative people.

However, not all participants had to apply to attend the ICCEP experience, Hannah feels that it is an important experience for all students to have,

We were actually volun-told- we were just told “You are doing ICCEP”- so all the students in [our class]. I actually didn’t know that it wasn’t always done that way. I think it was a great experience, an experience that I think everyone should have so I don’t know [about having an application process].

Whether selected through an application process or not, participants believed that the success of the team’s development was influenced by the attitudes of the team members. Repeatedly, participants made comments about how important a positive attitude was and surmised that having a team member with a negative attitude would have

negatively impacted the sense of team. Participants across all programs highlighted the role positive attitudes have in developing a strong interdisciplinary clinical team.

Existing literature on effective interdisciplinary teams described the value of positive personal characteristics such as co-operative, committed, and respectful (Molyneux, 2001; Oliver & Peck, 2006; Sax, 2012; Yeatts & Seward, 2000). When Molyneux explored characteristics of an effective team, participants spoke of the importance of respect, acceptance and being valued; participants believed this led to a greater sense of trust and confidence in each other. Drew, et al. (2004) examined the characteristics of effective inter-professional primary health care teams and found that teams who rated themselves lower on an effectiveness scale, voiced concerns related to buy-in and interaction. Yeatts and Seward (2000) researched self-managed work teams of interdisciplinary nursing care teams, and identified attitudes of valuing team members and respectful interpersonal relationships as contributing to effective teams. Oliver and Peck (2006) interviewed 23 hospice social workers who were members of an interdisciplinary team; participants identified trust, respect and individual personalities as factors influencing interdisciplinary team success. Sax (2012) provided advice on how to build a successful interdisciplinary surgical team, and suggested, “hire for attitude, train for aptitude” (p. 17) underlining the importance of the right attitude to the functioning of the entire team.

Molyneux reported on findings that team members on a successful inter-professional team have a high level of commitment and motivation and wondered if participants may have influenced the findings as they self-identified as being interested in participating on the inter-disciplinary team; similarly, most participants in this study

applied to join an ICCEP team and therefore self-identified their interest in the project. Using Molyneux's hypothesis it is possible participants described a "like mindedness" as a result of the application process; further research is needed into the level of influence selection of team members may have in other interdisciplinary clinical groups versus random team membership in such projects.

#### **4.2.2 Acceptance**

Participants specifically commented on the importance of feeling accepted and how it helped build a sense of team. Acceptance can be defined as a feeling of being accepted as a member of the team, a feeling of belonging to something. When participants felt accepted, they felt like they were part of the team. Participants described how a welcoming atmosphere, sharing meals or socializing, and being accepted for who they are as contributing to the development of team. Darla described the importance of feeling accepted, "I think acceptance is a big part of becoming a team, acceptance is important". Elizabeth shared how she felt accepted,

We welcomed each other, we didn't go in with a like "I'm [this student] and you are [this student]...I don't ever remember feeling excluded, and I never looked at anyone and [thought] "Wow, they might feel put out" and I think it's about a lot of little things- ...like I said, we would go to lunch and if there were two separate tables we would join them together.... I think everyone one of us wanted to belong, belong to something, but I think and this is going to sound weird, but we all wanted to belong to one another

Participants spoke about intentionally accepting team members even if they had different ideas or approaches,



We accepted them all, that's how they were from the first day we met them and that's how they are going to be and that's just them. So it didn't matter, we didn't put them off to the side- if we had something to see we'd say "We are going to do such and such, want to come?" (Darla)

Part of the sense of belonging began prior to the actual clinical experience with social activities such as a group lunch, a "meet and greet" and meeting outside of the clinical environment.

Right from that first meeting- we all had the anxiety of going into a new clinical together, we all had that trepidation, it wasn't just "this is your experience", "this is my experience"; we were all in it together. What I was seeing, they were seeing, you know, it connected us...I thought it was great to put a name to a face, to see who we were going to be with, so that when I walked through the door, the first day at the facility, I recognized a girl and it, I don't know, it calmed some of the anxiety. (Darla)

Definitely, you should meet before your first day of clinical, I thought the dinner was a really nice gesture...where they gave us a meal and let us talk; that was nice. Even if it is just getting together in a boardroom somewhere to see faces, to say "Hi I'm the BSCN student 3rd year", "Hi I'm the PN student", you see faces, you learn ahead of time what their role is; it's important. (Andrea)

Some of the participants had to travel to another community to do the ICCEP experience and stayed at the host campus' residence, Hannah reflected on how that also contributed to the sense of team,

[All] the [BScN] students plus a PN student lived there...and that really helped us build that sense of team. We had breakfast together, we made supper together, we just hung out. So you saw them outside of clinical.

For some of the participants, the social relationships continued past the ICCEP experience, “we are all friends on Facebook now because of it, all of us” (Carrie). “Now there are [students] in this classroom who would come running down the hall and hug me and say “oh, it’s you!” (Elizabeth).

Whether a planned formal gathering or informal social atmosphere, participants across all programs commented on the importance of getting to know each other outside of the clinical experience. These opportunities allowed for the development of initial relationships, participants were able to learn the names and faces of group members and share in the common anxieties of experiencing something new together.

Melrose (2004) wrote that clinical instructors should create a learning community that encourages a sense of belonging and encourages relationship building with clinical instructors and other group members. Levett-Jones, Lathlean, McMillan and Higgins (2007) completed in-depth interviews with nursing students in the United Kingdom and Australia, and found that the “students seek connectedness and friendly, comfortable and cooperative working relationships” (Levett-Jones, et al., 2007, p. 172). Daiski (2004) interviewed twenty Canadian nurses, both baccalaureate and diploma prepared; participants identified that changes within the nursing team need to begin during nursing education with the hopes of developing nursing communities rooted in mutual respect and caring. Participants specifically recommended camaraderie and teamwork as important content to include in nursing curricula, “you can include that right in the

beginning, right when they start ...the camaraderie, the support, the teamwork...”  
(Daiski, 2004, p. 47).

The importance of relationships and socialization with teams has been described as “belongingness” by Levett-Jones, et al. (2007). Authors suggest that clinical learning environments that promote belongingness enhance student learning and engagement (Henderson, Cooke, Creedy, & Walker, 2012; Levett-Jones et al., 2009). Henderson, et al. (2012) reviewed six studies across three different countries and found students in all countries reported similar perceptions about clinical learning environments including the importance of a sense of affiliation and inclusion.

The literature on student clinical experiences suggests that learning environments that are accepting and welcoming contribute to successful adult learning (Hohler, 2003; Russell, 2006), however, the literature often examines homogeneous education programs within university settings, for instance baccalaureate nursing students (Henderson, et al., 2012; Levett-Jones et al., 2009). The current study, examined data from “interdisciplinary” students from baccalaureate, diploma and certificate programs. Students had opportunities for meeting outside the clinical environment; to get to know each other in an atmosphere that was welcoming and supportive. Participants sought and found belongingness and demonstrated acceptance to other team members. Findings from this study remain consistent with literature emphasizing the value of acceptance in the clinical learning environment and suggest that activities which foster acceptance play a part in the team’s ability to come together.

### 4.3 Mutual Sharing of Knowledge and Skill

The third theme, *mutual sharing of knowledge and skill*, describes the nature of the sharing that occurred on the teams. When asked about things that helped build the team, participants described how they helped each other share the workload, and shared their knowledge of roles, theory and skills. This theme is closely linked to the *Clinical Instructor Mentoring* sub-themes of *encouraging co-operative learning* and *promoting learner participation* in that both refer to peer learning. Different than co-operative and invitational learning strategies described in the previous theme, in this theme participants described peer learning that occurred in routine day-to-day interactions among the students.

Sharing occurred among all education programs in various configurations; so at times the BScN third year students were teaching team members, at other times the PN or CCA students took the lead in teaching. Participants described this as “validating” and “empowering”. Bridget said “to have someone come to you to ask a question, to ask ‘can you show me this’, it built confidence”. Darla alluded to a perception of hierarchy between baccalaureate and diploma or certificate programs, she said, “there is still a stigma...it was kind of neat for us and empowering for us that we could actually teach”. Other participants also referred to the hierarchy; Hannah believed that when the CCA and PN students were sharing their experience and knowledge with others on the teams “it helped level the playing field”.

During the clinical experience, mornings were busy completing personal care, Andrea described how she experienced the team coming together when they shared the workload, “I would say I think...that instinct kicks in, someone needs help, stuff needs to

be done...it just kind of fell together, something needed to be done so...we are the ones who are here, we are going to get it done.”

Participants were asked to describe a time when they felt a part of the team. Carrie felt her team come together and demonstrated teamwork on a day when one student was home sick,

Two of us had [our] three patients, so it left [one] team member with just her to do all [their] three patients. What we did was she would get them ready, like washed but not dressed, and we were like “OK, when you need us to get so and so dressed then come and find us and we will help you”, we all pitched in to help her, so we didn’t leave [her alone].

As the team building occurred, Hannah saw how sharing the workload created a positive atmosphere.

The main thing was team work and working as a team, seeing how much easier and enjoyable your day is when you work as a team...when you are working as a team, you have communication, you have that little interaction, you know what is going on, you can plan and decide what needs to be done, you can see what needs to be done next, you can kind of see how all the work is being done and what you can do to help.

Another type of sharing that occurred had to do with the sharing of knowledge. Knowledge included learning about the role and scope that each team member had as well as practical knowledge about personal care and nursing actions. Participants described gaining an appreciation for the roles of others, as Bridget explained “It really

opened my eyes; because I didn't know what their course involved, and I don't think they knew what mine involved...It was an eye opener.”

I think that everyone has expertise, because I find in [our] program they don't like to downplay the roles of other disciplines, but you don't learn what the CCA can do. I mean I know they can do personal care but...I didn't know that they had a specialty in this or that or that part of their program was they had to learn how to cook meals and do homecare. So I learned that when you are in a team in the hospital, there are different disciplines, everyone has expertise and just because you are the RN doesn't mean that the RN knows the most because she has the highest degree. Everyone is educated for a purpose. (Andrea)

Hannah valued the learning she had about the roles other team members played and commented on how this advantages the ICCEP experience over traditional clinical education,

I kind of feel like [people in the traditional clinical] might have missed out, they were in a group that was all the same, they all had the same perspective ...I really appreciated working with the students from the [other] programs. I didn't know a lot about it, and I gained a lot of knowledge and insight ... for what they are doing. They are working hard too. ...So we counted on them, and I think that helped build the team as well.

Participants were appreciative of the knowledge and experience that the CCA, PN and third year BScN students shared. Hannah spoke of how the sharing of knowledge helped her, “we learned so much from them and we fed off their confidence, and they

were like “you are fine, you are doing a great job”. In the following quote, Carrie was reflecting on how other team members shared with others;

The CCA in my group knew more than the rest of us, like on personal [care], because she was at the end of her course. She was telling us stuff and we were like “Oh, I didn’t know that”... It doesn’t really matter what your course is, it doesn’t matter what your education is; she had experience that we didn’t have and we could learn. It was nice...and the [other] students who were ahead in their skills were good too. They actually took the time and [asked the client] “...Is it okay if they come in and watch me do this”, and then the client would say “sure, no problem”, then we would go in and they would explain every step of the way. So we thought it was pretty awesome, I don’t think there was even one negative thing about the experience.

Participants talked about how this type of learning felt comfortable and how they reciprocated by helping other team members. Elizabeth spoke about how each student shared their own expertise, “the stuff I learned from them, and they learned from us. We needed each other’s help and it was really good.” Fran explained the philosophy she went into the experience with, “I am just a person too, I have a bit of experience, and I have a little bit of knowledge, but if you can share your knowledge with me [then] I can share my knowledge with you.” Bridget also talked about how the sharing went back and forth,

Everyone worked so well together. I mean, everyone chipped in. I learned from them, they learned from me. I liked it because you weren’t on your own but...I

got to do the skills I knew how to do and so did the other students and they in turn, taught me.

Carrie explained how learning from other students was different than learning from an instructor,

You are more comfortable, you are more relaxed...and that is a very positive thing for students. ...It kind of puts you at ease when you are learning [from a peer] because if you have a not so intelligent question, you don't feel as horrible asking. [First,] you're not in front of a whole classroom...and second, they have a little more knowledge than you but they aren't going to judge you as much as an instructor would.... You want your instructor to think you are smart and so you might not ask a question because you don't want them to think "oh, they don't know what they are talking about". When it is a peer, they are willing to help you, you can be willing to ask them to do it again, or anything that you might want to know, and they are willing to help you.

There were some participants in the ICCEP experience who needed to practice and perform very specific skills in order to successfully complete their clinical hours; if their skills lists did not get signed off by their mentor or instructor, they would be at risk of not completing their program. Bridget described how at times students went out of their way to help other students get an optimal experience,

The other team members would come and find you. If it was something you hadn't done before they would be like "go get [Bridget]'", "go get [so and so]". We all looked out for one another. Even though we were assigned certain people, like for doing the care, we would go find someone else [if they needed to do a



certain skill], so I think that describes a sense of team. For example [one student] who was there, she had a huge list, a huge list she had to get checked off, it's like a book. So every time we were doing something... like putting a hearing aid in, [and if] she still needed to do it, to get it checked off, we were like "go get her! We're getting this patient ready, and he has a hearing aid. Go get her!"

Elizabeth, who wasn't in Bridget's group, was on the receiving end of similar sharing and commented "They were watching out for us. They'd be like 'yes, you guys need to get this stuff done'. In the end they were caring about us and our needs.... I think it was because the [students] in our groups were all caring and saying "I'll support you."

Participants shared their knowledge and skill with other students, and without specific direction, actively participating in peer learning. Participants described how sharing the workload and their knowledge of roles, theory and skills helped to build a sense of team. As peer teaching and learning occurred, some participants felt empowered, others sought out other students, finding it easier to ask questions or seek advice from their group members rather than seeking out the help of an instructor. As participants shared the workload and their knowledge and skill, the sense of team grew stronger.

Peer learning "involves people from similar social groupings who are not professional teachers helping each other to learn and learning themselves by so doing" (Topping, 2005, p. 631). Topping goes on to explain that while peer learning often occurs with students of equal or similar experience, it can also include students having different experiences. Campbell, et al. (1994) interviewed 50 baccalaureate nursing students across all four years of a nursing program. Participants actively sought out the

support and help of peers; as students moved along in their four year program, “they became increasingly independent of their instructor and interdependent among themselves” (p. 1129). Ladyshevsky (2001), in a quasi-experimental research project, studied 62 physiotherapy students in a simulated clinical environment. Those students that received reciprocal peer coaching had improved scores in clinical performance, did more brainstorming and had improved clinical reasoning (Ladyshevsky, 2001). Brooks (2007) held in-depth interviews with 11 university students in the United Kingdom to study their experience of friendships. Participants described the benefits of friendships as they experienced university life including emotional support as well as social and academic learning. Participants described the emotional support as critical to their successful completion of their programs (Brooks, 2007).

Although in Ladyshevsky’s (2001) study students received specific peer coaching training, the current study demonstrated that even without formal training, students from various educational programs have the skills and abilities to share their knowledge and skills with other students and that this can occur naturally without specific instruction from educators. Existing literature on peer learning and the importance of peer support tends to focus on the experiences of university students (Brooks, 2007; Campbell, et al., 1994; Ladyshevsky, 2001). Though participants in this study represented an “interdisciplinary” student group from university and community college programs, findings are consistent with literature emphasizing the importance of peer relationships and peer learning. Findings add to the body of research on peer learning, suggesting that peer learning also contributes to the development of a clinical education team. As students became involved with peer learning, they described increased self-confidence

and feeling valued as team members, further exploration of this topic is important to determine its influence on team building.

#### 4.4 Chapter Summary

Students in baccalaureate nursing, diploma practical nursing and certificate continuing care assistant education programs who took part in an “interdisciplinary” clinical practicum described the development of a positive sense of team. These descriptions were analyzed to produce three themes that contributed to the team building; *clinical instructor mentoring, the presence of peer attitudes of respect and acceptance, and mutual sharing of knowledge and skill.*

The role of *mentoring by their clinical instructor* set a tone of acceptance and also contributed to the development of an effective team as students’ role modeled these behaviours. Clinical instructors created a welcoming and accepting environment, role modeled appropriate teamwork skills, organized co-operative learning activities and encouraged students to practice the skills they had learned in theory courses. Students then followed the example set by clinical instructors and sense of team grew.

Participants described how *peer attitudes of respect and acceptance* helped develop a sense of team. The positive attitudes of the team members, feeling accepted by others and socializing outside of the clinical setting were described as contributing to the development of the team as well. Participants identified learning and growth that occurred among them through *a mutual sharing of knowledge and skill*. They described how growth occurred through the sharing of workload and knowledge and explained how this level of sharing helped in the creation of the team.

Findings from this study support existing literature that positive instructor interpersonal skills are important to student teams. The importance clinical instructors played in the role modelling of teamwork was highlighted as students modeled these behaviours themselves within their teams. Findings from this study are consistent with literature emphasizing the need for acceptance in the clinical learning environment and suggest that activities which foster acceptance play a part in the team's ability to come together. Activities such as clinical experience debriefing and group care mapping to enhance student learning and critical thinking skills is supported in the literature. The current study suggests that those same activities may also contribute to a sense of team. Existing literature suggests that one factor in the forming of an effective team is the characteristics of individual team members, such as positive attitudes. Some researchers question the influence of this finding in their own research as participants self-identified as being interested in participating on the inter-disciplinary team. Findings from the current study are consistent with literature emphasizing the importance of peer relationships and the use of peer learning to student learning, and add to the body of research, suggesting that these also contribute to the development of a clinical education team.

This study adds to the literature by providing a voice to non-baccalaureate students as participants represented an "interdisciplinary" student group from university and community college programs. Findings suggests that many strategies believed to enhance students learning may extend beyond academic learning to also influence the development of team building skills.

## Chapter V Discussion

The purpose of this qualitative descriptive study was to explore and describe experiences of team development among students in an “interdisciplinary” collaborative clinical practicum. Study participants described their team experiences from their perspectives and three themes were identified; *clinical instructor mentoring, peer attitudes of respect and acceptance, mutual sharing of knowledge and skill*. I will now discuss these themes through the use of existing theory and literature followed by implications for education, practice and research and close with final thoughts.

Baccalaureate nursing students, practical nursing and continuing care assistant students described a positive sense of team and of elements that influenced team development. Participants explained how *mentoring by their clinical instructor* such as creating a positive environment and role modeling played a part in the development of their team. They described *peer attitudes of respect and acceptance* and discussed the role of individual team member’s positive attitudes. Participants also identified how *a mutual sharing of knowledge and skill* helped develop a sense of team.

### 5.1 Clinical Instructor Mentoring

Participants spoke about the important role that instructors played in shaping and developing the sense of team and identified a number of aspects of instructor mentoring that contributed to their team building. Clinical instructors created a positive learning environment by demonstrating respect and openness, being available to answer questions and provide direction. They role modeled positive team skills such as helping to complete tasks, demonstrating flexibility and providing guidance on how to handle interpersonal conflicts. Clinical instructors facilitated cooperative learning activities such

as small group care-mapping and post-conference debriefing, recognized student's previous leaning in planning clinical assignments and activities, prompting interactions between disciplines and intentionally paired students in the ICCEP group with peers of different experiences. Instructors practised invitational learning by encouraging students to perform skills learned in their programs; sharing their knowledge and skills with others on the team. Findings suggest that supporting clinical instructors to create positive learning environments, role model team work and incorporate cooperative and invitational learning strategies were all important to the development of a sense of team in ICCEP clinical groups.

Literature supports the value of promoting a positive learning environment (Hohler, 2003; McBrien, 2006; Rothwell, 2008) and highlights the importance of a positive clinical learning environment (Campbell, et al., 1994; Gaberson & Oermann, 2010; Kelly, 2007) for student learning and as being preferred by students. This study suggests that the influence of a positive learning environment extends beyond learning to influencing the development of an "interdisciplinary" group's sense of team.

Evidence has demonstrated the importance of clinical instructor role modeling of positive professional behaviour and attitudes (Campbell, et al., 1994; Donaldson & Carter, 2005; McAllister, et al., 1997; Rose & Best, 2005) and that students practice those behaviour and attitudes, comparing their own performance to those of the role models. Some of the specific behaviours that students modeled included those found to be beneficial in an interdisciplinary team such as positive interpersonal relationships (Campbell, et al., 1994) although existing research did not study the effects of role modeling teamwork skills explicitly. Findings from this study suggest that participants

followed the lead of the clinical instructor in practicing positive team building skills such as sharing workload and practicing positive interpersonal skills, and sharing of knowledge and skills thus contributing to a sense of team development.

Participants described how instructors used co-operative strategies and how students gained knowledge from one another, developed respect for the other disciplines and how they, themselves, felt empowered and validated. The co-operative learning strategies employed may have increased participant's comfort levels in the setting consequently hastening feelings of inclusion and the sense of team as hypothesized by Jelley, et al. (2010). Literature suggests the use of co-operative learning strategies to develop team work skills such as leadership, decision making, trust, communication and conflict management (Eng, 2009; Gumbs, 2001; Hancock, 2004), and that activities such as post-conference debriefing and group care mapping encourage critical thinking and assist with applying theory to practice (Arafeh, et al., 2010; Hsu, 2007; Karns, 2010; Khosravani, et al., 2005; Molaison, et al., 2009).

Participants described the increased confidence they felt in being paired in the carrying out of clinical assignments as well as how much they learned to appreciate and learn about their respective disciplines. The benefits for the pairing of students in a clinical setting such as an increased comfort level, emotional support, shared learning and a heightened sense of team have been reported by Chojecki et al. (2010), Van Horn and Freed (2008), Jelley, et al. (2010) and Ruth-Sahd (2011). This study extends existing literature in that the pairing of students may be viewed as an effective tool for team building during an ICCEP clinical experience, and that other cooperative learning activities may also impact the sense of team in an "interdisciplinary" clinical group.

Participants in this study commented on how clinical instructors practised invitational learning by encouraging students to perform skills learned in theory courses; sharing their knowledge and skills with others on the team. In invitational learning, educators believe students are able and responsible, they encourage students to develop mastery and this positively impacts the self-concept of students (Zeeman, 2006). The benefits of invitational clinical styles included the reduction of student anxiety and improved student learning (Cook, 2005; Pape, 2007). Findings from this study suggest invitational learning activities may impact the sense of team in an “interdisciplinary” clinical group.

Literature supporting the value of positive learning environments, the benefits of role modeling, and cooperative and invitational teaching strategies often focused on baccalaureate nursing or other university based academic programs and reported on outcomes such as student preference, student anxiety levels and student learning (Arafeh, et al., 2010; Campbell, et al., 1994; Chojecki, et al., 2010; Cook, 2005; Van Horn & Freed, 2008; Hsu, 2007; Karns, 2010; Khosravani, et al., 2005; McAllister, et al., 1997; Molaison, et al., 2009; Pape, 2007; Rose & Best, 2005; Ruth-Sahd, 2011). Findings from the current study suggest that these strategies may also have impact on students enrolled in diploma and certificate programs and extend to positively impacting team development.

## **5.2 Peer Attitudes of Respect and Acceptance**

Participants described how peer attitudes of respect and the positive attitudes of the team members helped create a sense of being a part of the team. Socializing and meeting outside the clinical setting were believed to aide in the development of the team.



Findings from this study are consistent with literature emphasizing the need for acceptance in the clinical learning environment and suggest that activities which foster acceptance play a part in the team's ability to come together (Henderson, et al., 2012; Levett-Jones et al., 2009; Melrose, 2004). Participants, many who had never met each other prior to the experience, got to know each other as people; this was described as contributing to the development of relationships that extended beyond the ICCEP experience.

Most of the participants interviewed applied to participate in the ICCEP experience, contributing to the likelihood that the opportunity to experience an interdisciplinary team attracted a group of like-minded individuals, many who displayed positive attitudes. However, all participants, whether they applied to participate or not, described how activities which promoted socialization and encouraged the display of positive attitudes of team members further enhanced the sense of team.

### **5.3 A Mutual Sharing of Knowledge and Skill**

In this theme participants described peer learning that occurred in routine day-to-day interactions among the students. While clinical instructor mentoring encouraged the sharing of knowledge and skill, this also occurred without clinical instructor leadership. Participants spoke of the value of peer learning and differentiated it from the instructor-student model of teaching and attributed it to the development of the team. One poignant example of this was when Carrie described her team coming together to help a team mate whose partner had called in sick. The clinical instructor did not re-distribute the workload or ask other students to help, the team members themselves decided to share the work and help their teammate.

Evidence on peer learning highlights the importance of peer support for improved emotional, social and academic aspects of student lives (Brooks, 2007; Campbell, et al., 1994; Ladyshevsky, 2001). Findings are consistent with literature emphasizing the importance of peer relationships and peer learning and add to the body of research on peer learning, suggesting that peer learning also contributed to the development of this clinical education team.

#### **5.4 Findings in Relation to Learning Frameworks**

Interestingly, strategies used by the clinical instructors and identified by participants as contributing to team building, are consistent with theories of inter-professional education and adult learning. Reeves, et al. (2007) identify seven factors related to successful inter-professional education: 1) promoting interaction between learners, 2) ensuring group balance and stability, 3) demonstrating that the inter-professional education is valued, 4) hiring expert facilitators, 5) providing training and support for clinical faculty, 6) planning pre-licensure implementation, and 7) providing organizational support (i.e. curriculum, time, space, etc.).

Findings confirm the suggestions for successful inter-professional education presented by Reeves, et al. (2007). First, participants valued the interaction between learners; interactions were created through the use of cooperative learning strategies by clinical instructors and also occurred among students themselves, separate from clinical instructor direction. Second, the ICCEP experience provided a balanced and stable clinical experience as the teams stayed consistent over the duration of the experience and were balanced in the sense that they replicated the model of care used in most health care settings in Nova Scotia. In Nova Scotia the team providing direct patient care in most

settings is made up of Registered Nurses, Licensed Practical Nurses and assistive personnel such as Continuing Care Assistants (Government of Nova Scotia, 2008). Students valued the mix of educational experiences and spoke highly of the influence of peer learning across programs. Third, the ICCEP experience placed value on “interdisciplinary” education as the project took place during an actual clinical experience in which students received academic credit. All students were required to successfully complete this clinical experience in order to proceed through their respective programs. Fourth, collaboration between the two schools, Dalhousie School of Nursing and the Nova Scotia Community College School of Health and Human Services, resulted in the secondment of clinical instructors to each ICCEP group. All instructors met both schools’ hiring criteria and had past clinical instruction experience; instructors had put their names forward as being interested in participating in the ICCEP experience. Participants highlighted the important role clinical instructors played in the team building of the “interdisciplinary” group. Fifth, instructors were provided training and support prior to the clinical experience. Clinical instructors met with the ICCEP planning committee and discussed a number of items that proved valuable to the experience such as the pairing of students, journaling expectations, program and skill expectations, evaluation documents and troubleshooting (ICCEP, 2011). The importance of this training was evident as participants recognized the role that clinical instructor use of collaborative and invitational strategies played in the development of the team. Sixth, Reeves, et al. recommend that inter-professional education begin in pre-licensure programs of health care professionals and continue throughout their careers, the ICCEP experience is based on this principle of pre-licensure inter-professional education.

Seventh, the organizational support was evident in the collaboration between both schools including a joint planning committee, secondment of faculty, and shared resources. Each program demonstrated commitment to “interdisciplinary” education in providing the time, faculty, staff and resources necessary to ensure program implementation. Additional resources provided such as investment in selection processes and planning of pre-clinical social events, proved beneficial in the development of the sense of team as described by participants.

Malcolm Knowles, a pioneer in adult education theory, described adult learners as autonomous with accumulated experiences, various motivations to learn, and learn best in an environment that is respectful and welcoming (Hohler, 2003; Knowles, 1990; Lieb, 1991; Russel, 2006). Knowles suggested that adults take on the responsibility to learn when they have a specific need to know something or to be more effective, and that prior experiences can serve as a motivation to direct new learning or serve as a base on which to build (Knowles, 1990; Marks, 2011; Shepard, 2009).

Marks (2011) organized Knowles’ adult learning theory into six principles: 1) consideration of prior experiences of the learner, meaning learners have individual differences that create biases that impact new learning, 2) adults are not motivated to learn unless they can apply their learning in a meaningful way, 3) readiness to learn implies that the learner’s life circumstances may create a desire or need to know, where learning is built upon prior experiences, 4) adult learners typically value a problem-solving orientation to learning in which the new information is related to real-life scenarios, 5) adult learners are more motivated by intrinsic rewards such as quality of life, satisfaction and self-esteem, and 6) adults have socialization needs and they benefit

from a welcoming and supportive environment created by mentoring and respect for prior experience.

As participants spoke of their experience of team building, findings further confirmed Knowles' tenets of adult learning and suggest they are foundational in the building of an "interdisciplinary" team. First, students entered into the practicum with specific theory based knowledge learned in their classroom settings. Not only did each program have specific learning needs and prior experiences, each student entered the group with individual needs and prior learning. Participants in the study were at various points in their programs with various learning foci. For example, the CCA students were at the end of their educational program and were concentrating on the demonstration of specific skills required for program completion, and first year BScN students were experiencing their first clinical practicum focusing on initial skills of personal care, communication and demonstration of caring. Study participants also had varying degrees of team experience; some had experience similar to the makeup of the ICCEP team as they had worked on teams of Registered Nurses, Licenced Practical Nurses and Continuing Care Assistants in long-term care facilities, others had team experience in the customer service industry, volunteer groups and organized sports teams. Co-operative learning strategies used by the clinical instructors such as pairing of students, post-conferences and group care-mapping, were intended as opportunities to capitalize on the knowledge levels of the respective participants and fostered sharing of knowledge and skills. Clinical instructors recognized student's previous learning in planning clinical assignments and activities; students in the ICCEP group were paired with peers of different experiences, for example the first year BScN student who was on a first clinical

experience was paired with a PN student who was at the mid-point of their program and on their third clinical experience or a CCA student who was at the end of their program and had previously completed approximately 8 weeks of clinical education experience. These co-operative strategies encouraged team building as participants shared how they gained knowledge and respect for other disciplines and themselves felt empowered and validated.

Second, participants were able to apply their learning in a meaningful way. Participants spoke of being able to practice skills they had learned in theory courses prior to attending clinical and the role clinical instructors played in encouraging students to practice to the full scope of responsibilities within the respective programs. Participants also spoke of an increased self-confidence when they were able to share their knowledge and skills with students from other programs.

Third, participants identified a readiness to learn, in addition to the requirement of a successful completion of the clinical experience, students engaged in peer learning. Learning occurred among all education programs in various configurations; so at times the BScN third year students were teaching team members, at other times the PN or CCA students took the lead in teaching. Students described a desire to know, and sought out experiences and peers to gain knowledge and skill.

Fourth, adult learners typically value learning that is related to real-life scenarios. The ICCEP experience occurred in a real-life clinical setting where students had the opportunity to practice a variety of interpersonal and psychomotor skills. The ICCEP team model was also based on a current model of care in use in Nova Scotia health care organizations. In Nova Scotia the team providing direct patient care is made up of

Registered Nurses, Licensed Practical Nurses and assistive personnel such as Continuing Care Assistants (Government of Nova Scotia, 2008). Participants recognized the usefulness of having students at various stages of their programs as evidenced by valuing of peer learning and mutual sharing of knowledge and skill.

Fifth, participants indirectly spoke of intrinsic motivations to learn, in reporting the pride and validation they felt when clinical instructors had them practice skills they had been taught in class and when they were able to share their learning with students from other programs. As the successful completion of the clinical practicum was required to progress through their respective programs, there was also a strong external motivation to participate since all students were in similar positions, as one participant stated “we were all in it together.”

Sixth, the adult learner need for socialization was also evident as participants described factors that influenced team development. Having the opportunity to meet other students prior to and outside the clinical setting was described as valuable. An environment of welcoming and respect was modeled by clinical instructors, demonstrated by students and continued as students demonstrated attitudes of respect and acceptance.

Findings from this study further confirm the tenets of adult learning theory and the inter-professional education framework (Knowles, 1990; Reeves, et al., 2007) and suggest they can be applied to the process of building an “interdisciplinary” student clinical team. This study adds to the literature with its inclusion of non-baccalaureate students as participants representing an “interdisciplinary” student group from both university and community college programs. Findings suggest that many strategies currently believed to enhance baccalaureate student learning may apply to students in

community college settings, and extend beyond academic learning to also influence the development of team building skills.

### **5.5 Study Team Nomenclature**

The term “interdisciplinary” was chosen to describe the team studied in this research; however the composition of the research team did not reflect that usually seen in that non-disciplinary and unregulated student members were included because they are part of the patient care team. In the literature, the prefix “inter-“, embraced the importance of collaboration in the delivery of patient care; the term interdisciplinary was broader and more inclusive and it was also used to describe the clinical practicum being studied (Interdisciplinary Collaborative Clinical Education Project [ICCEP]). The concept of professional clearly indicates a membership that is self-regulating. Disciplines are also noted to have their respective bodies of independent knowledge, and this study team did not clearly fit any current designation of a team, however “interdisciplinary” was used to name the experience, and hence the study groups.

The specific team that provides care to patients, twenty-four hours a day, is not consistently labeled in practice or in the literature. While authors such as Daiski (2004) name the team “intra-professional”, this term requires clarity as it does not inherently include the unregulated health care provider, nor is it a term easily recognized by practicing health care providers. As this team plays an important role in the delivery of care and the health and outcomes of patients, further discourse is required to explore appropriate terminology.



## 5.6 Limitations

Of the 16 potential students for this study eight consented to participate. Although it is likely that the data would have been richer and thicker with 16 participants, the themes identified resounded well with those involved and found support in existing literature and frameworks. Participants from differing educational programs were purposefully sought to ensure data were not biased towards a particular student group. Each group of students (BScN first and third years, PN, CCA) was represented by at least one participant. Each program had limited participants therefore the experience of any one program cannot be described; however participants' descriptions of their experiences across all four programs were consistent related to team building.

Data from this study provided a snap shot within a specific experience, external factors such as location and timing may have influenced participants' perspectives. The ICCEP groups included in this study involved participants in only two of the various ICCEP sites across the province and both were located in what can be described as rural settings and this may have influenced some of the experiences. The interviews took place approximately eight months after the clinical experience. While this time allowed for participant reflection and contemplation, the perspectives of participants may have been different during or immediately following the experience and perhaps different again if participants were interviewed post-licensure. While strategies such as investigator triangulation with supervisors and reflexivity were used, my experience as an educator may have influenced the relationship with participants and the lens with which I viewed the research and the findings.

One limitation relates to the participants' high level of buy-in to the ICCEP concept as evidenced by the high number of participants who applied and sought out the experience. Most of the participants applied to participate in the ICCEP experience, contributing to the likelihood that the opportunity to experience an interdisciplinary team attracted a group of like-minded individuals.

### **5.7 Implications for Education**

Participants from baccalaureate nursing, diploma practical nursing and certificate continuing care assistant education programs described from their perspectives what they believed contributed to the forming of a positive “interdisciplinary” clinical education team. These data were analyzed to develop themes that support existing literature and frameworks related to inter-professional learning. In view of this, educators need to attend to the following in order to contribute to team development in “interdisciplinary” clinical team experiences: 1) valuing of “interdisciplinary” education by the continuation of the pre-licensure clinical education model, 2) structuring the team to reflect the model of care teams in local facilities, thus allowing students to participate in a real-world patient care team, 3) creating opportunities for students to meet prior to and outside of the clinical setting, particularly in an “interdisciplinary” experience involving students who would not have previously interacted (i.e. from different years of a program, or from different programs), and 4) pursuing professional development on interdisciplinary education including the important role clinical instructors play in the development of the group's sense of team. Topics to consider in professional development may include background on inter-professional education and adult learning theories including ways to create a welcoming and supportive learning environment, the importance of student

acceptance and belonging, and further exploration of co-operative and invitational learning strategies. Specific strategies such as the intentional pairing of students of various experiences as well as ways to enhance positive student attitudes should also be discussed.

### **5.8 Implications for Practice**

This research explored and described the team experiences of students in baccalaureate nursing, diploma practical nursing and certificate continuing care assistant education programs during an “interdisciplinary” clinical practicum. The clinical experience occurred in pre-licensure phases of their programs. These findings may be used in the pre-licensure clinical practice experiences in the programs involved and have the potential to be transferred to other pre-licensure interdisciplinary experiences as well as transfer to other university and community college “interdisciplinary” experiences. The likelihood of graduates of these programs working together as a team in the future may well be enhanced through these pre-licensure experiences.

Findings from this study may also have application for teams currently providing care in various settings. Existing teams may wish to consider the importance of positive role models, a welcoming and inclusive atmosphere, socialization, acceptance and mutual sharing of knowledge and skill as strategies that may positively impact existing teams.

### **5.9 Implications for Research**

This study about the “interdisciplinary” experience of team among eight pre-licensure students in BScN, PN and CCA programs identified three themes contributing to a positive team experience. These themes are believed to represent the first evidence of this nature in such a team and call for additional studies with several teams within

these programs as well as research across programs in other settings. It is important to continue research with existing teams to strengthen the evidence base regarding this type of learning to inform curricula in the programs involved.

Studies comparing team development on variables such as age, attitude, choice to participate, sense of belonging, and various contextual factors are warranted to determine predictors of team success in similar pre-licensure experiences. As both ICCEP groups in this research were in long-term care placements in rural communities, the effect of other clinical settings on team development should be explored. While this study explored the experiences of students participating in an ICCEP practicum, the perspectives of the faculty and the staff in participating facilities would also be valuable. There may have been other activities which the faculty, and participating facility staff witnessed as being instrumental in the team development. As the role of clinical instructors was highlighted by participants in this study, further research exploring the characteristics and attributes of faculty and the effect on team development would be beneficial. It would also be interesting to know if the presence of ICCEP groups in various facilities impacted their own team development or perceptions of team members.

## **5.10 Chapter Summary**

The purpose of this qualitative descriptive study was to explore and describe the experiences of student participants in the development of team during an “interdisciplinary” collaborative clinical practicum. Students in baccalaureate nursing, diploma practical nursing and certificate continuing care assistant education programs who took part in an “interdisciplinary” clinical practicum described the development of a positive sense of team. These descriptions were analyzed to produce three themes

believed to contribute to team building; *clinical instructor mentoring, the presence of peer attitudes of respect and acceptance, and mutual sharing of knowledge and skill.*

The *mentoring by clinical instructors* set a tone of acceptance and also contributed to the development of an effective team as participants' role modeled these behaviours. Clinical instructors created a welcoming and accepting environment, modeled appropriate teamwork skills, organized co-operative learning activities and encouraged students to practice the skills they had learned in theory courses. Participants described how *peer attitudes of respect and acceptance* helped develop a sense of team, as well as positive attitudes and feeling accepted. Socializing and meeting outside the clinical setting were described as contributing to the development of the team. Participants identified learning and growth that occurred among them through *a mutual sharing of knowledge and skill.* They described how growth occurred through the sharing of workload and knowledge and explained how this level of sharing helped in the creation of the team. These themes are supported in existing literature as well as inter-professional and adult learning theories, and have implications as described for education, practice and research.

### **5.11 Conclusion**

The quality of clinical instructing, feeling accepted and respected, and having the opportunity to share knowledge and skill contributed in a positive way to the experiences of the study participants, and to the development of their respective teams. Novel to this study was the conduct of research with participants from practical nursing and continuing care assisting programs as well as a baccalaureate program and revealed the relevance of

such practicum experiences across a variety of programs related to the development of an “interdisciplinary” clinical group’s sense of team.

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## APPENDIX A

### Participant Information Letter

Date:

Principal Investigator: Claudette McDonald, BScN RN, MN student,  
School of Nursing, Dalhousie University  
[Claudette.mcdonald@dal.ca](mailto:Claudette.mcdonald@dal.ca)  
Phone (902) 491-1097  
Fax (902) 491-4620

Dear Potential Participant,

You are invited to participate in a research project, “The Student Experience of Team during an Interdisciplinary Clinical Practicum”.

**Participation is voluntary and is not part of your clinical course.** If you agree to be in this study and then change your mind you may withdraw from the study at any time up until data analysis is complete. None of your clinical instructors will know if you participate or not and your clinical evaluation or grade will not be affected by your decision not to participate. **There are no direct benefits to you being in this study.**

#### **Who am I?**

I am currently a student in the Master of Nursing program at Dalhousie University. One of the requirements for graduation is to conduct a research study in a field of interest. I am interested in interdisciplinary practice as well as interdisciplinary clinical education.

#### **Purpose of the Study**

The information from this study will:

- Document student voices describing experiences of teamwork on an interdisciplinary clinical team.
- Describe how students experience team development in an interdisciplinary clinical experience and

- Describe things that impact a student's development of teamwork skills in an interdisciplinary clinical experience

I intend to examine these topics with baccalaureate, diploma and certificate student care providers who are participating in the interprofessional clinical education project at the designated sites for May 2011.

### **Study Design**

If you agree to participate, an in-depth individual interview will be arranged. The interview will require approximately 1 1/2 to 2 hours of your time. Interviews will take place at a mutually agreed location, date, and time. I plan to record the interview using an electronic recording device. You may refuse to answer any question at any time. You may also choose to withdraw from the study at any time up until the time that data analysis is complete by notifying me (the researcher) by email, phone or in person.

### **Who Can Participate**

All students enrolled in the Interdisciplinary Collaborative Clinical Education Project (ICCEP) at the designated sites are invited to be part of this study.

### **What you will be asked to do and time commitments**

*Upon receiving this Package (20 to 30 minutes)*

- Review information letter and consent letter (15 to 20 minutes)
- Completion and/or submission of intent to participate form (5 to 10 minutes)

*Mid-July, individual interviews (90 to 120 minutes)*

*Interviews will take place at a mutually agreed location, date, and time.*

- Review information letter (10 minutes)

- Questions and answers (10 to 15 minutes)
- Sign consent, if in agreement (5 minutes)
- Individual interview with the researcher (60 to 75 minutes)

*Late summer, validation of data (30 to 45 minutes)*

- Review of your transcript (20 to 30 minutes)
- Confirm that your experience has been accurately recorded (5 to 10 minutes)

### **Your Privacy**

Confidentiality is of utmost importance. Due to the nature of the in-person interviews, it is not possible for your participation to be anonymous, however I will remove all identifying names or references from transcripts. **Your name will not appear on any written transcripts.** Due to the small number of students who participate in the ICCEP at the designated sites, while people will not know if you have participated, they will know you have participated in the ICCEP project and therefore *may* have participated in this research.

Your privacy will be maintained throughout the research project in a number of ways.

- Each participant will be assigned a participant identification number.
- Your name will not be used on any of the research data.
- Your course professor will not know if you decide to participate in the study.
- Your clinical instructor will not know if you decide to participate in the study.
- Your classmates will not know if you decide to participate in the study.
- All notes will be transcribed by me only and I will use codes on notes or transcriptions to ensure confidentiality.
- All data gathered through this research project will be stored in a secure and locked cabinet for a period of five years, after which time it will be destroyed.

### **Risks/Benefits**

Since all clinical course marks have been entered, and as your clinical and course instructors will not know if you have agreed to participate in the study, there are no risks to you as a student.

There are no direct benefits to participating in this study. There is the possibility that the findings may influence the nature of clinical experiences for future students.

I am currently faculty in the Practical Nursing program at the Nova Scotia Community College, Waterfront campus. I have no official role at either the research sites which function, academically, as independent campuses.

Due to the small number of NSCC students who participate in the ICCEP at the research sites, while course and clinical instructors will not know if you have participated, they will know you have participated in the ICCEP project and therefore may have participated in this research. No information regarding your participation or any information you share during our interview will be shared with or accessed by any faculty or staff at NSCC.

### **Conflict of Interest**

The researcher has no conflict of interest and will not gain financially from this study.

### **How the results will be shared**

- It is expected that in the winter of 2011, you will be invited to attend a presentation reporting on the findings of the study. It is likely that faculty and students from the schools involved in the study will also attend this session.
- It can be expected that findings from this study will be submitted to the Faculty of health professionals for completion of graduate requirements.
- It is also expected that the findings from this study will be presented at nursing or educational conferences and be published in nursing and/or educational journals.
- If desired, you may receive a summary report of the results of the study.

**Permission to use quotes**

Individual interviews with the researcher will be taped and later transcribed. I may want to quote your words in written or oral reports, presentations and publications. All identifying information will be removed when study results are presented.

**Questions**

If you have any questions or need more information about this study, please contact Claudette McDonald, principal investigator at (902) 491-1097 or [Claudette.mcdonald@nsc.ca](mailto:Claudette.mcdonald@nsc.ca) .

**Problems or concerns**

If you have any concerns about any aspect of your participation in this study, you may contact Pat Lindley, Director of Dalhousie University's office of Human research Ethics Administration at (902) 494-1462 or by email at [patricia.lindley@dal.ca](mailto:patricia.lindley@dal.ca)

Sincerely

Claudette McDonald BScN RN  
MN student Dalhousie University  
Phone (w) 491-1097  
Fax (w) 491-4620  
Email: Claudette.McDonald@dal.ca

APPENDIX B  
Consent Form

I have received a copy of the Participant Information Letter for the research project entitled: “The Student Experience of Team during an Interdisciplinary Clinical Practicum.” By signing this consent form I am indicating that I have had an opportunity to read information provided on the research project or it has been explained to me, and any questions that I may have had have been answered.

I agree to participate in this research project, understanding that I am doing so voluntarily, that confidentiality will be maintained, and that I have the right to withdraw from the study at any time using the means outlined in the Participant Information Letter.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date



APPENDIX C

Participation Reply (attached to stamped-addressed return envelope)

YES, I am interested in participating in this research project

**If you have answered yes**, please complete the following contact information. You may return it in the stamped-addressed return envelope, fax it to the number indicated below, or send the information via email or phone (see contact information below)

\*\*\*\*\*  
\*\*\*\*\*

Name: (first & last) \_\_\_\_\_

Email: \_\_\_\_\_

Home Phone: \_\_\_\_\_ Cell Phone: \_\_\_\_\_

Other: \_\_\_\_\_

**Preferred Contact:**

Email ( )      Home Phone ( )      Cell Phone ( )      Other ( )

**Preferred Contact Time:**

Morning ( )      Afternoon ( )      Early Evening ( )      Late Evening ( )

## APPENDIX D

### Script for Research Assistant Phoning Potential Participants

#### **Introduction**

“Hello, my name is \_\_\_\_\_, I am a research assistant for Claudette McDonald a Master in Nursing student at the Dalhousie University School of Nursing. I am calling in follow-up to an invitation package you would have received in the mail in August, and again in October. The package was an invitation to participate in the study titled The Student Experience of Team during an Interdisciplinary Clinical Practicum. You were selected as a potential participant because you were a member of a ICCEP clinical experience.”

#### **Confirmation of Receipt of Invitation Package**

“Did you receive the information package mailed in August?”

#### **A. If “No” response to Confirmation of Receipt of Invitation Package**

“Are you interested in hearing more about the study now?”

#### **(i). “No” response to hearing more information**

“That’s fine, thank-you for taking the time to talk to me this \_\_\_\_\_

(morning, afternoon, evening)”

#### **(ii). “Yes” response to hearing more information**

“The findings from this study will describe: students’ experiences of teamwork and team development in an interdisciplinary clinical rotation from the students’ point of view and describe how teamwork skills develop in an interdisciplinary clinical rotation.

If you agree to take part, an individual interview will be arranged. The interview will take about an hour of your time. Together, you and the researcher will choose a time and place for this interview. Interviews will be recorded and then typed out.

Being in this study is voluntary. You may change your mind about being in the study up until the time your interview has been coded.

The only person who will know you are participating is the researcher. While other people may know you took part in the ICCEP, and they may think that you may have taken part in this research; no one at your school will know whether or not you have agreed to do this study. Your decision to take part or not to take part will not affect your grades in any way.

There is low risk to you being in this study. It is possible that reflecting on the ICCEP clinical experience may influence your experience of future clinical practicums. It is not believed that these influences would be negative. Any probability of reflection having a negative impact on future experiences would be very low. There are no direct benefits to doing this study. There is the chance that findings may help future clinical groups.

The researcher, Claudette, is a teacher in the Practical Nursing program at the Nova Scotia Community College, Dartmouth Waterfront campus and has no role at the research sites. They are independent campuses.” *(Taken from participant consent form)*

“Are you interested in having the researcher contact you with more information about taking part in the study?”

**(i). “No” response to having researcher contact**

“That’s fine. Thank-you for taking the time to talk to me this \_\_\_\_  
(morning, afternoon, evening)”

**(ii). “Yes” response to having researcher contact**

“I will provide Claudette, the researcher, with your contact information and she will contact you this week to discuss your participation in the study. What is the best way to contact you?”

“Thank-you for taking the time to talk to me this \_\_\_\_ (morning, afternoon, evening)”

**B. “Yes” response to Confirmation of Receipt of Invitation Package**

“Are you interested in having the researcher contact you with more information about taking part in the study?”

**(i). “No” response to having researcher contact**

“That’s fine. Thank-you for taking the time to talk to me this \_\_\_\_ (morning, afternoon, evening)”

**(ii). “Yes” response to having researcher contact**

“I will provide Claudette, the researcher, with your contact information and she will contact you this week to discuss your participation in the study. What is the best way to contact you?”

“Thank-you for taking the time to talk to me this \_\_\_\_ (morning, afternoon, evening)”

**Answering Potential Questions**

The research assistant will be provided with the researchers contact information in case participants in case it is requested.

The researcher will be provided with contact information for Nancy Edgecombe, thesis supervisor and Catherine Connors Director of Dalhousie Research Ethics should they be required.

For any questions related to the research:

“I can have Claudette, the researcher, contact you to answer any questions you have.”

## APPENDIX E

### Interview Questions followed by possible probes

1. Demographics: Please describe the following.
  - a. Which educational program are you in?
  - b. Which year of the program?
  - c. What is your age?
  - d. How many clinical have you had before experiencing the ICCEP
  - e. Describe any previous experience you have had working in a team (can be non-health care related)
  
2. Tell me about your ICCEP team.
  - a. How this clinical was different from previous clinical experiences?
  - b. How was the student make-up different?
  - c. How was the clinical faculty different than previous experiences?
  - d. How was this different from other teams you have worked on
  
3. Tell me about the sense of “team” within your clinical group? How was this enhanced or made better?
  - a. Describe the day you first met your team members
  - b. Describe your first day of the clinical experience
  - c. Describe an experience/incident when you felt you were part of the team
  - d. Things you did, other team members did, your faculty did (behaviours, learning experiences, activities)

4. Were there times when it was difficult to function as a team, tell me more about the types of things that interfered with the sense of “team” within the ICCEP group?
  - a. Describe an experience or time when you did not feel you were part of the team
  - b. Describe an incident or time when the group members were not an effective team
5. What were key things you learned about being an effective team member?
  - a. Are there other skills that would have been useful to have learned to be an effective team member
6. Thinking back to the weeks leading up to the ICCEP clinical and the three weeks of your ICCEP clinical experiences, what things helped you or other students gain teamwork skills?
  - a. Faculty, students, the make-up of the team,
  - b. The facility, the clients, the diagnosis/skill level
  - c. The assignments, the post-conferences, other learning
7. How would you improve your experience of team on the inter-professional clinical education experience?
  - a. Suggest improvements that could have impacted your growth and learning of team skills.