Study Proposal

Experiential Learning for Prelicensure Students about Interprofessional Teaming

The Interprofessional Education in Geriatric Care Project

Version 1.2 – September 18, 2006
Preface

“If interdisciplinary teams are to thrive, they must become lean, efficient and sophisticated entities for health care delivery. The individual member, the team and the organization all share responsibility for accomplishing this.”

# Table of Contents

Key Definitions used in the IEGC Program ................................................................. 3

I. Background and Study Rationale ........................................................................ 5

II. Summary of Relevant Literature ........................................................................ 6

III. Theoretical Framework ...................................................................................... 8

    i) Interprofessional Education for Collaborative Patient Centred Practice Synthesis Framework ........ 8

    ii) Systems Theory ............................................................................................... 8

IV. IEGC Program Goals and Objectives ................................................................ 10

V. IEGC Project Team .............................................................................................. 11

VI. IEGC Steering Committee ................................................................................ 12

VII. Research Methods ............................................................................................ 13

    i) General Overview: ......................................................................................... 13

    ii) Research Design .......................................................................................... 14

    iii) Study Timeline ........................................................................................... 14

        Figure 1 – Study Activities and Timeline ....................................................... 14

    iv) Study Participants ....................................................................................... 15

    v) Sample Size Calculation ............................................................................. 16

    vi) Research Questions ..................................................................................... 16

    vii) IEGC Learning Module .............................................................................. 17

    viii) Study Procedures ...................................................................................... 20

    ix) Data Collection/Instrumentation ................................................................. 30

    x) Data Analysis ............................................................................................... 36

XI. Reporting the Findings ...................................................................................... 36

XII. Ethics ................................................................................................................. 36

IVX. References ........................................................................................................ 38
Key Definitions used in the IEGC Program

IEGC Project
Interprofessional Education in Geriatric Care project – the project for which this proposal and all of its documents relate.

IECPCP
Interprofessional Education for Collaborative Patient Centred Practice – A Health Canada Initiative, as part of the Health and Human Resource Strategy to promote interprofessional education

Interprofessional [Interdisciplinary] Education
"Occasions when two or more professions learn from and about each other to improve collaboration and quality of care" (CAIPE, 1997 as cited in Health Canada, 2004).

Collaboration
"an interprofessional process of communication and decision making that enables the separate and shared knowledge and skills of health care providers to synergistically influence the client/patient care provided,” (Health Canada as cited in Way & Jones, 2000).

Collaborative Patient-Centered Practice
“is designed to promote the active participation of each discipline in patient care. It enhances patient and family goals and values, provides mechanisms for continuous communication among care givers, and fosters respect for disciplinary contributions of all professionals” (Health Canada, 2003).

Interprofessional Health Care Team
“an interdisciplinary [Interprofessional] health care team includes members from many disciplines and professions that work together to provide optimal coordinated care for individuals” (Health Canada, 2004).

IEGC Experiential block
A period of education, around interprofessional teaming that occurs during a traditional clinical practicum experience. Traditionally students are provided an opportunity to develop the necessary discipline specific skills and knowledge in the real world setting. All health care disciplines are required to participate in experiential blocks (also known as clinical practicums or placements).

IEGC Program
The entire IEGC Experience as funded by Health Canada (July 1, 2005 – March 31, 2008).

IEGC Learning Module
The educational activities (learning objectives, core competencies, schedule of activities) developed by the IEGC Program and implemented during the experiential block.

Discipline Specific Preceptors
Health care practitioners currently practicing as part of an interprofessional team in day hospitals, who will serve as preceptors for the five participating health care disciplines (medicine, nursing, pharmacy, physical therapy, occupational therapy), during each IEGC experiential block.
Clinical Team
All health care practitioners working as part of an interprofessional team in the participating day hospitals, regardless of discipline.

Faculty/Clinical Team Training
Any educational component related to IECPCP targeted at faculty and/or clinical team members

Learner
Any IEGC participant that engages in educational activities presented by the IEGC program; specifically targeting Student Learners, Clinical Team Learners, and Faculty Learners.

Client
The individual receiving care in the day hospital environment and/or their proxy/informal care givers (i.e. the patient).

Person First Terminology
Client centred practice recognizes the importance of maintaining a vernacular that is consistent with person first terminology. PUT PEOPLE FIRST, not their disability; for example: a woman with arthritis (versus an ‘arthritic woman’), children who are deaf (versus ‘deaf children’), people prone to falls (versus ‘fallers’), a person with dementia (versus ‘demented person’). This puts the focus on the individual, not a particular functional limitation.

GITT
Geriatric Interdisciplinary Team Training – A US Based initiative that teaches interdisciplinary teaming skills to students and professionals in geriatrics

JET
Interprofessional Education Joint Evaluation Team – One of the research teams associated with the Advancement of Interprofessional Education (CAIPE) group in London, England. CAIPE is the UK leader for the development of interprofessional education
Interprofessional Education in Geriatric Care
Experiential Learning for Prelicensure Students about Interprofessional Teaming

I. Background and Study Rationale

Health Canada (2004) defines an “interprofessional health care team [as a team that] includes members from many disciplines and professions that work together to provide optimal coordinated care for individuals” (p.28). The ability to work efficiently on an interprofessional team is rapidly becoming a requirement of most health care professions. Many health discipline accreditation boards require their applicants to understand/demonstrate a core set of interprofessional teaming skills. It is further expected that applicants are able to implement these skills when necessary. To address this issue, the 2003 First Ministers’ Accord on Health Care Renewal identified interdisciplinary education for collaborative patient-centered practice as “one of three mechanisms that address current and emerging health and human resource issues, and as a mechanism to ensure that health providers have the knowledge, skills, and attitudes to practice in this different paradigm.” (Health Canada, 2004, p.32)

It is widely agreed that interprofessional teaming does not occur spontaneously when various professionals are placed in academic or clinical settings (Drinka & Clark, 2000; Hyer, Flaherty, Farichild et al, 2003). For students and new health care practitioners to acquire interprofessional teaming skills, it is imperative that they are taught in an environment conducive to interprofessional collaboration. The Romenow Report (2002) emphasizes that “if health care providers are expected to work together and share expertise in a team environment, it makes sense that their education and training should prepare them for this type of working arrangement” (p.109). Research in other areas (ie. the airline industry) indicates that interprofessional teaming education works best when conducted in context. Extrapolating this to a health care environment, experiential learning in a clinical site would be beneficial to the learner (Reason, 1997 as cited in Cook, 2005).

With this in mind, and in response to the call for proposals from Health Canada’s Interprofessional Education for Collaborative Patient Centred Practice (IECPCP) initiative, Dr. Grymonpre, Dr. van Ineveld and Dr. Boustcha applied for and received funds to design, implement and evaluate an experiential learning initiative surrounding interprofessional education in geriatric care (IEGC; for a copy of the official Health Canada Funding Agreement please see Appendix A). Recognizing the importance of and need for collaborative effort in implementing this type of initiative, the investigators worked closely with academic faculties, health care institutions, and government to develop and submit the successful proposal to Health Canada. Letters of support from the participating health care facilities can be found in Appendix B.

As the number of health professionals trained in geriatric care and use of the IECPCP framework increases, the ultimate goal is that a growing number of health professionals will have the necessary attitudes, skills and knowledge to work collaboratively in the care of older adults and that participation in collaborative patient centred care will lead to improved patient and provider satisfaction and improved patient outcomes.
II. Summary of Relevant Literature

The increased continuity of care which results from interprofessional teaming and collaborative patient-centered practice in geriatrics has substantial effects. The literature that surrounds collaborative practice suggests benefits to overall patient care that include: decreased hospital stays, increased availability of health professionals resulting in shorter waiting times, increased health outcomes, increased satisfaction with service providers, as well as increased control over treatment decisions. Service providers at the individual and systemic levels also experience benefits related to IECPCP. Reported benefits include: a reduction in professional barriers (disciplinary split), the creation and implementation of best practice tools, an increase in the recruitment and retention of health care employees, and an ultimate decrease in health care costs which are seen at the professional, institutional, and structural levels (Curran, 2004; Gilbert et al., 2000; Health Canada, 2004; Romonow Report, 2002).

The concept of Interprofessional education (IPE) is not a new one; in the United Kingdom (UK), IPE began during the 1960s with parallel initiatives in social work and nursing across the country (Barr, 2002). The World Health Organization (WHO) has also been instrumental in the global development of IPE, with initiatives such as ‘Health for All by the Year 2000’ (as cited in Oandasan & Reeves 2005) and ‘Learning to Work Together for Health’ (1988; as cited in Tunstall-Pedoe & Rink, 2003; Hilton 2003). Currently, the most noteworthy centre in the United Kingdom (UK) for IPE is the Centre for the Advancement of Interprofessional Education (CAIPE) in London, England. CAIPE is the UK leader for IPE development, and the CAIPE umbrella contains a number of influential sub organizations and publications devoted solely to IPE and IPE research. These include: JET (The Interprofessional Education Joint Evaluation Team), and the Journal of Interprofessional Care (Barr, 2002; CAIPE web site, 2005; JET, 2002; Oandasan, 2005).

IPE programs in North America have been developing over the last two decades. One of the most noted curriculum programs in the United States (US) is the Geriatric Interdisciplinary Team Training (GITT) program, initiated and funded by the John Hartford Foundation. The GITT program was originally developed to teach existing professionals how to “function in interdisciplinary groups within geriatric sites” (Mellor, Hyer & Howe, 2002, p.868). Since its initial implementation, the GITT core program has been applied to graduate students as well as practicing health professionals, and has led to the creation of many interprofessional evaluation and training techniques (Cole, Waite & Nichols, 2003; Dyer et al., 2003; Flaherty et al., 2003; Fulmer et al., 2005; Heinemann, Schmitt, Farrell & Brallier, 1999; Hyer et al., 2000; Hyer, Skinner, Kane, et al., 2003). Additionally, the Geriatric Education Centers (GEC), have created highly referenced and effective IPE initiatives throughout the US GEC program developers have recognized the need for interprofessional teaming in geriatric care and have developed several programs to address this area. The Rhode Island Geriatric Education Center (RIGEC) is a model example of a sustainable and successful certificate program for Interdisciplinary Practice in Geriatrics in the form of several workshops (Burbank, Owens, Stoukides & Evans, 2002; Clark 2002; Clark, Leinhaas & Filinson, 2002; Owens, Padula & Hume, 2002).

Two of the longest standing Canadian programs are found at the Universities of British Columbia (UBC) and Toronto (UT). Through these initiatives, there have been various interprofessional programs implemented. Gilbert et al. (2000) from UBC conducted a very successful IPE related workshop in which learners were placed into teams and asked to re-create an ambiguous Lego® prototype. Gilbert et al. found that teams whose members could easily merge roles were the most time and product efficient. The outcome of this workshop influenced the development of UBC’s Interprofessional Health and Human Services (IHHS) courses, which are a permanent part of the UBC curriculum for students in health care professions. The University of
Toronto’s week long curriculum, ‘Pain Week,’ is a valuable, mandatory event for students where IPE is delivered in the context of pain assessment and management (Watt-Watson et al., 2004). Further, the successful implementation and sustainability of the Interprofessional Rural Program of BC (BC Academic Health Counsel, 2004), demonstrates the applicability of interprofessional programs to rural as well as urban areas. Although IECPCP is a relatively new concept in Canada, the number of IPE programs being developed and implemented has increased substantially since Health Canada’s IECPCP call for proposals under the Health Human Resource Strategy.

In order for an IPE program to be successful and sustainable, the literature suggests that there are a number of common barriers to be overcome. Some of the most common barriers include elements such as: timing and scheduling conflicts between disciplines, structural and accreditation differences among faculties, professional attitudes and boundaries, lack of personnel for program implementation, lack of curriculum offerings in IPE, high staff turnover, and finally, differing university, professional, organizational, and government agendas (Gilbert, 2005; Glista & Petersons, 2003; Harris et al., 2003; Mellor et al., 2002; Orchard et al., 2005; Parsell & Bligh, 1998).

Once barriers have been addressed, Harris et al. (2003) states that the successful implementation and sustainability of an IPE program depends on several conditions. First, all institutions, agencies and personnel must be committed to interprofessional teaming. Second, the project should employ leaders who have the ability to cross professional and cultural boundaries. Finally, real cases are the most effective learning tools. Therefore, IPE should take place in context whenever possible. When real clients are not available, the experience must be as similar to actual clinical experience as possible. It should be noted, that there are very few studies (of which the main focus is IPE solely, and not nested in the context of a disease) in the published literature which have infiltrated hospitals and other clinical settings for IPE programming. Additional characteristics of a successful program have been identified as: learners and teachers who value and trust the roles of other professionals, a subject matter that is conducive to team learning, team skills taught are generalizable to other cases, work spaces and equipment are shared by all, and finally, program effects are clearly measured and documented (Gilbert, 2005; Glista & Petersons, 2003; Mellor et al. 2002; Orchard, Curran, & Kabene, 2005; Parsell & Bligh, 1998).

Despite the growing body of literature in this area, there are several areas of IECPCP where there is a paucity of information. Due to the difficulty associated with capturing change in this area, many studies have not acknowledged what (if any) changes have occurred at the organizational level in long-term interprofessional practice. Further, the majority of studies focus on learner outcomes while patient measures are generally under noted. The overall intention of IECPCP is to create a client centred atmosphere, indicating that ideally, the client should be an active member of his/her own health care team. If this is to be the case, patient perceptions regarding IECPCP initiatives could shed light on the real world implications of such programs. Finally, much research has been done with graduate students, residents and professionals, leaving undergraduates or pre-licensure students as underutilized yet valuable participant groups (Reeves & Freeth, 2002; Tunstall-Pedoe & Rink, 2003). Given the demonstrated importance of IECPCP to health care standards, these identified gaps in the literature need to be acknowledged and addressed. The proposed study is an attempt to account for understudied areas of interprofessional education and teaming through the implementation of a Manitoba IECPCP initiative. The implications of addressing these topics in this project may increase program success and long term sustainability of interprofessional education strategies.
III. Theoretical Framework

i) Interprofessional Education for Collaborative Patient Centred Practice Synthesis Framework

The proposed study was designed around the IECPCP framework as presented by D'Amour and Oandasan (2004; please see Appendix C for a copy of the IECPCP framework). These authors proposed a conceptual framework to outline the factors, determinants, and elements that underlie and influence IECPCP. The components are further described in relation to various macro, meso and micro levels. It is important to note that this framework emphasizes the connective nature of collaborative practice and interprofessional education; whereby they are independent, yet interrelated. The framework by D’Amour and Oandasan (2004) exemplifies the interactive relationship between the seemingly unrelated macro, meso and micro levels of both patients (clients) and learners. The authors further to demonstrate a number of macro level structures that affect both learner and patient outcomes, further demonstrating the interdependence between interprofessional education (learner) and collaborative practice (patient). For example: A change in government policy regarding health and social services (macro level) may impact on both the learners’ and the patients’ experiences in the health care arena; and subsequently, influencing IECPCP. Oandasan et al. (as cited in Curran 2004) states that “determinants influence and inform each other…one may be catalyst or another barrier…the relationship is dynamic…if IECPCP is to be fostered…collaboration between educators, practitioners, researchers and policy-makers will be required.”

For IECPCP to become a successful reality, the interplay among interprofessional education and collaborative practice is a necessary consideration. Based on this connection, Curran (2004) in his systematic review of the IECPCP theoretical framework, states that at the pre-licensure stages of education, students must be provided with opportunities to participate in training that occurs in a collaborative setting, with health professionals that effectively model collaborative practice. Curran also indicates that there is a subsequent need to foster the collaborative practice abilities and attitudes of the health professionals in these settings. If collaborative practice is fostered, then successful interprofessional education should follow and vice versa.

ii) Systems Theory

As a supplement to the framework for IECPCP, and in an effort to ground this research in existing social theory, the researchers have identified Systems Theory as a good fit for the proposed study, bridging between the existing IECPCP framework (a health care specific example of systems theory), and to the greater social science literature. Systems Theory sees the social and physical world in terms of systems, whereby each system is a whole, which is more than the sum of its parts, but also is part of larger systems. For example, a family and a community can be seen as ‘systems’ where the ‘parts’ are people (Johnston, 2004). In the context of IECPCP for example, the interprofessional team (student learners, all clinical team disciplines, client and his/her informal care providers) can be seen as ‘systems’ where the ‘parts’ are individual disciplines or people.

Systems Theory as a means of understanding interactions and behaviour originated with Ludwig von Bertalanfyy, and is a product of various scientific ideas imported into sociology from other fields (Ritzer, 1992). Systems theory offers a procedural rather than a structural view of the social world. Structuralism, as defined
by Ekeh, is the "search for the universal and invariant laws of humanity that are operative at all levels of human life – at the most primitive and at the most advanced" (cited in Ritzer, 1992; pp.359).

Systems theory as it relates to the proposed study focuses on the arrangement of, and the relations between, the participant groups which connect them into a whole – clinical team - (Heyligher and Joslyn, 1992) rather than reducing an entity to the properties of its parts or elements – each discipline individually. The organization of the parts determines the system independent of each element; which allows systems theory to be useful in various disciplines, such as physics, biology, technology and sociology. Systems theory has become increasingly relevant as society calls for the development of theories capable of interdisciplinary application; recent applications include areas of social work, mental health, and the behavioural sciences (Laszlo & Laszlo, 1997).

Russel Ackoff defines a system as a set of two or more interrelated elements with the following properties (1981, as cited in Ritzer, 1992, p.15-16):

i) Each element has an effect on the functioning of the whole;
ii) Each element is affected by at least one other element in the system;
iii) All possible subgroups of elements also have the first two properties

Buckley (1967) identified some general principles of systems theory as they apply to a sociocultural domain. First, tension is an ever present, normal and necessary aspect of the social system. Second, the nature and sources of variety in a social system is an area of focus. Third, attention is paid to the selection process at all levels of the system, and alternatives available to the system are determined. Fourth, the interpersonal characteristics of the system are considered to be the framework for larger structures. The interactions of exchange, negotiation, and bargaining are the processes from which stable social and cultural structures emerge. Finally, although the other four principles generate a systemic dynamism, there is awareness in the system that some common and stable accommodations and adjustments occur (as cited in Ritzer, 1992).

Systems theory is multi leveled and can be applied to all aspects of the social world regardless of scale, objectivity or subjectivity. Systems theory is interested in the variety of relationship between aspects of the social world and argues that the relationships between these parts cannot be studied out of the context of the whole. Systems theory views all aspects of the social world in terms of process, especially as networks of information and communication. In addition, systems theory is inherently integrative, meaning that the individual and the social system are treated equally, not as separate entities but as “mutually constitutive fields” relating through communicative processes (Ritzer, 1992).

Systems theory is a good fit as a theoretical framework for the proposed study, working as a guiding conceptualization, helping to guide question development and data interpretation. The researchers are interested in the experiences of groups that fit within the social system of the geriatric day hospital environment. The researchers intend to examine participant’s perspectives regarding who is involved in this social system, what constitutes the environment for the social system and what relationships of the system parts exist. Under the properties defined by Ackoff (1981, as cited in Ritzer, 1992), each of the five discipline groups in the proposed study would have an effect on the functioning of the whole group. Each group of participants interacts and fulfills their roles based on the actions of the other participants.

System theory indicates that the individual and the system are equal and cannot be studied out of context. In the case of this research; the perspectives and experiences of each health discipline/practitioner, student learners, senior administrators/government, and health care consumers will be analyzed as equal. Systems theory can be applied to the components of the system without worry about subjective or objective information.
the theory is able to unify the participant’s perspectives using a common language that will be applicable regardless of discipline of origin in each participant group.

This study will examine the interactions between the participant groups from the perspective of systems theory, focusing on the interactions between members of the system (students, clinical team members, faculty champions, senior administrators/government, and health care consumers) as well as paying attention to the effect that actions/activities or events from the environment may have on the system holistically as well as at an individual participant level. “Environment” in systems theory has generally been referred to what is outside of the system and relegated it to a secondary or residual role (Bailey, 1998). However, for the purposes of this study, the “environment” is recognized to be a valuable source of information, potentially impacting on the system identified in the IEGC program.

IV. IEGC Program Goals and Objectives

The overarching goals of this project are to develop a sustainable IECPCP opportunity in the context of community-based geriatric care. If program implementation and evaluation are to be successful, the plan is to follow this template of program implementation involving a greater number of community based geriatric sites and a wider scope of health care disciplines. The program also has the potential to be rolled out to a broader scope of health care specialty areas which also practice collaborative patient-centred care (e.g. diabetes, multiple sclerosis, palliative care). The desired outcomes of this initiative are to produce health care professionals who possess the necessary knowledge, skills and attitudes/behaviors to participate in IECPCP; to improve health care professional and patient satisfaction; and to achieve optimal health outcomes in patients.

The specific objectives of this project are:

i) To develop and implement an interprofessional education experience in geriatric care (IEGC). The learners for this experience include pre-licensure students in nursing, pharmacy, physiotherapy, occupational therapy and medicine. The practice sites for this experience will involve the Geriatric Day Hospitals where collaborative patient centred care of community dwelling older clients is the standard of practice.

ii) To promote IEGC within the University of Manitoba, including the University Administration, the Faculties of Medicine, Pharmacy, Nursing, and the School of Medical Rehabilitation, and the University Of Manitoba Council Of Health Professions.

iii) To identify ‘champions’ within each faculty with expertise/interest in interprofessional education, geriatrics and/or collaborative patient centred care who are willing to participate in the development, implementation and evaluation of IEGC and advocate for its sustainability.

iv) To increase the knowledge, skills and attitudes of students, faculty and clinical team members in the areas of geriatric care, interprofessional collaboration and effective teaming.

v) To conduct an extensive evaluation of the IEGC experience; documenting the change in attitudes (at the organizational level), structure and processes required to implement an IEGC within the University of Manitoba and the participating Geriatric Day Hospitals. The evaluation will also assess the impact of IEGC on students’, faculty, and clinical teams’ knowledge, skills and attitudes in geriatric care, interprofessional collaboration and effective teaming; and the impact of IEGC on increasing student interest in pursuing geriatrics as a practice specialty.

Proposal Version 1.2: September 18, 2006
To share our experiences with and disseminate our project findings to participating and non-participating health faculties within the University of Manitoba, Manitoba Health, the Regional Health Authorities, other Universities in Canada and the U.S., and Health Canada.

V. IEGC Project Team

The Interprofessional Education for Geriatric Care Project Team (IEGC PT) includes one or more Faculty ‘Champions’ from each of the participating disciplines. Faculty champions were selected based on their willingness to participate in the development of this IEGC experience and/or their expertise and interest in geriatrics or interprofessional collaborative practice/training. In addition to creating and delivering teaching materials, this group will address logistical issues as they arise, which may include scheduling conflicts and ensuring the program is consistent with the accreditation requirements of each Faculty/Department. Members of the IEGC PT will also serve as liaisons between the project, their respective faculties, and clinical preceptors.

Dr. Ruby Grymonpre (Principal Investigator)  
Professor, Faculty of Pharmacy

Dr. Cornelia van Ineveld (Co Investigator)  
Assistant Professor and Program Director of Geriatric Medicine, Faculty of Medicine

Michelle Nelson  
IEGC Research Director

Amy De Jaeger  
IEGC Program Research Technician

Fiona Jensen  
Instructor,  
Faculty of Nursing

Jenneth Swinamer  
Associate Professor,  
Physiotherapy Department Head,  
School of Medical Rehabilitation

Dr. Leah Weinberg  
Department of Physical Therapy,  
School of Medical Rehabilitation

Theresa Sullivan  
Academic Fieldwork Coordinator,  
Occupational Therapy,  
School of Medical Rehabilitation

Ann Booth  
Associate Professor,  
Department of Occupational Therapy,  
School of Medical Rehabilitation

Rachel Ines  
IEGC Program Research Technician

Proposal Version 1.2: September 18, 2006
VI. IEGC Steering Committee

Critical to the dissemination and sustainability of this project is a Steering Committee, which will meet on a quarterly basis to discuss project progress, offer feedback and advice, and comment on project sustainability. Members of this committee include senior administrators within each participating organization: Deans/Directors (or designates) of each participating Faculty/Department, Chief Executive Officers/Chief Operating Officers (or designates) of the 3 participating hospitals, as well as representatives from Manitoba Health and the WRHA, student learners and older persons. It is anticipated that the membership of this committee will continue to evolve over the course of the program. The following list is an identification of committee membership thus far, additional members are expected.

Committee Co-Chairs:

Dr. Ruby Grymonpre (Principal Investigator)
Professor,  
Faculty of Pharmacy

Dr. Cornelia van Ineveld (Co Investigator)
Assistant Professor and Program Director  
Geriatric Medicine, Faculty of Medicine

Committee Members:

Dr. Elizabeth Boustcha (Co Investigator)
Head, Section of Geriatric Medicine,  
Faculty of Medicine

Dean Care
Acting Dean,  
Faculty of Nursing

Dr. David Collins
Dean,  
Faculty of Pharmacy

Dr. Dean Sandham
Dean,  
Faculty of Medicine

Dr. Emily Etcheverry
Head,  
School of Medical Rehabilitation

Leanne Matthes
Manitoba Health

Terry Goertzen
Manitoba Health

Norm Kasian
President,  
Riverview Health Centre

Dr. Michel Tetreault
CEO,  
St. Boniface General Hospital

Real Cloutier
COO,  
Deer Lodge Centre

Jim Hamilton
Secretariat,  
MB Seniors & Healthy Aging

Proposal Version 1.2: September 18, 2006
VII. Research Methods

i) General Overview:

Researchers plan to carry out this project in three geriatric Day Hospital sites throughout Winnipeg (St. Boniface Day Hospital, Riverview Day Hospital and Deer Lodge Day Hospital), with the following overarching methodological activities:

1. Design an IEGC learning module to be implemented in the day hospital setting during a 4 week experiential block. The “learning module” will contain didactic and interactive learning opportunities around seven core competencies for interprofessional teaming (Student intervention). For a detailed outline of the student learning module please see page 18.

2. As part of the traditional experiential block at the participating day hospital sites and using the IEGC learning module, provide approximately 15 hours of training and testing on interprofessional teaming and collaborative patient centred practice for senior health discipline students in Occupational Therapy, Physiotherapy, Pharmacy, Nursing and Medicine. During the experiential block, opportunities will be generated for students to practice the IEGC skills together, as an interprofessional team, with standardized and real life clients.

3. Conduct educational activities around interprofessional teaming for faculty champions, and clinical team members throughout the IEGC program (Faculty/Clinical Team intervention).

4. Communicate on a quarterly basis with a Steering Committee comprised of Senior Administrators (Deans and CEOs), government, older persons, and students to inform them of project progress, obtain feedback, and address sustainability issues (Steering Committee intervention).

5. Recruit and obtain written informed consent from all participants (student learners, clinical team members, faculty champions, steering committee members, and health care clients) as well as control group members for the student learner, clinical team, and faculty champion participant groups.

6. Conduct pre and post intervention testing around knowledge of core teaming competencies, attitudes toward teaming, and teaming skills from learners and controls. Depending on the participant group, the intervention may involve educational sessions, the IEGC experiential block, the IEGC program overall, and/or meetings.

7. Collect qualitative information from participants regarding attitudes/behaviours toward teaming, perceptions of the IEGC learning module and IEGC program.

8. Analyze data using both qualitative and quantitative approaches.

9. Professional and scholarly dissemination of study findings as well as dissemination to all participant groups.
ii) Research Design

The Interprofessional Education Joint Evaluation Team (JET; 2002) in their systematic review of studies relating to interprofessional education, found that studies based on quantitative data and limited interpretation were dominant, indicating a strong need for more interpretive and critical studies. The JET suggests that there would be much to gain from well conducted qualitative studies, or since most interprofessional education initiatives are multi-faceted, a well designed mixed method would be advantageous. Based on information such as this, and from a desire to obtain the most comprehensive information possible from this study, the researchers are proposing a mixed methods design, converging quantitative and qualitative data collection/analysis procedures. More specifically, the researchers are proposing a “Concurrent Triangulation Strategy, which utilizes two different methods in an attempt to confirm, cross validate or corroborate findings within a single study” (Creswell, 2003).

The traditional concurrent triangulation method is considered advantageous because it typically results in well validated and substantiated findings. These methods also relate well to the proposed study’s shorter data collection phase of 2 years (Creswell, 2003). By using quantitative and qualitative methods, researchers anticipate being able to offset any potential weakness inherent with one method, with the strengths of the other. Limitations of this type of inquiry generally include a greater effort and expertise on the part of the researcher to adequately use both methods to study a phenomenon, often requiring the development of a research team. It may also be difficult to compare the results using two different analyses and problems may occur when a researcher is required to resolve discrepancies in study results. These issues can often be addressed by a research team with various backgrounds and expertise such as the IEGC Program Planning Committees.

iii) Study Timeline

The IEGC program received confirmation of funding on June 29, 2005, and subsequent activities involved the hiring of program staff (a program coordinator, a research technician, an office assistant, and a pharmacist); and program development including the creation of learning and evaluation tools, examination of faculty/department schedules, and the preparation of an ethics submission for review by the University of Manitoba, St. Boniface General Hospital, Deer Lodge Centre, and Riverview Health Centre research review/ethics boards. Please see Figure I for a schematic of the proposed study activities and corresponding timelines. It is important to note that due to the iterative nature of the proposed program, study activities will occur simultaneously, rather than sequentially.

**Figure 1 – Study Activities and Timeline**

<table>
<thead>
<tr>
<th>Program Development and Ethical Approval</th>
<th>Recruitment</th>
<th>Data Collection</th>
<th>Data Analysis</th>
<th>Report Writing and Dissemination</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 05 – November 05</td>
<td>December 05 – August 07</td>
<td>January 06 – December 07</td>
<td>November 07 – February 08</td>
<td>January 08 – March 08</td>
</tr>
</tbody>
</table>

Proposal Version 1.2: September 18, 2006
iv) Study Participants

This is a large scale study interested in capturing the experiences and perspectives of all groups that are involved in the development and implementation of an interprofessional education experience for pre licensure students in a post secondary environment. Participants for this study fall within five categories:

i) Students: Students in advanced level training of five health disciplines (Pharmacy, Medicine, Occupational Therapy, Physiotherapy, and Nursing), that are participating in an experiential block and the IEGC learning module, in one of the day hospital sites. Also, their controls who provide signed, informed consent to participate in the research will be considered study participants.

ii) Faculty Champions: As part of the proposal to Health Canada, the co-investigators identified members of the participating faculties that had a particular knowledge or experience in interprofessional education and/or geriatrics and invited them to participate in the development and implementation of the program. Each faculty champion and his/her control who provide signed, informed consent to participate in the research component of this study will be considered study participants.

iii) Clinical Team Members: As part of the preexisting (traditional) experiential blocks/practicums, students are assigned “preceptors” (health professionals from their originating discipline), that are currently practicing in the geriatric day hospitals. It is expected that a student placed in this clinical environment during an IEGC experiential block will have learning opportunities modeled by the full interprofessional team which extends beyond his/her disciplinary boundary. Therefore, this study will examine the concept of preceptor as it relates to the discipline specific mentor and the entire clinical team that the student practitioner has the opportunity to observe. All clinical team members and a control team from a similar clinical site who provide signed, informed consent will be considered study participants.

iv) Institutional Administrators, students/senior representatives (Steering Committee): Each Dean and/or designate of the participating faculties, as well as the CEOs/COOs of the participating institutions, representatives of government, older adults, and students, have agreed to sit on a Steering Committee for the program. The Steering Committee will be informed on the progress of the project, provide feedback, and discuss sustainability issues. Steering Committee members who provide signed, informed consent will be considered study participants.

v) Health Care Consumers (Clients/Patients): With the increasing focus on the client/patient as an active member of the interprofessional team, the researchers feel it is important to collect information from individuals accessing services in the day hospital environment, regarding their perceptions/experiences while being involved a program teaching specific interprofessional team care. Cognitively intact clients that provide signed, informed consent will be considered study participants.

vi) Key Informants (clients/informal care providers): As an additional activity designed to include the perspective of the client (reinforcing the need to be client centered), the researchers are proposing a client focused validation activity. This activity, consisting of a series of key informant interviews, will collect information from participants selected for their representativeness of the clients receiving services in the day hospital environment who will not be directly involved with the interprofessional education experience. Cognitively intact clients that provide signed, informed consent will be considered study participants.
vii) **Educational Validation (Student Representatives):** These groups will consist of “student leaders” from each discipline (Chief Medical Residents, Senior Sticks, or student council representatives) as identified by the faculty champions. Student representatives that provide signed, informed consent will be considered study participants.

viii) **Program Validation (Clinical Team):** These groups will consist of discipline specific preceptors and clinical team members at the three participating Day Hospital locations. Interested clinical team members who provide signed informed consent will be considered study participants.

v) **Sample Size Calculation**

The sample size calculation for the quantitative aspect of this project was based on a before/after and test/control comparison involving a 1:1 matched student sample (matched by discipline, age, gender, and level of training), and the findings of one study where the “Attitudes Toward Health Care Teams Scale’ was administered to health professionals (Heinemann, et al, 1999). The mean score for the 14 item Quality of Care/Process subscale administered to social workers was 57.5±8.2. Assuming 80% power, and $\alpha = 0.05$ and a 10% change as significant, the required sample size is $n = 40$ students per group (test and control). Our target over the 2 years of project implementation is 60 test students with 60 controls.

vi) **Research Questions**

The JET (2002) modified Kirkpatrick’s ‘Model of Educational Outcomes’ with the development of two additional outcomes: i) changes in organizational practice and, ii) benefit to patients/clients. The JET model identified six areas of educational outcomes, which clearly mirrored the research questions of the IEGC project. For implementation in this initiative, the outcomes have been classified as six general evaluation areas; data collection process and instruments have been identified under each of the sub headings and will be discussed in the study procedures section of the proposal (pages 21 to 31).

Based on this model, the researchers have identified the following research questions within the six general research areas:

I. **REACTION**

Questions under this evaluation area are intended to collect information regarding the participants’/learners’ perspectives of the IEGC experience and its interprofessional nature.

- What were participants’ overall perceptions of the experience?
- What were their perspectives on the content of the educational materials?
- Did participants find this to be a valuable experience?
- Would participants recommend initiatives of this type to other students and professionals?
- What were the best features/worst aspects of the program?
- What changes to the experiential block would the participants recommend?

II. **ATTITUDES/PERCEPTIONS**

The researchers are interested in understanding changes in reciprocal attitudes or perceptions toward interprofessional teaming within, and between, participant groups.
• What changes occurred in participants’ perceptions of teams and interprofessional teaming?
• What changes occurred in participants’ attitude/perceptions of other disciplines?

III. ACQUISITION OF KNOWLEDGE AND SKILLS
Researchers are primarily interested in changes in participants’ knowledge regarding interprofessional collaboration and specifically to the competencies required for effective interprofessional teaming.
• Did participants’ level of knowledge change pre/post the educational experiential block?

IV. BEHAVIOURAL CHANGE
Questions around behavioural change identify an individual’s transfer of interprofessional learning to the practice setting and changes in professional practice:
• What are indicators of behavioural change related to interprofessional teaming?
• What team behaviours do participants exhibit after the experiential block that they did not prior to the training?
• What changes in behaviour are exhibited at the follow-up stage as a result of the IEGC program?

V. CHANGE IN ORGANIZATIONAL PRACTICE
In accordance with the overall project goals and objectives, the researchers are interested in wider changes within the organizations identified and delivery of care.
• What changes were implemented at the institution/clinic/team level?
• Are perceptions of team function different pre initiative to post initiative?
• What are indicators of a successful initiative?
• What indicators of sustainability are evidenced by this program?

VI. BENEFIT TO PATIENTS/CLIENTS
The clinical sites selected for inclusion in the IEGC program are already providing team based, collaborative care for their clients. Therefore, the researchers are primarily interested in the client’s awareness and perceptions of the IEGC initiative.
• What perceptions did the patient/client have of the interprofessional education experience?
• Was participation in this initiative burdensome to the client?

vii) IEGC Learning Module

Students involved in the research components of the Interprofessional Education in Geriatric Care Program (IEGC) will be invited to participate in a learning module specific to interprofessional teaming situated in a geriatric day hospital. The initiative will be approximately 15 hours of teaching and testing, using a combination of didactic and interactive learning strategies. The proposed program is outlined below with further explanation of the types of activities and evaluative methods that will occur during the experiential block.

The goals for the educational experience are:
1. Learners will be able to demonstrate understanding and management of the complex needs of older adults (including emotional, environmental, financial, psychosocial, etc.), recognizing the need for an interprofessional team;
2. Learners will have the opportunity to learn in the clinical context, along with skill development and experiential learning regarding interprofessional teaming;

3. Through “real life” experiences, learners will develop the necessary competencies, key behaviours and attitudes that contribute to the objectives of interprofessional teaming. They will possess the knowledge and be able to demonstrate appropriate behaviours consistent with interprofessional teaming

Week One of the Learning Module:

Orientation Meeting
This first week of the IEGC program will include a voluntary 2.5 hour “orientation meeting” that will occur at a time that is convenient for students at each of the three participating day hospital sites, during which the following activities will occur:

i) "A Team Building IceBreaker"
The program planning committee feels it is important to start the IEGC learning module with a team building, "fun" activity that will exemplify the need for teamwork and all of its encompassing competencies. Other initiatives have implemented such activities (Gilbert et al. 2000) with success. This activity will allow the student learners to start the experiential block with a fun, social opportunity outside the context of the health care environment.

ii) Pre-Testing
For those student learners that agree to the research component, the "orientation meeting" will include pre-testing. Specifically, the researchers intend to collect pre-intervention data regarding: a) measures of attitude toward interprofessional education and teaming, and b) students’ knowledge regarding the competencies necessary for interprofessional teaming.

iii) Introduction to the Journaling Assignment
As a self-reflection opportunity of the educational experience, and as a measurement tool, students will be asked to complete a journal assignment during their time in the IEGC learning module. Journal entries will occur on predetermined dates (approximately 5 over the course of the experiential block), with a set of standardized questions. The journal will be completed on days that the students have interprofessional team experiences. Questions will focus on a variety of topics (nature of the interaction, types of teamwork, questions regarding leadership roles, and conflict resolution), as well as offer the student an opportunity to provide other comments and notes regarding their experiences in the IEGC educational experience.

Weeks Two through Four:

Interactive Discussion Sessions (four educational sessions anticipated)

The second and third weeks of the educational initiative will focus on providing student learners with education regarding the outlined competencies through interactive and cooperative learning opportunities. It is anticipated that students will have an opportunity to learn about the core competencies and have opportunities throughout the week to apply and practice the skills discussed.

For the purposes of teaching interprofessional teaming, the IEGC Project Team has identified the following as being necessary competencies for learners to exhibit:
goal directedness (a clear and recognizable idea that can serve as the central focus for team work)
disciplinary articulation (participants must be aware of, and understand each other’s roles)
flexibility (open mindedness, willing to experience new modes of interaction, acceptance of changes in authority and status)
conflict resolution (need to develop communication skills, capabilities and readiness to handle conflict)
communication (effective communication within disciplines and between disciplines)
team dynamics (awareness of different stages of team development)
leadership (leadership for different tasks may rotate among team members as the need and focus changes – students should be prepared to undertake this role)

The Real World Client (one to three client care plans anticipated)

It is intended that during the four week experiential block period, student learners will be asked to work through the care process with one or more actual day hospital clients. It is anticipated that the student learners, with modeling from the preceptors, will work through the intake, goal setting, care planning, treatment, case review, and discharge planning process as an interprofessional team. It is expected that by the end of the exercise, the student learners will present their case materials to the clinical team for feedback.

“Wind-Up”
This final activity of the IEGC program will include a 2.5 hour “wind up meeting” that will occur at a time that is convenient for students at each of the participating day hospital sites, during which the following activities will occur:

i) “A Team Building Activity”
Similar to the icebreaker activity, this final team building activity will provide a fun, social opportunity for the student learners to close the experiential block on a positive note. It will also allow the student learners to self reflect and the researchers to observe how team interaction may change as a result of the program. This will also allow the students/residents an opportunity to discuss their perspectives on the program, giving the researchers feedback for future experiential blocks.

ii) Post-testing
For those student learners that agree to the research component, the “wind-up meeting” will include post-testing. Specifically, the researchers will collect post-intervention data regarding: a) measures of attitude toward interprofessional education and teaming, and b) students’ knowledge regarding the competencies necessary for interprofessional teaming, and c) program/experience evaluation with a self reflective component.

iii) Letter of participation
As a gesture of appreciation for their involvement in the IEGC experiential block, student learners will receive a letter that outlines their participation in this interprofessional teaming experience and the skill set acquired (Appendix D).


viii) Study Procedures

This section will outline the study procedures as they relate to each of the participant groups. Due to the complex design of the proposed research project, as well as the depth and breadth of information sought, each of the outlined participant groups will engage in a series of activities designed to collect information regarding the six identified research areas (pages 17 and 18). Detailed descriptions of the data collection instruments included in this section can be found on pages 31 through 37. A matrix that outlines the participant groups, research area, and the specific instruments or techniques that the researchers intend to implement for each group can be found in Appendix E.

Study Procedures: Validation of the Educational Content and Research Process

Recognizing the need to include the student learner’s perspective in the development and implementation strategies for this initiative, the researchers are proposing to conduct a validation meeting with purposefully selected student representatives from the participating faculties. The students will be Chief Medical Residents, Senior Sticks, or student council representatives. Faculty champions in each discipline will contact the student representatives and provide them with an information letter and consent form (for a copy of all introductory letters and consent forms, please see Appendix F). If students are interested in participating in the validation meeting/focus group, they will be asked to contact the research technician.

These students (10 in total: 2 from each discipline) will be invited to participate in a one hour audiotaped focus group held over lunch or dinner. The research technician will obtain informed consent from the student representatives prior to any data collection. After receiving consent, a research team member will lead the group through discussion regarding the proposed education process and research activities. Researchers are specifically seeking information on students’ overall impressions of the proposed educational experience, the appeal the program might have with students, potential difficulties researchers might have with implementation, and strategies to overcome these difficulties. Researchers would also like to gather feedback on the content of the learning module, specific to the workload and perceived value of the educational experience.

Acknowledging the importance of clinical team involvement throughout the IEGC program, the researchers propose to conduct a series of three validation meetings with clinical team members at each of the participating Day Hospital sites. A member of the research team will contact the clinical team managers at each site to determine a convenient time and date prior to implementation of the IEGC Learning Module. Clinical Team Managers at the sites will distribute introductory letters and consent forms to interested team members (for a copy of all introductory letters and consent forms please see Appendix F). A member of the research team will obtain signed, informed consent prior to any data collection.

Participating clinical team members will be invited to attend a one hour audiotaped focus group scheduled at a time that is convenient for team members at each of the three sites. Once consent is received, a member of the research team will lead the group through a discussion regarding the proposed IEGC Learning Module and research activities. Researchers are specifically seeking information on clinical team members’ impressions of the proposed educational experience, potential difficulties with implementation, and strategies to overcome these difficulties. Researchers would also like to gather feedback on the workload and perceived value of the IEGC experience.

Proposal Version 1.2: September 18, 2006
To reinforce the need to be client centred, a third validation activity designed to include the perspective of the client, is proposed. This activity, consisting of a series of key informant interviews, will collect information from participants selected for their representativeness of the client receiving services in the day hospital environment. The researchers are proposing to conduct key informant interviews with three older adults (n=9) from each of the participating day hospitals. Researchers are primarily interested in collecting feedback from the participants’ regarding the proposed educational module and study procedures. Questions will focus on the client’s impressions of the educational experience, what potential issues may arise in the involvement of clients, with potential solutions outlined. Researchers are also very interested in the key informants’ perspectives on perceptions of burden – will clients feel overburdened by their involvement in the IEGC learning module?

The research technician will contact the site managers and case managers at each of the participating facilities, providing them with an overview of the process and anticipated activities, as well as inclusion and exclusion criteria. If the case manager is amenable to assisting the researchers in recruitment, the research technician will send copies of an introductory letter and consent form to the day hospital (for a copy of all introductory letters and consent forms, please see Appendix F). The case manager will approach clients of the day hospital, briefly explain the study activity and ask the client if they would be interested in meeting with the research technician discuss the IEGC project and proposed learning module. If the client agrees, the research technician will attend the day hospital at a mutually agreed upon time (between the client and the research technician), review the activity and answer any questions the client may have. After obtaining informed consent, the research technician will conduct the interview, audiotaping the proceedings. If the client chooses not to be audiotaped, the interview discussions will be captured in detailed notes.

Study Procedures for the Student Participant Group

Intervention
Student learners from 3 to 5 different disciplines (a combination of: Medicine, Pharmacy, Nursing, Occupational Therapy, and Physiotherapy) will participate together in a four week experiential block which will include completion of the IEGC learning module. The IEGC learning module will focus on the seven identified core competencies required for effective interprofessional teaming and will involve approximately 15 hours of activities (learning and testing). Details of the IEGC learning module can be found on pages 18 through 20.

Student Participant Recruitment
As part of their pre-licensure training, students from all participating health disciplines are required to complete a minimum 4 week experiential block rotation. An IEGC learning module will only be implemented when student learners from at least 3 to 5 different disciplines (a combination of: Medicine, Pharmacy, Nursing, Occupational Therapy, and Physiotherapy) are available to participate together in the 4 week block. Therefore, researchers plan to collect information from students that have already been assigned to clinical placement (i.e. practicum placement) at one of the participating day hospitals (St. Boniface Hospital, Deer Lodge Centre, Riverview Health Centre), between January 2006 and November 2008.

To ensure a consistent recruitment process for all participating disciplines, ensuring faculty members are not associated in any way with recruiting students from their faculties to IEGC activities, an IEGC Introductory/Recruitment Letter (see Appendix V for a copy of the letter) will be distributed to students/residents. This letter and attached project summary (see Appendix X for a copy) will outline the goals and objectives of the IEGC program as well as the process students should follow if they are interested in
participating in the IEGC educational experience. Due to the unique factors in each faculty/school, the exact procedures for assigning students to the experiential blocks and subsequently the IEGC program vary slightly for each faculty/school and as such, are outlined below:

**Medical Resident Learners and Controls:**
The geriatrics rotation consists of a 4 week clinical exposure offered 12 times during the academic year. There may be more than one resident in the rotation, generally from different programs, e.g. one Internal Medicine trainee, one Family Medicine trainee. Rotation assignments are completed by the home programs in May/June preceding the start of the academic year (July 1) with very few mid-year changes.

Currently the Geriatrics rotation is an elective for all Internal and Family Medicine residents. While they must actively choose to participate in the rotation, the timing of the rotation is controlled by the administrative staff of the Internal or Family Medicine programs. Therefore, neither the geriatrics program nor the resident controls the timing of the rotation.

To increase awareness of the IEGC program, a copy of the IEGC introduction/recruitment letter and project summary will be sent to all residents via the Office of the Section of Geriatric Medicine. Residents assigned to the geriatrics rotation during times when the IEGC modules are taking place will be invited to participate in this educational experience. Should they decline, they will be assigned to a non participating site and undertake all of the usual rotation activities. Individuals who are assigned to a geriatrics rotation at a time when the IEGC learning module is not taking place will be approached to serve as controls. Control group recruitment letters will be distributed to all residents located at non IEGC clinical placement sites (please see Appendix W for a copy of the letter). Letters will be sent by email via the Office of the Section of Geriatric Medicine approximately four weeks prior to the start of an IEGC experiential block. Those residents who are interested in participating as a control group member will be asked to contact the IEGC research technician for more information.

**Nursing Student Learners and Controls:**
Students in the Faculty of Nursing must be registered in the final clinical practicum course (course number: 49.428), the last required course before graduation. Traditionally, this course is a 12 week experiential course in an area of interest and facility of choice. Students submit 3 choices to the course leader and from there the participating agencies and Unit Managers are contacted by the course leader. The course leader was approached by an IEGC faculty champion (Fiona Jenson) in July of 2005 about the IEGC learning experience and how it might fit into the traditional nursing experiential block. It was decided that interested nursing students would participate in the 4 week IEGC learning module, either at the beginning or the end of their existing 12 week experiential block.

All fourth year nursing students, registered in the final practicum course, will be approached during a regularly scheduled class time by the faculty champion to discuss the IEGC project goals and learning opportunities available for students who are interested in gerontology and interprofessional education. During this discussion, the faculty champion will distribute the IEGC introduction/recruitment letter and project summary. Interested students will be asked to contact the course leader for more information about how they can participate in the IEGC program.

Of the students who express interest, the course leader will determine which students are eligible based on predetermined criteria which should be invited to participate in the IEGC learning module. The remaining students will be approached to participate as controls. Approximately four weeks before the beginning of an
IEGC experiential block, control group recruitment letters will be distributed to all students enrolled in course number 49.428 by the IEGC research technician during a predetermined class time (please see Appendix W for a copy of the letter). Those students who are interested in participating as a control group member will be asked to contact the IEGC research technician for more information.

*Occupational Therapy Student Learners and Controls:*
Occupational Therapy students must be registered in the at least one of the following fieldwork courses: Intermediate Fieldwork 1 (course number: 168.640), Intermediate Fieldwork 2 (course number: 168.760), or Advanced Fieldwork (course number: 168.780). To determine placement sites for the field work courses, a list of placement location offers is distributed to qualifying occupational therapy students asking them to indicate their top 5-6 locations of choice. Students are encouraged to actively participate in indicating their preferences for experiential placements, according to the accreditation standards and U of Manitoba guidelines. These guidelines will be used by the Academic Fieldwork Coordinator to make final determinations about placement assignment.

Following the above process, students will be informed (in writing) of the placement opportunity at the participating IEGC day hospital(s) when the list of placement offers is distributed. A comment box next to the placement offer will indicate that this particular placement offers a unique learning experience and that students are encouraged to contact the IEGC research technician, if they would like more information prior to indicating a preference for the experiential placement containing the IEGC learning module. A copy of the IEGC Introductory/Recruitment Letter will also be placed in the Fieldwork Site Profile (a binder accessible by students which contains all of the placement offers for a particular time period). Students who are interested in participating in an IEGC experiential block will be instructed to indicate the participating day hospital site as their preferred placement opportunity.

Due to a limited number of placement offers, it is possible that a student may be assigned to the experiential placement site containing the IEGC learning module even if it was not their preferred. If this happens, it is possible that the student may choose not to participate in the IEGC project.

Controls will be recruited from occupational therapy students who complete their practicum placement at a non-IEGC participating site. Control group recruitment letters will be distributed to all eligible occupational therapy students approximately four weeks prior to the start of an IEGC experiential block via student mailboxes placed within the occupational therapy department (please see Appendix W for a copy of the letter). Those students who are interested in participating as a control group member will be asked to contact the IEGC research technician for more information.

*Pharmacy Student Learners and Controls:*
Pharmacy students elect their top 3 location preferences and/or their areas of interest and every effort is made to assign students to his/her top preference. The students who are assigned to the participating day hospital sites will be invited to participate in the IEGC learning module. The IEGC introduction/recruitment letter will be distributed by the placement coordinator to students placed at participating day hospital sites. Students who are not placed at one of the participating day hospital sites will be asked to participate as members of the control group. Control group recruitment letters will be distributed to eligible students by email, via the Faculty of Pharmacy general office approximately four weeks prior to the beginning of an IEGC experiential block (please see Appendix W for a copy of the letter). Students who are interested in taking part as control group participants will be asked to contact the IEGC research technician for more information.

Proposal Version 1.2: September 18, 2006
Physiotherapy Student Learners and Controls:

In early November, the clinical education coordinator will send out requests to all potential sites for offers to take students for the upcoming period (Feb-Aug). All eligible students, registered in the Neurological Disorders course (course number: 167.388), will be approached during a regularly scheduled class time by the faculty champion to discuss the IEGC project goals and learning opportunities available for students who are interested in gerontology and interprofessional education. During this discussion, the Faculty Champion will distribute the IEGC introduction/recruitment letter and project summary. In early December, the list of offers (including the IEGC placements) will be posted for viewing by eligible students. At this time, physiotherapy students who are registered in the Clinical Education in Neurological Disorders course will submit their top 6 site preferences based on the list of offers to the clinical education coordinator, who will allocate the students to the sites, based on multiple factors (e.g. their site and placement-type history). The IEGC placements will be added to the list of site offers from which students will make their selection and students who are interested in the IEGC placements will be asked to indicate their preference for one of the participating day hospital sites at this time. In early February, the allocation of the neuro-geriatric placements will be finalized and posted to students. Students who are not placed at one of the participating day hospital sites will be asked to participate as control group members. Control group recruitment letters will be distributed to all eligible physiotherapy students approximately four weeks prior to the start of an IEGC experiential block via student mailboxes placed within the physiotherapy department (please see Appendix W for a copy of the letter). Those students who are interested in participating as a control group member will be asked to contact the IEGC research technician for more information.

Students from the five identified disciplines will be informed by their faculty champions that the IEGC educational activities may occur during their experiential block placement. Students who are placed at one of the participating IEGC clinical sites during a time when an IEGC experiential block is scheduled will be approached by the IEGC Research Technician and at that time will be informed of the research component of the project. Interested students will be contact by the research technician approximately 2 weeks prior to the beginning of the experiential block and sent recruitment materials, consent forms, and appropriate covering letters (for a copy of all introductory letters and consent forms, please see Appendix F). The research technician will follow up with students to answer any questions they may have and inform them of the orientation meeting. Written informed consent will be obtained by the research technician at the beginning of the orientation meeting, with a copy of the signed consent form provided to the consenting student. Intervention testing will not commence until signed, informed consent is received. Students who do not wish to participate in the research component of the experiential block will still be able to attend the IEGC learning modules, however, they will be excluded from evaluative components coinciding with the experience.

Evaluation

Researchers plan to collect pre and post intervention data over each IEGC experiential block that occurs between January 2006 and November 2008. A 6 month post experiential block survey will also be conducted. Please refer to the Evaluation Matrix (Appendix E) for a schematic outline of the evaluation materials to be administered to student participants.

After obtaining informed consent at the orientation meeting, pre-testing will occur, which will include completing: an attitudes/team skills questionnaire and a knowledge questionnaire. For the remainder of the orientation meeting, students will participate in educational activities. At the end of the meeting, students will be provided with their journaling activity and readings package. The journal activity is to be filled out three
times during the learning module on a pre-scheduled day (to be determined) when IEGC interactive sessions occur. Pre-testing for student learners who are unable to attend the orientation meeting will take place during the first one hour learning module in week one. Separate one on one meetings will take place between control students and the IEGC research technician at a time that is convenient for both parties. Control student participants will complete the same attitudes/team skills questionnaire and knowledge questionnaire.

As part of the 4 week learning module, students will participate in a complete team work-through of either a standardized or real world client (depending on students’ learning needs) in the day hospital setting. The complete client work-through will include: the intake, goal setting, care planning, treatment, case review and discharge planning process as an interprofessional team. Students will be observed during these activities by a member of the research team, who will document the student teams’ functioning using a standardized observation tool (Team Observation Scale) and an audiotape recorder. The data collected from these observations will be analyzed using qualitative methods.

Immediately following the 4 week experiential block, students will attend a wind-up meeting that will follow the same format as the orientation meeting. Post-testing will occur at the wind up meeting and will include: an attitudes/team skills questionnaire, a knowledge questionnaire, and the post experiential block evaluation form. Students who are unable to attend the wind-up meeting will be sent a copy of post test questionnaires with a self addressed, stamped envelope for return to the IEGC office. Control student participants will complete the same attitudes/team skills questionnaire and knowledge questionnaire at a separate one on one meeting.

6 months following the experiential block, the research technician will send follow up materials to participating students (including controls), which will include: the 6-month follow-up reflective survey, the attitudes/team skills questionnaire, and the knowledge questionnaire. In the event that the 6 month follow-up materials are not returned to the IEGC office two weeks from the mailing date, students will be sent a reminder letter (Appendix U). Reminders will be sent a maximum of three times before the data is considered lost. Upon receipt of the follow-up materials, the participant’s honorarium will be mailed to them. If participants indicate they would like them, a copy of the study results will be mailed out (March 2008).

**Study Procedure for the Faculty Champions**

**Intervention**

Faculty champions participate in bi-weekly meetings to develop and implement the IEGC learning module. During these meetings, literature regarding interprofessional teams and collaborative patient centred practice are distributed to each member with the expectation that she/he reads the information and contributes in a meaningful way to the program’s development.

Educational training, specific to interprofessional teaming skills will be provided to the faculty champions on an ongoing basis throughout the duration of the IEGC program (December 2005 to January 2008). At this time, researchers have not determined what topics would most benefit faculty members. Researchers will used a variety of feedback techniques with faculty team members to solicit they type of information required to determine what their learning needs are and develop appropriate educational opportunities. Therefore, these will be developed at a later date. Please note that copies of the educational session content, time frames and potential process evaluation tools will be provided to appropriate ethics review committees for review and approval prior to implementation.
Faculty Participant Recruitment

Faculty champions were selected from each participating faculty/department based on their interest/expertise in interprofessional education and/or geriatrics. Faculty champions were instrumental in the design of the project proposal and by virtue of their participation in program development; they have agreed to be approached as study subjects. The faculty champions will assist the research technician in identifying a member from the faculty that is not participating in the IEGC program to serve as a control participant. The research technician will approach this faculty member, inviting them to participate in the proposed research.

Consent forms and appropriate covering letters (for a copy of all introductory letters and consent forms, please see Appendix F) will be sent to the faculty champions (and controls) in late December 2005, with the intention of obtaining informed consent from interested faculty members in January 2006. The research technician will be responsible for communicating with, and obtaining informed consent from these participants. Intervention and testing will not commence until signed, informed consent is received.

Evaluation

Researchers are proposing to collect research information from the faculty participants beginning approximately December 2005 until March 2008. This includes an ongoing log of activities, pre and post education session, and mid and post program evaluations. Please refer to the Evaluation Matrix (Appendix E) for a schematic outline of the evaluation materials to be administered to faculty participants and their controls.

Throughout the duration of the IEGC program, Faculty Champions members will complete diary sheets to track any IEGC related program activities in which they are involved. Upon completion of the IEGC program (anticipated January 2008), faculty participants will complete a program evaluation form and self reflective questionnaire. The attitudes/team skills questionnaire will be administered to both the faculty champions and the control participant group. Study results will be disseminated in March 2008 and all faculty participants will receive a copy.

Study Procedures for the Clinical Team

Intervention

To become familiar with the student specific educational material, clinical team staff will be provided a package containing all the education materials the student learners will receive. During week two of the student experiential block, the clinical team will be asked to identify between one and three clients that they feel would allow for good team based discussions and learning opportunities amongst the students learners, in the context of interprofessional education in geriatric care. Clinical team members and preceptors will be asked to provide guidance to the student team during the “workup” of these clients. Throughout the duration of the experiential block, the clinical site team will engage in regular team meetings, act as preceptors for discipline specific students, model team skills, and perform their typical standard of care. Please note that there will be no change in the expected daily activities of clinical preceptors or clinical site team members, nor to the quality of care offered to clients as a result of involvement in the IEGC program. Please note that discipline specific preceptors are asked to provide additional mentorship to the students regarding interprofessional teaming.

Additionally, educational training opportunities specific to interprofessional teaming skills will be provided to the clinical team members. It is anticipated that these sessions will occur over multiple occasions throughout the
duration of the IEGC program (dates to be determined). At this time, the researchers have not determined what clinical team training topics would most benefit the clinical team. Researchers will use a variety of feedback techniques with faculty team members to solicit they type of information required to determine what their learning needs are and develop appropriate educational opportunities. These opportunities will be developed at a later date. Copies of the educational session content, time frames and potential process evaluation tools will be provided to appropriate review committees for review and approval prior to implementation.

Clinical Team Participant Recruitment
Preceptor recruitment procedures vary between disciplines and are described below:

Geriatricians rotate their clinical responsibilities and therefore, the individual geriatrician that functions as preceptor in a particular day hospital will vary from rotation to rotation. The assignment of a preceptor takes into account multiple factors including: scheduling of teaching sessions, academic responsibilities, preceptor burn out, conference leaves, vacations, and administrative responsibilities. All geriatricians providing clinical support to day hospitals are likely to function as a preceptor at one time or another during the duration of the IEGC program (January 2006 to March 2008). Subsequently, all geriatricians providing clinical support to participating geriatric day hospitals will be approached for recruitment into the IEGC program.

The remaining participating disciplines (pharmacy, nursing, physiotherapy, and occupational therapy) have permanent clinical appointments to one site. As an example, the physiotherapy preceptors at each of the participating sites can be expected to remain the same throughout the duration of the IEGC program, barring unexpected staffing changes. The faculty champions for the aforementioned disciplines will contact the discipline-specific managers at each of the three participating day hospitals and secure the necessary number of preceptors required for each IEGC learning module block time.

Recruitment of Preceptors and Clinical Team Members to the Research Project
Once the preceptors have been identified, faculty specific preceptors and the clinical team staff will be approached at the clinical site by the research technician approximately two weeks prior to the beginning of an experiential block. The clinical team functioning at the Seven Oaks Day Hospital will be approached as a possible control team. Consent forms and appropriate covering letters will be provided at this time (for a copy of all introductory letters and consent forms, please see Appendix F), allowing sufficient time for review and questions. The research technician will return to the clinical site prior to the beginning of the program (January 2006, at a time that is convenient for staff at each of the three sites) and obtain written informed consent, with a copy of the signed consent forms left for each participating clinical team member. Intervention and testing will not commence until signed, informed consent is obtained. The informed consent/testing process will continue for new staff members at clinical sites; 1) to foster the involvement of all clinical team members if they choose to participate, and 2) to account for staffing changes.

Evaluation
Researchers are proposing to collect information from the clinical team staff, from approximately December 2005 until January 2008. Testing will include pre and post experiential block, and post clinical team specific educational session. As well as, an ongoing log of program related activity, Bi-annual personnel audits and team functioning assessments, and a post program evaluation. Please refer to the Evaluation Matrix (Appendix E) for a schematic outline of the evaluation materials to be administered to clinical team participants.

Proposal Version 1.2: September 18, 2006
Pre-testing will take place after informed consent is received at a time outside clinical hours that is convenient for the clinical team at each participating site. Pre-tests administered to both the clinical team and control participant groups will include: the attitude/team skills questionnaire, and the knowledge questionnaire. Immediately following the experiential block (week four), at a time convenient for staff at each of the three sites, participating clinical team members will complete an experiential block evaluation form.

For the duration of the IEGC program, clinical team members will be asked to fill out diary sheets documenting any IEGC program related activities with which they are involved. Diary sheets will be distributed by the team managers at each clinical site and will be filled out by participating clinical team members, whenever a change in their typical activity occurs as a result of the program. For example: attending a lecture on interprofessional teaming, watching an interprofessional teaming video etc.

Four times over the course of the program (every six months), clinical team managers will be asked to provide researchers with a “snapshot” of clinical staffing levels and team structure. The “personnel audit” includes EFT and discipline changes of clinical staff. No personal information or identifiers will be collected. Also at this time, clinical team meetings will be observed and documented by trained external observers with an expertise in teaming, with the data analyzed using qualitative methods with feedback provided to the clinical team. All observations and feedback will be administered by a non-faculty associated observers.

Upon completion of the IEGC program (anticipated January 2008), participating clinical team members will complete the program evaluation form and the self reflective questionnaire. The attitudes/team skills questionnaire, and the knowledge questionnaire will be completed by both the clinical team and control participant groups. As a gesture of appreciation for their involvement in the IEGC experiential block, clinical team members will receive a letter acknowledging their participation in this interprofessional teaming experience (Appendix G). As well, study results will be disseminated in March 2008 and all participating clinical team members will receive a copy.

Study Procedures for the Steering Committee

Intervention
Steering Committee members (or an assigned designate) will attend quarterly meetings and participate in discussions regarding the progress of the IEGC program.

Steering Committee Participant Recruitment
Steering Committee members were identified and recruited during proposal development. As with the faculty champions, each member of the Steering Committee had the opportunity to review and contribute to the proposal. By virtue of their written endorsement of the project and their (or their designates’) willingness to serve on the Steering Committee they have agreed to be approached as study participants.

Consent forms and appropriate covering letters (for a copy of all introductory letters and consent forms, please see Appendix F) will be sent to committee members approximately 1 week prior to the December 2005 meeting, giving them sufficient time to review and ask questions about data collection procedures and the consent forms. Written, informed consent will be obtained by a member of the researcher team (not a participating member of the committee) at the beginning of the initial Steering Committee meeting, with a copy of the signed consent form provided to the consenting participating member. New members will be
approached about the research component of the IEGC program and consented at subsequent meetings, if necessary. Intervention and testing will not commence until signed, informed consent is obtained.

**Evaluation**

Researchers are proposing to collect information from the Steering Committee members, or their appointed designates, at each meeting from approximately December 2005 until March 2008. Please refer to the Evaluation Matrix (Appendix E) for a schematic outline of the evaluation materials to be administered to steering committee participants.

During the meetings, the committee members will be asked a set of standardized question regarding their perceptions of interprofessional education and for feedback on the progress and sustainability of the IEGC concept/initiative. The answers to these questions along with the meeting proceedings will be observed and documented using “field notes” (useful and reliable notes regarding the details of the research setting and activities).

Upon conclusion of the final meeting (Winter 2007), the committee members will be debriefed by a member of the research team and the themes developed from observational processes and standardized questions will be presented to the committee for member checking (ensuring the accuracy of the data). Study results will be disseminated in March 2008 and all members of the steering committee, including designates, will receive a copy.

**Study Procedures for the Client**

**Intervention**

Throughout the experiential block, the client will continue to participate in their regular day hospital activities with potential additional meetings with student team members. **Please note that students are supervised by their preceptors and student participation in the IEGC learning module will not influence clients’ care plans or treatments.**

**Client Participant Recruitment**

During the clinical block experience, the clinical team will be asked to identify clients that they feel would allow for good team based discussions and learning opportunities amongst the students learners, within the context of interprofessional education and teaming. The case manager will approach clients who are deemed capable (by the clinical team) to fully understand the consent form and actively participate in the research interview to request their participation in the educational component of team-based care for the students, and provide them with the introductory letter/consent form on behalf of the researchers (for a copy of all introductory letters and consent forms, please see Appendix F). For those clients, deemed unable to understand the consent form, but who could actively participate in the research interview; the designated decision maker for that person (proxy/family member) will be informed about the project and asked to sign the consent form on behalf of the older adult, and the client will be asked to provide a statement of assent recorded on audiotape. If the client is unable to understand the consent form and would not be able to actively participate in the research interview; researchers will approach the proxy/family member for that individual. The proxy/family member will be approached by the case manager and provided with a copy of the introductory letter/consent form on behalf of the researchers. If the proxy/family member is interested in taking part in the research interview, they will be asked to contact the research technician for more information.
After the third week of the experiential block, the research technician will contact the case manager to ask if the client would be interested in meeting to discuss their potential involvement in the research study. If the client has agreed, the research technician will attend the clinical site and meet with the client, explaining the research program to them and asking if they have any questions. At the point where the client/proxy has no more questions, the research technician will ask the client to participate in the research. If the client/proxy agrees, they will be asked to sign the informed consent form prior to data collection.

**Evaluation**

After obtaining informed consent, a member of the research team will conduct a short post-intervention interview (with either the client or proxy as per the client recruitment procedures), asking questions about the client/proxy’s awareness, perceptions of and attitudes toward the IEGC experiential block conducted at the site. Please refer to the Evaluation Matrix (Appendix E) for a schematic outline of the evaluation materials to be administered to client participants.

Study results will be disseminated in March 2008 and all participating clients and their informal caregivers (if requested) will receive a copy.

**ix) Data Collection/Instrumentation**

This section will provide an overview of the data collection tools/instruments, outlining what they measure in relation to each of the participant groups. Due to the complex design of the proposed research project, as well as the depth and breadth of information sought, there are multiple instruments per participant group. A matrix that outlines the data collection areas, which participant groups the researchers intend to collect data from each research area, and the specific instruments or techniques that the researchers intend to implement for each group can be found in Appendix E.

**The Attitudes and Team Skills Questionnaire:**

Participants’ attitudes and behaviour towards teaming in health care and team skills will be assessed using the **GITT entry and exit questionnaires** see Appendix H (Hyer, Flaherty, Fairchild et al, 2001). These questionnaires are a combination of both the Attitudes Towards Health Care Teams Scale (ATHCTS; Heinemann, Schmiitt & Farrell, 1994) and the Team Skills Scale (TSS; Hepburn, Tsukuda, & Fasser, 1996). Previous research has shown both the ATHCTS and TSS have been found to be reliable and valid measures of individual attitudes and perceived behaviours towards teaming and team skills, and both have been used extensively by various GITT programs (Heinemann, Schmiitt & Farrell, 1994; Hepburn, Tsukuda, & Fasser, 1996; Hyer, Flaherty, Fairchild et al., 2003). For the purposes of the present study, the ATHCTS and TSS will be used as a pre and post test measure to assess a change in participants’ attitude and perceived self behaviour due to involvement in the IEGC program.

**Data Collection Procedures**

**Students:**

The ATHCTS and TSS takes approximately 20 minutes to complete and will be collected during the orientation meeting of the student learning module and experiential block. Post test information will be collected upon
Conclusion of the learning module at the wind-up meeting. The same information will be collected from control group members during a one on one meeting with the research technician before and after their experiential block placement. Students will be contacted 6 months following the end of their IEGC experience and asked to complete the ATHCTS and TSS again. Follow-up testing will provide insight into the sustainability of potential changes in attitude and behaviour over time. The questionnaire will be mailed to students and returned to the IEGC office via a self addressed, postage paid envelope.

Clinical Team:
Pre-test data from the ATHCTS and TSS for clinical team members will be collected at a time that is convenient for each participating site (and the control team), prior to the commencement of the first IEGC experiential block (January 2006) or upon joining a participating clinical team, with post testing to take place upon completion of the IEGC program (January 2008).

Faculty Champions:
ATHCTS and TSS pre-testing for faculty champions and their controls will occur prior to the beginning of the first faculty specific educational session (date to be determined), with post testing to occur upon completion of the IEGC program (January, 2008).

Knowledge Questionnaire
The IEGC Knowledge Questionnaire (Appendix I) was created to assess if participants’ knowledge regarding the seven identified core competencies changes as a result of the IEGC educational interventions. The Knowledge Questionnaire was created by IEGC Research Team specifically for the IEGC program, and is intended to be used as a pre and post test measure of knowledge.

Data Collection Procedures

Students:
The pre-intervention knowledge questionnaire takes approximately 25 minutes to complete and will be collected from student learners during the orientation meeting scheduled to take place at the beginning of the student learning module and experiential block. Post intervention information will be collected upon conclusion of the learning module at the wind-up meeting. The same information will be collected from control group participants during a one on one meeting with the research technician before and after their experiential block placement. Student learners will be contacted 6 months following the end of their IEGC experience and asked to complete the knowledge questionnaire again. Follow-up testing will provide insight into the retention of knowledge around teaming. The questionnaire will be mailed to students and returned to the IEGC office via a self addressed, postage paid envelope.

Clinical Team:
The pre-intervention knowledge questionnaire will be collected at a time outside clinical hours that is convenient for clinical team members at each participating site (and the control team), prior to the commencement of the first IEGC experiential block (January 2006) or upon joining a participating team, with post testing to take place upon completion of the IEGC program (January 2008).

Team Observation Scale (TOS):
The Team Observation Scale (Appendix J) will be used in the current study as a quantitative measure to assess changes in teaming behaviour throughout the course of the IEGC program. The Team Observation Scale was created by Cole, Waite, and Nichols (2003) to be used as an observation tool with which to assess changes in teaming behaviour over time. A modified version of this scale is currently implemented as part of the GITT core curriculum (Hyer, Flaherty, Fairchild et al, 2003).

Data Collection Procedures

Students:
Student team meetings regarding the work-up of both the standardized and real world clients, will be observed by a member of the research team and documented using the TOS.

Clinical Team:
Four times throughout the course of the IEGC program (every six months from approximately January 2006 to March 2008), clinical site team meetings will be observed by a trained external observer with an expertise in teaming and documented using the TOS. As a learning opportunity, clinical teams will be offered the opportunity to obtain feedback on their team functioning from the TOS.

IEGC Diary Sheet:
The IEGC Diary Sheet was created to track any IEGC program related activities in which participants are involved. The Diary Sheet was created by the IEGC Research Team specifically for the IEGC program, and is intended to be used as an ongoing measure of individual behaviour change, as well as changes in organizational practice. The resulting documents will be analyzed using content analysis techniques and used as a measure of program related behaviour, organizational and process change. Please refer to Appendix K for a copy of the IEGC Diary Sheet and instructional package.

Data Collection Procedures

Faculty Champions:
Diary sheets will be completed by faculty champions whenever program related activities occur (attending a seminar on interprofessional teaming, incorporating an interprofessional teaming video into lectures, purchasing an interprofessional text, etc.), throughout the duration of the IEGC program. The Diary Sheet will take approximately 5-10 minutes to complete and completed forms will be sent back to the IEGC office.

Clinical Team:
For the duration of the IEGC program, clinical team members will be asked to fill out diary sheets to document any program related activities in which they are involved. Diary sheets will be placed in the team meeting room at the clinical site, and will be filled out by participating clinical team members whenever a change in their behaviour/organizational practice occurs as a result of the program. The type of activities may include: attending a lecture on interprofessional teaming, watching an interprofessional teaming video etc.

Personnel Audit:

Proposal Version 1.2: September 18, 2006
The IEGC Personnel Audit form (Appendix L) was created by the IEGC Research Team specifically for the IEGC program, and is intended to be used as an ongoing measure of clinical team personnel changes within and across each of the participating day hospital sites.

Four times over the course of the program (every six months), clinical team managers will be asked to provide researchers with a “snapshot” of clinical staffing levels and team structure. The “personnel audit” includes EFT and discipline changes of clinical staff. No personal information or identifiers will be collected by researchers.

**Student Journals:**

The IEGC Student Journal Exercise was created to track changes in attitudes/perceptions and behaviours regarding teaming throughout the student learner’s involvement in the IEGC program. The student journal was created by the IEGC Research Team specifically for the IEGC program, and is intended to be used as an ongoing measure of attitude and behaviour change. Please see Appendix M for copies of all IEGC Student Journal Exercises and instructional package.

The initial journal entry takes approximately 35 minutes and will be completed during the orientation meeting and returned to the research technician upon completion. The three ongoing entries take approximately 25 minutes to fill in and will be completed on three separate, pre-determined dates (to be determined) on which the student teams had an IEGC learning module activity. Students will be given the Ongoing Journal Exercise in the form of a book, complete with instructions and entry sheets. The final journal entry takes approximately 35 minutes to complete and will occur at the conclusion of the wind-up meeting and be returned to the research technician upon completion. The resulting documents will be analyzed using content analysis techniques and used as a measure of program related attitude, perception and behaviour change.

**Evaluation Questionnaires:**

A series of evaluation questionnaires have been developed by the IEGC Research Team to assess the various participant groups’ reaction to their IEGC experience and teaming skills, in general. Please see Appendix N for copies of the IEGC Evaluation Questionnaires. These evaluation tools were created specifically for the IEGC program and are intended to evaluate the IEGC learning module and the IEGC program, as a whole. Each evaluation takes approximately 15 minutes to complete.

**Data Collection Procedures**

**Students:**
The Student Evaluation Post IEGC Experiential Block will be completed by student participants and returned to the research technician at the end of the wind-up meeting.

**Clinical Team:**
Upon the completion of each experiential block they participate in, clinical team staff will complete the Clinical Team Evaluation Form Post Experiential Block at a time that is convenient for the staff at each of the participating day hospitals. The resulting information will be used to develop program related themes and if necessary, implement change.
Upon completion of the IEGC program (March 2008), clinical team staff will complete the Clinical Team Evaluation Form Post IEGC Program at a time that is convenient for clinical staff at each of the participating day hospitals.

Faculty Champions:
Upon completion of the IEGC program (anticipated January 2008), faculty champions will complete the Faculty Evaluation Post IEGC Program.

Self Reflective Questionnaires:
Self reflective questionnaires have been developed by the IEGC research team to assess the various participant groups’ reactions, feelings, and perceived behaviours surrounding interprofessional teaming and their IEGC experience. Please refer to Appendix O for copies of all IEGC Self Reflective Questionnaires. The self reflective questionnaires are designed to be a post-test measure and the resulting documents will be used to assess program effectiveness as well as perceived behaviour change resulting from program participation. The self reflective questionnaire takes approximately 20 minutes to complete.

Data Collection Procedures

Students:
Approximately 6 months after they complete the IEGC learning module, student learners will receive and complete the Student Reflective Exercise IEGC Project 6 month Follow-Up questionnaire. The questionnaire will be mailed to students and returned to the IEGC office via a self addressed, postage paid envelope.

Faculty Champions:
Faculty champions will be asked to fill out the Faculty Reflective Exercise Post IEGC Program questionnaire upon completion of the IEGC program (approximately January 2008). Faculty Champions will also be asked to fill out an abbreviated version of the reflective exercise every six to eight months, to assess program effectiveness and implement change if necessary.

Steering Committee Standardized Questions:
A set of standardized questions (Appendix P) was created by the IEGC research team to assess students’, senior administrators’ and government attitudes, perceived behaviours and reactions to the IEGC program and teaming in general. During the quarterly Steering Committee meetings, members will be asked a series of standardized question regarding their perceptions of interprofessional education, requesting feedback on the progress and sustainability of the IEGC concept/initiative.

The answers to these questions along with the meeting proceedings, will be observed and documented using “field notes” (useful and reliable notes regarding the details of the research setting and activities). The resulting documents will be analyzed using content analysis techniques, developing discussion themes. Copies of the meeting proceedings and researchers’ field notes will be provided to the steering committee members after each meeting.
Client Interview Questions:

A set of client interview questions (Appendix Q) were created by the IEGC Research Team to assess the health care clients’ awareness, perceptions of and attitudes toward, the IEGC experiential block conducted at the day hospital site they attend. After obtaining informed consent, a member of the research team will conduct a short post-intervention interview with clients of the day hospital who are interacting directly with the student team. If the client is deemed unable to understand the consent form or take part in the interview process (for a complete description of client participation, please refer to the Client Recruitment Procedures page, 30 to 31), their proxy/family member will be asked to participate in the interview.

The answers to these questions will be audiotaped and documented using “field notes” (useful and reliable notes regarding the details of the research setting and activities) and the resulting documents will be analyzed using content analysis techniques.

Key Informant Interview Questions:

A set of interview questions for key informants (older individuals or their informal care givers; see Appendix R) have been created by the IEGC Research Team to collect feedback from these participants regarding the proposed educational module and study procedures. Questions focus on the client’s impressions of the educational experience, what potential issues may arise in the involvement of clients, with potential solutions outlined. Researchers are also very interested in the key informants’ perspectives on perceptions of burden – will clients feel overburdened by their involvement in the IEGC learning module?

The answers to these questions will be audiotaped and documented using “field notes” (useful and reliable notes regarding the details of the research setting and activities) and the resulting documents will be analyzed using content analysis techniques.

Student Focus Group Questions:

A set of student focus group questions (Appendix S) were created by the IEGC Research Team to collect information about the student learner’s perspectives regarding the development and implementation strategies for this initiative. The focus group session will take place prior to the implementation of the first IEGC experiential block placement. Questions focus on the students overall impressions of the proposed educational experience, the appeal the program might have with students, potential difficulties researchers might have with implementation, and strategies to overcome these difficulties. Researchers would also like to gather feedback on the content of the educational initiative, specific to the workload and perceived value of the educational experience.

The answers to these questions will be audiotaped and documented using “field notes” (useful and reliable notes regarding the details of the research setting and activities) and the resulting documents will be analyzed using content analysis techniques.

Clinical Team Focus Group Questions:
A set of clinical team focus group questions (Appendix T) were created by the IEGC Research Team to obtain information about the team’s perspectives regarding the development and implementation strategies for this initiative. The focus group session will take place prior to the implementation of the first IEGC experiential block placement. Questions will focus on clinical team members’ impressions of the proposed experience; potential difficulties researchers might have with implementation, strategies to overcome these difficulties. Researchers would also like to gather feedback on the workload and perceived value of the IEGC experience.

x) Data Analysis

Researchers are proposing to conduct both quantitative and qualitative data analysis, and compare and contrast the data obtained from using both methods.

Pre and post test analysis of quantitative data will assume a before/after and test/control comparison involving a 1:1 matched sample (ideally controlled by: discipline, age, gender, and level of training). We will use a mixed modeling procedure to allow for matching and comparisons across cohorts (test/control) and time (before/after). We will document and control for covariates that might influence the study subjects’ choice to participate (such as previous exposure to interprofessional training, previous years at university, previous degrees held, and previous work experiences). Quantitative data will be entered into the Statistical Package for Social Sciences (SPSS) software; the data will be analyzed, and descriptive as well as bivariate analysis will be conducted.

The student representative focus group discussion will be audio taped and transcribed. Field notes, open ended responses and journal entries from the other participant groups will be analyzed using content analysis techniques to identify general categories or themes, as coding of the information will allow the researchers to understand the scope of the information.

XI. Reporting the Findings

In accordance with the funding agreement between the researchers and Health Canada, the IEGC project made a commitment to disseminating study results. The researchers anticipate presenting their findings to various audiences in both academic and community settings, through presentations, project reports, publications and appropriate conference proceedings. Throughout the study, but particularly between January-March 2008, a concentrated effort will be made to disseminate study results through less traditional, non-academic avenues. For example, we have established a newsletter that will be published quarterly and all study participants, including clients and their informal caregivers (if requested), will receive a copy. Additionally, the IEGC program, and Dr. Grymonpre specifically, is involved in a successfully funded proposal to Health Canada to develop the Canadian Interprofessional Health Collaborative, that will be housed at the University of British Columbia, under the direction of Dr. John Gilbert. As part of Dr. Grymonpre’s involvement with this initiative, she has committed to sharing all study findings and key learnings with other researchers (Canadian and internationally) working in this field of inquiry.

XII. Ethics

Proposal Version 1.2: September 18, 2006
The following information outlines the steps taken to ensure the ethical conduct in this study:

i) The study protocol will be submitted to the Health Research Ethics Board at the University of Manitoba, and appropriate institutional review boards for review and approval;

ii) Among other documents, a cover letter from the researchers will be included in the project introductory package to all potential participants. This letter explains why the research is being performed and outlines the research activities. This letter also provides the name of a research representative (Program Coordinator or Research Technician) who may be contacted for questions related to the project.

iii) Written informed consent will be required from participants prior to participating. These signed consent forms, will be stored in a secured environment (locked filing cabinets in the IEGC office which is locked outside of office hours), at the IEGC program offices;

iv) Only program research staff will be directly involved in recruiting students, faculty, and clients;

v) Only program research staff will see individual participant responses and identifiers;

vi) Anonymized (study participant number) data will be presented to the research committee members for analysis and interpretation; and all final reports and other publications will report only aggregate level findings.

vii) Student learner (and student control group participants), as well as clinical team (and control site) participants, will receive a $200 honorarium for their participation. This honorarium is being offered to compensate the participant for the substantial amount of time required (approximately 3 hours) to complete the survey instruments (depending on study participant, estimated at 1 hour for pre-testing; 1 hour for post-testing; and 1 hour for 6 month follow-up).

viii) Data that is stored electronically on a networked computer will be stored in IEGC specified network space that is password protected. Only research staff identified and affiliated with the project will have access to this information.

ix) Data collected (hard copies, computer discs) from participants will be stored for seven years in a secure location at the University of Manitoba – Faculty of Pharmacy.

x) After the 7 year storage period, all paper data will be shredded using a professional shredding company. Computer discs will be disposed of in an environmentally friendly manner.
IVX. References


Proposal Version 1.2: September 18, 2006


Oandasan, I., & Reeves, S. (2005). Key elements for interprofessional education part 1: The learner, the educator and the learning context. *Journal of Interprofessional Care Suppl.1*, 21-38.


