Introducing Interprofessional Education and Care Concepts in a Geriatric Multilevel Centre: Development and Introduction of a Toolkit for Staff and Students

Faith D. Boutcher, RN, MSc; David K. Conn, M.B., FRCPC; Margaret Mroziewicz, BS, MSc & Lisa M. Guttman Sokoloff, MS, CCC-SLP

Abstract

Background: Although interprofessional education (IPE) is not new, there has been limited research in IPE focused on the care of older adults. The objective of this study was to develop and implement an interprofessional education and care (IPE/C) toolkit, to help staff and students understand and apply the concepts of IPE/C.

Methods and Findings: Focus groups identified staff and students' understanding of IPE/C and informed development of an IPE/C toolkit comprised of IPE/C tools and resources. Five clinical teams ($N = 51$) attended workshops that introduced the toolkit and educated teams about IPE/C. Focus group participants had heard of but had limited exposure to IPE/C. Responses to the Attitudes Toward Health Care Teams (ATHT) questionnaire indicated a positive trend on all questions; 2 questions in subscale 1 were statistically significant ($p = .01$ & $p = .005$), indicating a positive attitude toward teams and teamwork. Several limitations were identified, including inconsistent attendance at workshops, scheduling challenges, and limited physician participation.

Conclusions: This pilot project provided baseline data on staff and students' understanding of and attitudes toward IPE/C in a multilevel geriatric centre and demonstrated that an IPE/C toolkit delivered via team workshops can enhance healthcare team attitudes. Next steps include expanding the rollout to other teams and introducing the toolkit to all staff and students.

Keywords: Interprofessional education; Interprofessional care; Toolkit; Workshops; Geriatrics

Introduction

The need for interprofessional education and care in healthcare

A growing body of evidence indicates that interprofessional teamwork in healthcare can reduce clinical error, increase staff satisfaction, and improve patient outcomes and patient safety [1-3]. Interprofessional care has been identified as part of a solution to help reduce wait times, improve access to healthcare professionals, and keep Ontarians healthy [4]. The inclusion of interprofessional collaboration in the delivery of healthcare is not surprising. Not only is there a need for a more sustainable and innovative use of human health resources, but a rapidly aging population is also in need of effective teams of diverse health and social care professionals to co-ordinate their care [5,6]. Given that about 80% of older adults have one chronic health condition and 50% have at least two [7], successful interventions for chronic disease

usually requires a co-ordinated, multidisciplinary team approach. In response to this growing need, healthcare organizations are developing models of interprofessional care for elderly patients in order to address these complex health needs [8].

Changing the way health professionals are educated is key to achieving system change and to ensuring that they have the necessary knowledge and training to work effectively in interprofessional teams [9]. Interprofessional education (IPE) has been identified as one way to address emerging health and human resource issues and to ensure that health providers have the knowledge, skills, and attitudes to practice as a team [10]. IPE is education specifically designed to help health professionals and students function as part of the healthcare team. It occurs when two or more professions learn about, from, and with each other to enable effective collaboration and improve health outcomes [11]. Significant changes have occurred at the government, legislative, regulatory, and academic levels to ensure that IPE for collaborative care is indeed becoming the norm [12].

A review of the organizational change literature indicates there is no one best model of change that can be applied to the areas of interprofessional education and care (IPE/C). Change is required in several domains, including education and practice, and at different levels in the system, including the individual and team, organization, and system and policy [13]. A critical step forward in IPE/C requires the development of a culture that supports collaborative practice, including the elements of risk taking and shared leadership [14]. According to Boutcher [15] a focus on principles of interprofessional collaboration in conjunction with the existence of a strong professional culture, an understanding of professional roles, scope of practice, and competency will help move collaborative practice forward.

IPE/C in geriatric care

Although the concept of interprofessional training is not new, there has been very little work and research in this area focused on care of the older adult. However, there are examples of geriatric IPE initiatives. In the United States, the Hartford Foundation created the *Geriatric Interdisciplinary Team Training (GITT) program* [16], and there is a national network of Geriatric Education Centres funded by the U.S. Department of Health and Human Services [17-19]. Research centres were also created to test interdisciplinary geriatric care models [20].

In Canada, there have been several initiatives to promote IPE and interprofessional care (IPC) in geriatric care. The *Regional Geriatric Programs of Ontario* developed a digital toolkit, part of which promoted interprofessional care and interorganizational collaboration in the care of seniors [21]. At the University of Manitoba, an *Interprofessional Education for Geriatric Care* project was initiated from 2005–2008 to develop an interprofessional education program in community-based geriatric care [22,23]. In addition, the *SCO Health Service* in Ottawa developed a self-learning module to promote interprofessional care of the elderly [24].

Evidence suggests training in interdisciplinary teamwork for geriatric care helps increase team functioning, improve efficiency of patient management, increase understanding of the roles of other health professionals, and increase sensitivity to

Journal of Research in
**Interprofessional
Practice and
Education**

Vol. 4.1
June 2014

www.jripe.org

the needs of patients [25,26]. Studies suggest that the interdisciplinary approach in geriatric care improves survival, quality of life, social activity, and patient satisfaction; reduces physician visits, emergency department visits, hospital stays, and readmissions; improves quality of care; and reduces costs [20,27-32].

Project objectives

As a leading Toronto academic health science centre in aging and brain health, our organization has a mandate to provide IPE/C learning opportunities for our staff and to support the IPE curriculum of the over 1100 students and trainees who train in the organization annually.

IPE has been identified as a strategic priority in our organization, and our goal is to lead innovative initiatives that foster and facilitate interprofessional geriatric education throughout our academic campus.

The goal of this pilot project was to develop and implement an IPE/C toolkit as a preliminary step in helping the organization understand the concepts of IPE/C, and to apply them in clinical practice.

The objectives were to:

1. increase health professionals' awareness and knowledge of IPE/C

and

2. introduce an IPE/C toolkit to five clinical teams across the organization.

The IPE/C toolkit was designed to assist staff in understanding the concepts of IPE/C, to help them apply these concepts in practice, and to optimize the clinical environment for IPE student/trainee placements.

Methods

Participants

Focus groups were held with health professional staff and current students who were recruited by email; flyers and information letters were sent out simultaneously. Staff were recruited for the workshops by letters emailed to unit managers and directors (program and medical), requesting them to volunteer their clinical teams to participate in IPE/C workshops. Interprofessional teams in each of our five clinical programs were targeted; the goal was to secure one team from each clinical program to receive the workshops, and this was achieved.

Intervention

The development and implementation of the IPE/C toolkit for health professional staff and students included three main activities:

Focus groups

Focus groups were conducted with staff and students to explore their knowledge, understanding, and experience with IPE/C, as well to identify their needs for development of the toolkit. These groups were facilitated by an IPE lead on the project

Journal of Research in
**Interprofessional
Practice and
Education**

Vol. 4.1
June 2014

www.jripe.org

and supported by the project assistant. They were 1 hour in length and offered three times each for both staff and students.

Toolkit development

Focus group feedback helped to refine the toolkit. The toolkit comprised information collated from an extensive scan of the literature for resources and tools developed by other organizations and groups; the most applicable elements were selected for inclusion. All sources were credited accordingly, and permission was obtained to reproduce content as appropriate.

Workshops

Two workshops were conducted with health professional staff—one team from each of our five clinical programs. The purpose was to introduce the IPE/C toolkit and increase health professionals' awareness and knowledge of IPE/C. Each workshop was 1.5 hours in length and was facilitated by two project team members who are IPE leads in the organization. They were scheduled a few weeks apart to allow staff time to reflect and come prepared with questions to the second workshop.

WORKSHOP OBJECTIVES

To have participants:

- understand how to apply the concepts of IPE, IPC, and collaboration;
- understand the organization's role in IPE and IPC, including student placements;
- recognize the connection between teamwork and IPC; and
- become familiar with the IPE/C toolkit tools/activities and understand the benefits of the toolkit.

WORKSHOP CONTENT

Workshop #1 consisted of an ice breaker activity, an overview of IPE/C and the organization's role in IPE/C, including student IPE placements, and an introduction to the IPE/C toolkit. A simulation exercise was used (a video from the Centre for Interprofessional Education, University of Toronto [33], showing a dysfunctional team engaged in discharge planning) to generate discussion about IPE/C with the goal of demonstrating one of the resources referenced in the toolkit. Workshop #2 reviewed the content learned in the first workshop using an electronic voting system [34] for a fun, interactive multiple-choice, and true-false quiz. After the quiz, participants were provided with a case tailored to their clinical area (Appendix 1). As a group, they discussed the case and evaluated the team's interactions based on seven elements of collaboration: co-operation, assertiveness, responsibility/accountability, communication, autonomy, co-ordination, and mutual trust and respect [35].

Journal of Research in
**Interprofessional
Practice and
Education**

Vol. 4.1
June 2014

www.jripe.org

This pilot project received approval from the organization's Research Ethics Board.

Data collection

A mixed-methods approach was used and included both qualitative (focus groups, workshop evaluation) and quantitative measures (attitude questionnaire and workshop evaluation).

Focus groups

The focus groups consisted of semi-structured questions to elicit the staff and students' ideas about and experience with IPE/C and to gather input into the development of the toolkit (Appendix 2).

Attitude questionnaire

The Attitudes Toward Health Care Teams (ATHCT) scale (Appendix 3) is a validated instrument originally developed by Heinemann et al. [36]. It is a 21-item questionnaire with an internal consistency of 0.81. The original subscales were revised into three factors (team value, team efficiency and shared leadership) that reflect normative team constructs [37]. This scale has been used to measure participants' attitudes toward interprofessional healthcare teams and interprofessional collaboration. Responses are provided on a 6-point Likert scale, ranging from strongly disagree to strongly agree. For most questions, the higher the score, the more positive the response; however, some designated questions require reverse-scoring.

Workshop evaluation form

Participants were asked to complete an evaluation of the workshops on a 5-item questionnaire, using a Likert scale with a range of 1–5, with particular focus on content, format, and style. There was also space for participants to comment on key learnings, what they liked, what could be improved upon, and their overall impression of the workshops. Participants completed the evaluation form after each workshop.

Data analysis

The Attitudes Toward Health Care Teams (ATHCT) data were analyzed using independent t-tests, as the sample consisted of potentially two different groups of health professional participants for Workshop 1 and Workshop 2.

A modified phenomenographical approach was used for the focus groups to introduce the topic, asking staff and students to give examples of their experiences and to stimulate discussion about IPE/C. This approach explores the qualitatively different ways that phenomena are experienced [38]. The use of open-ended questions allowed participants to introduce the language and perspectives that they wished without prompting from the facilitators.

All focus groups were tape-recorded and field notes were taken. Transcription of audio tapes was completed by the project assistant. Transcripts were reviewed by the IPE lead facilitator for accuracy, and the text was read several times, by both the

Journal of Research in
**Interprofessional
Practice and
Education**

Vol. 4.1
June 2014

www.jripe.org

project assistant and IPE lead facilitator, to make sense of the data and to obtain an overall impression. Statements were grouped based on topics to draw out key issues discussed by participants. Categories emerged and were refined through dialogue and consensus between the project assistant and IPE lead facilitator.

Results

Focus groups

Staff

Thirty staff members participated in the staff focus groups. Participants were from a variety of professions, including lab, nursing, pharmacy, physiotherapy, recreational therapy, social work, culture, arts and innovation, and some managers and directors (Table 1).

Most had previously heard of the concepts of IPE/C in weekly rounds, sessions for students, staff meetings, IPE placements, et cetera. However, some participants had only heard the terms once or not at all.

Staff were asked what interprofessional collaboration meant to them and reported:

Table 1:

Staff attendance at focus group sessions, by professional group

Staff focus groups	
Group	**Number**
Pharmacy	1 (Clinical coordinator)
Recreational Therapy	7
Physiotherapy	6
Nursing	5
Social Work	3
Lab	1 (technician)
Culture, Arts and Innovation	3
Managers, Directors	4
Total:	**30**

- understanding scopes of practice, overlaps of practice, and limitations;
- trust and shared decision-making;
- good communication;
- discussing together and valuing each other's input;
- having a culture of sharing ideas and information and implementing them;
- having common patient goals; and
- having tools, processes, and measures to integrate knowledge.

Staff commented that collaboration is natural and that IPC practices come naturally. They provided both positive and negative examples of the impact IPC and teamwork can have on patient care. Positive experiences included close collaboration, good communication, productive team meetings, and sharing of information across many clinical units. Workload issues impeding collaboration, team hierarchy, lack of awareness about roles, the challenge of having limited access to other health professionals, and the cultural or religious perspectives of patients being overlooked

Journal of Research in
**Interprofessional
Practice and
Education**

Vol. 4.1
June 2014

www.jripe.org

were some of the negative experiences they shared. They requested that the toolkit be available in both hardcopy and online and suggested how to promote and encourage the use of the toolkit through orientation, flyers/posters, email, and in-house publications. One suggestion was an enter-to-win survey to encourage staff to review the toolkit.

Staff suggested the following be incorporated into an IPE/C toolkit:

- role descriptions;
- case studies;
- advice on how to make meetings more effective and efficient;
- contact directory (i.e., contact information for staff, programs, departments); and
- student IPE requirements.

Focus groups also helped identify criteria to measure the long-term success of the organizational IPE/C strategy. When asked to envision the future (when all staff and teams have been trained in IPE and IPC), staff hoped to see:

- awareness of everyone's roles and how they overlap;
- clear patient goals;
- clearer communication;
- every profession having sufficient time with clients;
- collaborative care plans with standardized documentation; and
- better use of technology, for example, screens and tablets.

Students

Twenty-eight students participated in the student focus groups and were from the following professional groups: nursing, nutrition, social work, speech-language pathology, and research (Table 2).

Some had heard of the concepts of IPE/C previously during orientation and at IPE sessions/presentations at school, and for some, IPE was included in their course work and a requirement for completing their program. For example, any health professions students from the University of Toronto had attended IPE courses, as they have had a mandatory IPE-competency-based longitudinal curriculum since 2009. Other students, however, had only heard about IPE/C when they read the flyers and emails used to recruit for the focus groups, and the majority had not heard of IPE/C before.

Although many students were unfamiliar with the terminology, they had a good understanding about what it means to work collaboratively on a healthcare team.

Table 2

Student participation in focus group sessions, by professional group

Student focus groups	
Group	**Number**
Speech language pathology	2
Nutrition	1
Nursing	17
Social Work	7
Research	1
Total	**28**

Journal of Research in
**Interprofessional
Practice and
Education**

Vol. 4.1
June 2014

www.jripe.org

When asked about the meaning of interprofessional collaboration, they reported:

- understanding roles;
- good communication;
- exchanging ideas and sharing information between disciplines;
- respecting others' roles and expertise;
- working together and helping team members;
- availability of other professionals;
- interprofessional meetings to learn and get updates on others' work, meeting patients' needs, and involving the patient.

Students were able to provide examples of the impact of IPC and teamwork on patient care in the practice setting, such as participation in team meetings to discuss patients, and collaboration that resulted in effective interventions. When asked to comment on the level of interprofessional collaboration they had witnessed in the organization, they reported seeing different professionals working well together, clear communication of roles, and good communication between team members from the same and from different health professions.

Students suggested the following be included in the IPE/C toolkit:

- role descriptions and tools to help learn one another's skills;
- videos showing interprofessional team interactions;
- case studies;
- overview of the benefits of IPE/C;
- contact directory (i.e., contact information for programs, services, IPE support); and
- interactive opportunities.

When asked to envision the future (when all staff and teams have been trained in IPE and IPC), students hoped to see:

- teams with no hierarchy and where everyone respects each other's input;
- opportunities to be exposed to students from different professions;
- new staff encouraged to practice IPC;
- each profession being used to its full potential;
- team leaders stressing the importance of collaboration;
- client and family-centred care, including more holistic care.

One student observed the limited communication between researchers and clinicians, and this resonated with other students; many suggested stronger communication and collaboration between the two groups to help practitioners understand the rationale behind research protocols and treatments they use in practice. They also suggested an independent "IPE team" who would work with clinical teams and help them resolve team issues as they arise.

Journal of Research in
**Interprofessional
Practice and
Education**

Vol. 4.1
June 2014

www.jripe.org

Workshops

Five clinical teams participated in a series of two workshops, scheduled three to four weeks apart. As this was a sample of convenience, a total of 51 staff members participated in at least one workshop, but only 20 staff participated in both workshops. Participants came from various professional groups, including nursing, nutrition, occupational therapy, personal support workers, physiotherapy, social work, speech-language pathology, and therapeutic recreation (Table 3).

Table 3
Staff attendance at workshop sessions, by professional group

Workshop #1		Workshop #2		At least one workshop		Both workshops	
Group	**Number**	**Group**	**Number**	**Group**	**Number**	**Group**	**Number**
Nursing	19	Nursing	11	Nursing	24	Nursing	6
Personal Support work	5	Personal Support work	3	Personal Support work	8	Recreational Therapy	2
Therapeutic Recreation	2	Therapeutic Recreation	2	Therapeutic Recreation	2	Physiotherapy	2
Physiotherapy	3	Physiotherapy	2	Physiotherapy	3	Occupational Therapy	6
Occupational Therapy	7	Occupational Therapy	6	Occupational Therapy	7	Speech language pathology	1
Nutrition	1	Nutrition	1	Nutrition	2	Social Work	3
Speech language pathology	1	Speech language pathology	1	Speech anguage pathology	1		
Social Work	4	Social Work	3	Social Work	4		
Total	**42**	**Total**	**29**	**Total**	**51**	**Total**	**20**

Attitudes toward healthcare teams

The Attitudes Toward Health Care Teams (ATHCT) questionnaire [35] was administered to participants before the first workshop and after the second. A total of 32 pre-workshop questionnaires and 23 post-workshop questionnaires were completed. As each team was relatively small, the data were collapsed for four of the five clinical teams. One team's data were excluded due to incompleteness.

Combined data (N = 51) indicated a positive trend on all ATHCT questions (Table 4). Using independent t-tests, statistically significant results were found on two questions of Subscale 1: "Patients receiving team care are more likely than other patients to be treated as whole persons" (p = .01) and "Hospital patients who receive team care are better prepared for discharge than other patients" (p = .005). This suggests that participants were more positive about teams and teamwork after the workshops.

Journal of Research in
**Interprofessional
Practice and
Education**

Vol. 4.1
June 2014

www.jripe.org

Workshop evaluation

A total of 39 participants rated Workshop #1 an average of 4 points on a scale of 1-5. A total of 24 participants completed the evaluation form for Workshop #2 and gave a rating of 3.9/5, indicating they were highly satisfied. Overall, comments were extremely positive. Participants stated that the workshops were informative, well presented, and a valuable learning opportunity. They learned about IPE/C, the importance of teamwork, what it means to work collaboratively, the importance of communication and respect, and the impact of collaboration on client care. Some commented that they learned they have an excellent team and are already collaborating well.

For some, the workshops were a review and a validation of the knowledge and principles they already held and practiced. Some suggested areas for improvement included: scheduling the workshops to avoid peak clinical care times; more opportunity for the team to have a deeper discussion about core issues and IPE/C challenges; more case studies, role plays, interaction, and opportunities for reflection and critical thinking; and the need for the entire team, including physicians and more members of other disciplines, to be present at the workshops.

Table 4

Question mean for the 2 workshops – 4 teams: Data combined

Question	Mean Time 1	Mean Time 2	Desired Change in Score
1	1.94	1.78	↓
2	5.75	5.91	↑
3	5.48	5.70	↑
4	3.26	3.00	↓
5	4.74	5.61*	↑
6	3.42	2.77	↓
7	4.88	5.35	↑
8	2.09	2.00	↓
9	5.06	5.22	↑
10	2.66	2.39	↓
11	4.16	4.83	↑
12	2.84	2.18	↓
13	4.75	5.06	↑
14	5.50	5.71	↑
15	2.66	1.88	↓
16	2.97	2.47	↓
17	4.59	5.47*	↑
18	2.78	2.13	↓
19	5.39	5.56	↑
20	5.31	5.63	↑
21	5.53	5.63	↑

*statistically significant change

Discussion

Focus groups were a useful and informative method to assess staff and students' knowledge about and experience with IPE/C and to help develop tools and resources for practice. Many had not heard of IPE/C before, and it was important not to make assumptions about what they knew or had experienced. Staff and student feedback helped inform the IPE/C toolkit design and, as many staff and students had limited knowledge about IPE/C, feedback from the focus groups also informed the development and design of the workshops. An overview of IPE and IPC was incorporated into the first workshop to provide context and to ensure all

Journal of Research in
**Interprofessional
Practice and
Education**

Vol. 4.1
June 2014

www.jripe.org

**Boutcher, Conn,
Mroziewicz, &
Guttman Sokoloff**

participants had the same knowledge base. IPE has been shown to be most effective when principles of adult learning are used, such as problem-based learning and building on experience, when the learning methods reflect real-world practice experiences, and when learners are interacting [12]. Applying principles of adult learning theory, the workshops were designed to be interactive and engaging, and involved creating a non-threatening and positive learning environment, providing opportunities for reflection, and where self-expression was welcome [1,2,39-41]. To create a comfortable environment, the workshops started with fun and interactive ice breakers, allowing staff to openly discuss misconceptions and myths about their professions and to review the IPE/C definitions. Dialogue and discussion were encouraged throughout, and staff were eager for and open to discussion during the video and case study; these activities were chosen because they mirrored real-life clinical scenarios and facilitated interactivity and reflection. The clinical case studies generated the greatest discussion.

One interesting observation was that manager endorsement/support appeared to be a key ingredient for increasing staff comfort and enhanced their ability to talk freely about their ideas and opinions, generating fulsome discussions. Most interaction occurred when a manager attended both workshops with their teams, ensured that all team members received the invitation to attend, and encouraged all staff to attend both workshops. This was in contrast to the workshops where managers did not attend and did not facilitate team attendance. The literature highlights the importance of supervisor support on behaviours that support "training transfer." Supervisor support prior to (e.g., motivation to attend) and during (e.g., discussing topics or listening and talking through ideas) has been identified as critical behaviour for training transfer [42]. For example, when one's boss took the same training there was a strong association with post-training utilization [43]. Healthcare managers themselves report that team performance is most greatly affected by managers who demonstrate a commitment to working collaboratively, a commitment to the organization, and a commitment to a quality outcome [44]. This is an interesting area for further research to explore whether health professionals working across teams and professional boundaries value the need for effective collaboration compared to health professionals that work in fixed clinical teams. Additionally, the workshops served as good settings for team members to share their positive thoughts about each other's roles and contributions and also to share their concerns with each other, helping team members recognize that they were not alone in their concerns, making the workshops a meaningful experience for the participants.

The potential also exists for such a toolkit to be used in the care of other specialized and complex populations, such as pediatrics. In a qualitative study of workplace factors influencing delivery of children's education and mental health services, King et al. [45] noted the importance of a collaborative, learning-oriented workplace culture as a factor in enhancing knowledge and optimizing skills of professionals providing education and mental health services to children.

Journal of Research in
**Interprofessional
Practice and
Education**

Vol. 4.1
June 2014

www.jripe.org

Limitations and challenges

Planning and implementing the workshops was challenging. Recruiting five clinical teams in a large multi-level geriatric centre required perseverance. To accommodate clinical care, all workshops were provided on the clinical units; however, last-minute emergencies did impact staff's ability to attend and remain focused. Attendance varied from workshop to workshop and, as a result, many staff did not experience both workshops, limiting potential for impact. Further strategies will need to be implemented to improve attendance and completion at future workshops, such as scheduling them after hours or remunerating staff who attend.

Without the involvement of all team members, it is difficult to improve team functioning and collaboration. In this project, team composition varied from workshop to workshop; one team comprised nurses and personal support workers, another occupational therapists and physiotherapists. No physicians attended the workshops. This was a major limitation of the study and challenges us to think creatively about how to bring more than two professions, including physicians, into the discussion to ensure they are engaged in IPE/C initiatives. A key goal of the project was to introduce an accessible and user-friendly IPE/C toolkit to staff, so copies of the toolkit were available for review and feedback during the workshops. Unfortunately, there was little time for staff to browse the toolkit, and there was no indication that staff used the toolkit between or after the workshops.

The majority of the teams were well represented during the workshops, and this does suggest some interest in IPE/C among clinical teams specializing in geriatrics. The results must be interpreted with caution, however, as the small sample size may not be representative of the larger population of healthcare professionals. There is no information about the professionals who did not complete the questionnaire, and a social desirability bias was possible on the part of the staff attending; they may have responded based on what they thought the answers should be rather than having the answers reflect their true attitudes. Professional hierarchy can impact communication, and it has been found that individual health professions are likely to protect their own sense of identity when interacting in IPE, interfering with their ability to learn in a collaborative manner [46]. No statistically significant relationships were found between the ATHCT and demographic characteristics of the sample, perhaps due to the small sample size. Generalizations cannot be made beyond the sample studied.

Implications for practice

Implementing IPE/C initiatives can be challenging for many academic teaching hospitals. Next steps in our organization include continuing to build IPE/C capacity in staff by running workshops for all teams with manager support and attendance, and continuing to educate the organization about the availability of the toolkit as a resource. Scheduling workshops to ensure maximum participation from the majority of the interprofessional team members, including physicians, will be a key to future success. In offering future IPE/C workshops, close attention will have

to be paid to the issue of professional hierarchy in the design, delivery, and outcomes [46].

Conclusion

The findings of this pilot project indicate that an IPE/C toolkit delivered via team workshops can have a positive effect on healthcare team attitudes. It was a first step in increasing staff awareness of IPE/C within a geriatric multilevel centre and provided an opportunity to raise staff and student awareness of IPE/C, as well as to develop a toolkit for use by clinical teams. We hope that the development and implementation of our toolkit will provide valuable insights that can then be shared with other healthcare organizations. The toolkit can now be accessed on both the intranet and Internet [47] and will be a springboard for further development of our organizational strategy for IPE/C.

Acknowledgements

References

1. Oandasan, I., & Reeves, S. (2005). Key elements for interprofessional education. Part 1: The learner, the educator and the learning context. *Journal of Interprofessional Care*, 19 (S1), 21–38.
2. Oandasan, I., & Reeves, S. (2005). Key elements of interprofessional education. Part 2: Factors, processes and outcomes. *Journal of Interprofessional Care*, 19 (S1), 39–48.
3. West, M.A., Guthrie, J.P., Dawson, J.F., Borrill, C.S., & Carter, M. (2006). Reducing patient mortality in hospitals: The role of human resource management. *Journal of Organizational Behavior, 27*(7), 98–1002.
4. Government of Ontario. (2005). *Laying the foundation for change*. A progress report on Ontario's Health Human Resources Initiative. URL: http://www.health.gov.on.ca/en/common/ministry/publications/reports/hhr_05/hhr_05.pdf (April 9, 2014).
5. Health Professions Regulatory Advisory Council (HPRAC). (2009). *Critical links: Transforming and supporting patient care.* URL: http://www.hprac.org/en/reports/resources/hpraccritical linksenglishjan_09.pdf (April 9, 2014).
6. Conference Board of Canada Report. (2007). *Liability risks in interdisciplinary care: Thinking outside the box.* URL: http://www.conferenceboard.ca/e-library/abstract.aspx?did=1979.
7. Centres for Disease Control and Prevention. (2011). *Helping people to live long and productive lives and enjoy a good quality of life.* URL: http://www.cdc.gov/chronicdisease/resources/publications/AAG/aging.htm [January 8, 2014].
8. Tracy, C.S., Bell, S.H., Nickell, L.A., Charles, J., & Upshur, R.E. (2013). The IMPACT clinic: Innovative model of interprofessional primary care for elderly patients with complex health care needs. *Canadian Family Physician, 59*(3), e148–55.
9. Health Force Ontario. (2010). *Interprofessional Care Strategic Implementation Committee final report.* URL: http://www.healthforceontario.ca [July 8, 2013].
10. Oandasan, I. (2007). Teamwork and healthy workplaces: Strengthening the links for deliberation and action through research and policy. *Healthcare Papers, 7* (S), 98–103.
11. *Centre for the Advancement of Interprofessional Education* (CAIPE). (2002). URL: http://www.caipe.org.uk [July 8, 2013].
12. World Health Organization. (2010). *Framework for action on interprofessional education and collaborative practice.* URL: http://www.who.int/hrh/documents/education/en/index.html [July 12, 2013].
13. Ginsburg, L. & Tregunno, D. (2005). New approaches to interprofessional education and collaborative practice: Lessons from the organizational literature. *Journal of Interprofessional Care, 19*(1), 177–187.

14. Orchard, C.A., Curran, V., & Kabene, S. (2005). Creating a culture for interdisciplinary collaborative professional practice. *Medical Education Online, 10*(11), 1–13.

15. Boutcher, F. (2006). (Unpublished). *Integrating health professionals into new models of interprofessional care delivery.* EXTRA Intervention Project, Canadian Health Services Research Foundation.

16. John A. Hartford Foundation Inc. (2001). *Geriatric interdisciplinary team training program.* URL: http://www.gittprogram.org/learning.html [July 12, 2013].

17. Dyer, C., Hyer, K., Feldt, K., Lindemann, D., Busby-Whitehead, J., Greenberg, Sherry, Kennedy, R.D., & Flaherty, Ellen. (2003). Frail older patient care by interdisciplinary teams: A primer for generalists. *Gerontology & Geriatrics Education, 24*(2), 51–62.

18. Flaherty, E., Hyer, K., Kane, R., Wilson, N., Whitelaw, N., & Fulmer, T. (2003). Using case studies to evaluate students' ability to develop a geriatric interdisciplinary care plan. *Gerontology & Geriatrics Education*, 24(2), 63–74.

19. Fulmer, T., Flaherty, E., & Hyer, K. (2003). The geriatric interdisciplinary team training program (GITT). *Gerontology & Geriatrics Education, 24*(2), 3–12.

20. Wetle, T., & Pincus, H.A. (2011). Developing interdisciplinary research centres for improving geriatric health care: Lessons from a John A. Hartford Foundation Initiative. *Hartford Foundation Report (e-newsletter), 7*(5). URL: www.jhartfoundation.org [July 12, 2013].

21. Ryan, D., Barnett, R., Cott, C., Dalziel, W., Gutmanis,I., Jewell, D., Kelley, M.L., Liu, B., & Puxty, J. (2013). Geriatrics, interprofessional practice, and interorganizational collaboration: A knowledge-to-practice intervention for primary care teams. *Journal of Continuing Education in the Health Professions,* 33(3), 180–189.

22. Grymonpre, R., van Ineveld, C., & Boustcha, E. (2008). *Interprofessional Education for Geriatric Care Program: IEGC Project.* URL: http://umanitoba.ca/outreach/iegc/ [April 7, 2014].

23. Grymonpre, R., van Ineveld, C., Nelson, M., DeJaeger A., Booth, A., Jensen, F., Sullivan, T., Swinamar, J., & Weinberg, L. (2008). *Interprofessional education in geriatric care: Reference guide to the seven core competencies.* Winnipeg, MB: Interprofessional Education in Geriatric Care (IEGC) Program, University of Manitoba. Winnipeg Regional Health Authority. URL: http://umanitoba.ca/programs/interprofessional/media/Title_Pages.pdf [April 7, 2014].

24. Hall, P., Brajtman, S., & Weaver, L. (2008). *Self-learning module: You, the person in your care, in care of the elderly and rehabilitation (CoE & R) & the interprofessional care team at SCO Health Service.* URL: http://www.ahc-cas.ca/repo/en/educational%20resources/Humanities%20FR_EN/Rehab%20Self-learning%20module.pdf [April 7, 2014].

25. Clark, P.G., Leinhaas, M.M., & Filinson, R. (2002). Developing and evaluating an interdisciplinary clinical team training program: Lessons taught and lessons learned. *Educational Gerontology, 28*(6), 491–510.

26. Leipzig, R.M., Berkman, C.S., Ramirez-Coronado, S., & Pignotti, M. (2001). Integrating housestaff into a geriatric inpatient interdisciplinary team. *Gerontology & Geriatrics Education, 21*, 63–72.

27. Institute of Medicine (IOM). (2008). *Retooling for an aging America: Building the health care workforce.* URL: http://www.nap.edu/catalog/12089.html [January 8, 2014].

28. Shortell, S.M., Marsteller, J.A., Lin, M., Pearson, M.L., Wu, S.Y., Mendell, P., Cretin, S., & Rosen, M. (2004). The role of perceived team effectiveness in improving chronic illness care. *Medical Care, 42*(11), 1040–1048.

29. Schmitt, M.H., Farrell, M.P., & Heinemann, G.D. (1988). Conceptual and methodological problems in studying the effects of interdisciplinary geriatric teams. *The Gerontologist, 28*, 753–764.

30. Schmitt, M.H. (2001). Collaboration improves the quality of care: Methodological challenges and evidence from US health care research. *Journal of Interprofessional Care*, 15(1), 47–66.

31. Burns, R., Nichols, L.O., Martindale-Adams, J., & Graney, M.J. (2000). Interdisciplinary geriatric primary care evaluation and management: Two-year outcomes. *Journal of the American Geriatrics Society, 48*, 8–13.

32. Sommers, L.S., Marton, K.I., Barbaccia, J.C., & Randolph, J. (2000). Physician, nurse, and social worker collaboration in primary care for chronically ill seniors. *Archives of Internal Medicine, 160*, 1825–1833.

33. Centre for Interprofessional Education, University of Toronto. (2006). *Interprofessional Development Multimedia Toolkit.* URL: http://www.ipe.utoronto.ca/resources/dvd.html [January 8, 2014].

34. Sharpe Decisions. (2013). URL: http://www.sharpedecisions.com/products/executive-workshop [January 8, 2014].

Journal of Research in
**Interprofessional
Practice and
Education**

Vol. 4.1
June 2014

www.jripe.org

35. Way, D., Jones, L., & Baskerville, N.B. (2001). *Improving the effectiveness of primary health care through nurse practitioner/family physician structured collaborative practice (NA342). Final report to the Primary Health Care Transition Fund*. Ottawa, ON: University of Ottawa.

36. Heinemann, G.D., Schmitt, M.H., & Farrell, M.P. (1999). Development of an Attitudes Toward Health Care Teams Scale. *Evaluation & The Health Professionals, 22*(1), 123–142.

37. Hyer, K., Fairchild, S., Abraham, I., Mezey, M., & Fulmerr, T. (2000). Measuring attitudes related to interdisciplinary training: Revisiting the Heinemann Schmitt and Farrell Attitudes Toward Health Care Teams' scale. *Journal of Interprofessional Care, 14*(3), 249–258.

38. Marton, F. (1986). Phenomenography: A research approach to investigating different understandings of reality. *Journal of Thought, 21*(3), 28–49.

39. Knowles, M. (1980). *The modern practice of adult education – From pedagogy to androgogy* (revised). Chicago: Follett Publishing Co.

40. D'Amour, D., Beaulieu, M.D., San Martin Rodriguez, L., & Ferrada-Videla, M. (2004). Chapter 3: Key elements of collaborative practice & frameworks: Conceptual basis for interdisciplinary practice. In Oandasan, I., D'Amour, D., Zwarenstein, M., Barker, K., Purden, M., Beaulieu, M-D., Reeves, S., Nasmith, L., Bosco, C., Ginsburg, L., & Tregunno, D. (Eds.), *Interdisciplinary education for collaborative, patient-centred practice: Research & findings report*. Ottawa, ON: Health Canada.

41. Reeves, S., & Freeth, D. (2002). The London training ward: An innovative interprofessional learning initiative. *Journal of Interprofessional Care*, 16, 41–52.

42. Lancaster, S., & Di Milia, L. (2013). Supervisor behaviours that facilitate training transfer. *Journal of Workplace Learning, 25*(1), 6–22.

43. Gilpin-Jackson, Y. (2007). Leadership development training transfer: A case study of post-training determinants. *Journal of Management Development, 26*(10), 980–1004.

44. Leggat, S.G. (2007). Effective healthcare teams require effective team members: Defining teamwork competencies. *BMC Health Services Research, 7*, 17.

45. King, G., Specht, J., Bartlett, D., Servais, M., Petersen, P. Brown, H., Young, G., & Stewart, S. (2010). A qualitative study of workplace factors influencing expertise in the delivery of children's education and mental health services. *Journal of Research in Interprofessional Practice and Education, 1*(3), 265–283.

46. Baker, L., Egan-Lee, E., Martimianakis, M.A., & Reeves, S. (2011). Relationships of power: Implications for interprofessional education. *Journal of Interprofessional Care, 25*, 98–104.

47. Centre for Education & Knowledge Exchange in Aging, Baycrest. (2012). Baycrest Toolkit for Interprofessional Education and Care (IPE/C). URL: http://www.baycrest.org/educate /students-and-trainees/interprofessional-education/ [January 8, 2014].

Journal of Research in
**Interprofessional
Practice and
Education**

Vol. 4.1
June 2014

www.jripe.org

Appendix 1
Example of Workshop #2 Case Study

Mrs. X has been a resident of the Apotex for 3 years. Her medical history includes Alzheimer's dementia, osteoarthritis, depression, and a remote CVA (10 years ago) that left her with some weakness on her right side.

Over the past 2 weeks, Mrs. X has become increasingly agitated in the morning—screaming, yelling at her caregivers, and refusing to participate in morning care. She gets really agitated if her needs are not met immediately. She is at risk for falling if she tries to get up and go to the bathroom without help.

The psychiatrist has assessed her and recommended medication to help "calm her down." The attending physician agrees with starting the medication and has already spoken with the family to get consent. However, the medication also makes Mrs. X sleepy and makes it difficult for her to participate in care, recreational, and therapeutic activities.

You, the team, are meeting to discuss Mrs. X and to look at her care needs. The goal is to develop a plan of care, taking into consideration her recent change in behaviour.

Journal of Research in
**Interprofessional
Practice and
Education**

Vol. 4.1
June 2014

www.jripe.org

Appendix 2
Focus Group Questions

- Tell me about the first time you heard about the terms IPE and IPC?

- Tell me what interprofessional collaboration means to you?
  - How do you know it's happening?
  - What do you think is needed for interprofessional collaboration to work?

- In what ways have you seen IPC (teamwork) impacting patient care?
  - What factors were in play that affected the process of interprofessional collaboration?

- What elements of interprofessional collaboration and care are we living at Baycrest? Can you provide examples or stories that demonstrate that it is alive?

- What tools and resources are required to enact IPE/C?

- Imagine Baycrest three years from now. Teams have taken workshops and are collaborating together and with patients and families at a level you could have not imagined before.
  - What kinds of conversations are happening among health professionals, students, administrators, and staff?
  - What does care look like?
  - What would be different?

Journal of Research in
**Interprofessional
Practice and
Education**

Vol. 4.1
June 2014

www.jripe.org

Appendix 3
Attitudes Toward Health Care Teams (ATHCT) Questionnaire

We would like to know about your attitudes toward interdisciplinary healthcare teams and the team approach to care. By interdisciplinary healthcare team, we mean three or more health professionals (e.g., nurse, physician, social worker) who work together and meet regularly to plan and co-ordinate treatment for a specific patient population.

"IN MY OPINION":	Strongly Disagree	Moderately Disagree	Somewhat Disagree	Somewhat Agree	Moderately Agree	Strongly Agree
1. Working in teams unnecessarily complicates things most of the time.	☐	☐	☐	☐	☐	☐
2. The team approach improves the quality of care to patients.	☐	☐	☐	☐	☐	☐
3. Team meetings foster communication among team members from different disciplines.	☐	☐	☐	☐	☐	☐
4. Physicians have the right to alter patient care plans developed by the team.	☐	☐	☐	☐	☐	☐
5. Patients receiving team care are more likely than other patients to be treated as whole persons.	☐	☐	☐	☐	☐	☐
6. A team's primary purpose is to assist physicians in achieving treatment goals for patients.	☐	☐	☐	☐	☐	☐
7. Working on a team keeps most health professionals enthusiastic and interested in their jobs.	☐	☐	☐	☐	☐	☐
8. Patients are less satisfied with their care when it is provided by a team.	☐	☐	☐	☐	☐	☐
9. Developing a patient care plan with other team members avoids errors in delivering care.	☐	☐	☐	☐	☐	☐
10. When developing interdisciplinary patient care plans, much time is wasted translating jargon from other disciplines.	☐	☐	☐	☐	☐	☐
11. Health professionals working on teams are more responsive than others to the emotional and financial needs of patients.	☐	☐	☐	☐	☐	☐

Journal of Research in
**Interprofessional
Practice and
Education**

Vol. 4.1
June 2014

www.jripe.org

19

Developing an IPE
Toolkit for Geriatric
Care

**Boutcher, Conn,
Mroziewicz, &
Guttman Sokoloff**

"IN MY OPINION":	Strongly Disagree	Moderately Disagree	Somewhat Disagree	Somewhat Agree	Moderately Agree	Strongly Agree
12. Developing an interdisciplinary patient care plan is excessively time consuming.	☐	☐	☐	☐	☐	☐
13. The physician should not always have the final word in decisions made by healthcare teams.	☐	☐	☐	☐	☐	☐
14. The give and take among team members helps them make better patient care decisions.	☐	☐	☐	☐	☐	☐
15. In most instances, the time required for team meetings could be better spent in other ways.	☐	☐	☐	☐	☐	☐
16. The physician has the ultimate legal responsibility for decisions made by the team.	☐	☐	☐	☐	☐	☐
17. Hospital patients who receive team care are better prepared for discharge than other patients.	☐	☐	☐	☐	☐	☐
18. Physicians are natural team leaders.	☐	☐	☐	☐	☐	☐
19. The team approach makes the delivery of care more efficient.	☐	☐	☐	☐	☐	☐
20. The team approach permits health professionals to meet the needs of family caregivers as well as patients.	☐	☐	☐	☐	☐	☐
21. Having to report observations to the team helps team members better understand the work of other health professionals.	☐	☐	☐	☐	☐	☐

Sources: Heinemann, G.D., Schmitt, M.H., & Farrell, M.P. (1999). Development of an Attitudes Toward Health Care Teams Scale. *Evaluation & The Health Professionals, 22*(1), 123–142; Hyer, K., Fairchild, S., Abraham, I., Mezey, M., & Fulmerr, T. (2000). Measuring attitudes related to interdisciplinary training: Revisiting the Heinemann Schmitt and Farrell Attitudes Toward Health Care Teams' scale. *Journal of Interprofessional Care, 14*(3), 249–58.

Journal of Research in
**Interprofessional
Practice and
Education**

Vol. 4.1
June 2014

www.jripe.org