

Collaborative Interprofessional Stroke Care in Community Re-engagement

CISCCoR

**Final Report
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Submitted to

**The Ministry of Health and Long Term Care
Ontario Stroke System Best Practices Research Committee
The Toronto West and South East Toronto Stroke Networks' Stroke Steering
Committees**

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**Ontario
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EXECUTIVE SUMMARY

Stroke remains the third leading cause of death in Canada despite medical advances in prevention and treatment over the past decade¹. Three quarters of people who survive a stroke will return home, but may experience some form of limitation in their activities of daily living impacting their quality of life¹. The recovery process is complex, not only for the person who sustained a stroke and their family, but also for their healthcare providers (HCPs). Understanding and responding to this complex process in a holistic and integrated manner can translate into positive outcomes for stroke clients, their families and healthcare providers alike.

A pilot study conducted by Cheung and McKellar in 2008 developed and evaluated the impact of a multifaceted educational intervention on stroke best practices in community re-engagement (CR). CR is defined as a holistic approach to the reorganization of physical, bio-psycho-social characteristics so that an individual can resume well adjusted living after illness (stroke)³. This pilot study was designed to facilitate the adoption of CR stroke best practices by HCPs working in community settings. Positive results and several key recommendations emerged from the pilot that helped shape the current Collaborative Interprofessional Stroke Care in Community Re-engagement (CISCCoR) study. The recommendations led to the enhancement of the educational intervention through the inclusion of an interprofessional collaborative (IPC) approach to care for clinical settings across the care continuum. Within this study, IPC is defined as “a process of developing and maintaining effective interprofessional working relationships with student learners, practitioners, patients/clients/ families and communities to enable optimal health outcomes”¹⁴. The integration of the CR framework and concepts of IPC in the educational intervention provided HCPs with a shared framework and language from which to work when considering the complex needs of stroke clients.

Purpose

This research project evaluated the impact of an innovative educational intervention (integrating concepts of IPC patient-centered care and CR) on HCPs’ day to day practice and on their delivery of best practice based care to persons living with stroke.

The specific objectives were:

1. To investigate HCPs’ perceptions, perspectives, knowledge and understanding of a CR framework and IPC team approach pre and post intervention.
2. To document the experiences of HCPs with respect to self-reported change in practice post intervention.
3. To identify the impact of the educational intervention across the continuum of care.

A secondary purpose was to discover if the intervention translated into perceived changes in the delivery of care from the perspectives of stroke clients post intervention.

To meet the purposes, several approaches were undertaken:

- Development of an educational intervention consisting of best practices in stroke, the CR framework and an IPC approach to care (elements, skills and competencies of IPC) incorporating principles of adult learning, reflective learning, and knowledge transfer strategies;



- Refinement of a trigger tool bookmark, developed in the pilot, addressing the eight components of CR with corresponding reflective questions;
- Incorporation of additional multimodal strategies (LinkHealthPro, Peer Support Sessions) to influence the uptake of knowledge and change in practice.

Methods and Data Analysis

The CISCCoR study was evaluated using a combination of quantitative and qualitative methods. Quantitative data was obtained through the administration of evaluative questionnaires to HCPs i.e. a 90 Second Program Evaluation, a pre-post CR questionnaire and a pre-post Primary Healthcare Questionnaire©. Chi-square or Fisher exact tests were used to examine differences between groups and non-parametric methods were used to examine differences pre- and post-test.

Qualitative data were obtained from HCP interviews (post intervention), completion of a Commitment to Action tool (completed on day 2 of the intervention), and through stroke client interviews (pre and post intervention). Interviews were audio recorded and transcribed verbatim, audio-checked for accuracy and thematically coded using QSR Nvivo ® 7.

Refer to the flow diagram which is a pictorial representation of the CISCCoR study (p. 9).

Findings

Sixty seven HCPs, representing fifteen roles/professions from nine healthcare settings spanning the continuum of care within four Stroke Networks participated in the intervention. HCPs with varying levels of experience in providing stroke care were recruited to the project.

Based on the ninety second program evaluation, overall feedback on the format and content of the two education days was positive. Satisfaction scores were equally encouraging:

- 95% (n= 58) of HCPs reported being “*very satisfied*” or “*extremely satisfied*” with the educational intervention,
- 5% (n= 3) gave a rating of “*satisfied*”.

HCPs were asked to rate their level of knowledge about stroke care practices related to CR both prior to and 6 months following the delivery of the educational intervention. Statistically significant changes in HCP ratings of knowledge regarding CR were detected pre and post intervention. Furthermore statistically significant changes in HCPs’ rating of their level of confidence when working with stroke clients were detected pre and post intervention.

Analysis comparing pre and post data on the Primary Health Care Questionnaire© which looked at team performance and team viability, did not reveal any statistically significant changes.

* ratings were based on a 5 point Likert scale with 5 being extremely satisfied to 1 being not at all satisfied



Four key themes were identified through the qualitative analysis of the HCP interview data: 1) *enhanced understanding of IPC* (through *enhanced interprofessional communication, better role understanding* (their own and each others'), *enhanced collaboration, and improved team functioning*); 2) *self-reported accounts of practice change* 3); *constraints* (preventing the adoption of CR best practices operating at multiple levels) and 4) *enhanced understanding of the complexity of stroke*. Many HCPs reported their teams were already functioning in an IPC manner, but that the intervention was still able to enhance their existing skills and competencies required for IPC.

A number of HCPs interviewed indicated how they perceived change in their practice. The intervention gave HCPs a new appreciation for the many areas of needs stroke clients have as they transition across the continuum of care. This heightened awareness extended to how the eight components of CR are interrelated and enabled HCPs to gain a more holistic/ and comprehensive appreciation of the stroke client. HCPs self reported addressing areas of CR they had not previously fully considered or felt were outside of their scope of practice. In addition, HCP told stories of self reported practice change at a team level, where teams were contributing to making positive changes to their program in the area of collaborative patient centred goal setting

Various constraints on the HCPs' ability to integrate knowledge into practice were also identified in the HCP interviews. These constraints existed at multiple levels: organizational, professional socialization, individual and workplace issues.

Accounts from stroke clients in their pre (n = 22) and post (n = 16) interviews, provided examples of positive experiences with health care services. Stroke clients commented that they felt they 1) were included in the goal setting process, 2) noticed HCPs consulting and communicating with other HCPs during service provision and 3) observed HCPs working collaboratively. The interviews also revealed how various CR components were not consistently probed or openly discussed. Stroke client accounts also highlighted their perceived reliance on HCPs for guidance and information to facilitate optimal re-engagement. The stroke client interviews revealed that clients and their families are not always aware of what to expect or what questions to ask of HCPs in their recovery process. The responsibility often falls to HCPs to direct this discussion in a comprehensive and holistic way.

The delivery of the educational intervention enhanced HCPs daily practice in the delivery of stroke best practices care. The CR framework and IPC approach provided HCPs working across the care continuum with a common framework and language when setting interprofessional client centered goals with persons living with stroke.

Recommendations

Several key recommendations emerged from the findings and highlight additional opportunities to build upon and inform ongoing efforts in stroke CR best practice and IPC. The recommendations of this study are: 1) *Further iterations of the CISCCoR intervention*; 2) *Education intervention on the Community Re-engagement framework for stroke clients*



1) Recommendations for further iterations of the CISCCoR intervention

Taking into account HCPs' positive feedback from the education sessions and the study's findings, it is recommended that the CISCCoR intervention be implemented broadly across the province. As much as possible, complete teams ought to be trained to support collaboration and continuity of care. The sessions should continue to have a mix of HCPs from a range of clinical care settings and roles/professions. Additional strategies must be used to sustain the learnings at a team and client level. Those leading/ providing future iterations of CISCCoR would participate in 'train the trainer' education to prepare them for this role. Skills in team facilitation and a strong knowledge base around IPC and stroke best practice based care in CR would be required.

2) Education intervention on the Community Re-engagement framework for stroke clients

It is apparent that the needs and issues faced by stroke clients are complex and stroke clients rely heavily on HCPs to guide and direct them in their care. A self management approach in CR is needed to reduce the negative impact of stroke and foster empowerment. A recommendation is put forth to develop an education intervention on self-management incorporating the CR framework and CR trigger tool bookmark that could be taught to stroke clients (and their caregivers) in order to facilitate self-management in a holistic manner.

Next Steps

1) Incorporation of CR Framework and Resources in the Community Care Resources' Website

The Community Care Resources (CCR) Website² is intended to help individuals find a variety of health services to maintain their health, independence and quality of life. The website can serve as a primary vehicle for HCPs and stroke clients (and their caregivers/family) to navigate and access the array of stroke specific community support and health agencies in their communities. By listing the resources within the CR framework, HCPs are prompted to think holistically and coordinate care to meet the complex needs of their clients. Moreover, stroke clients are better able to self manage their care needs in a holistic manner

2) Further research

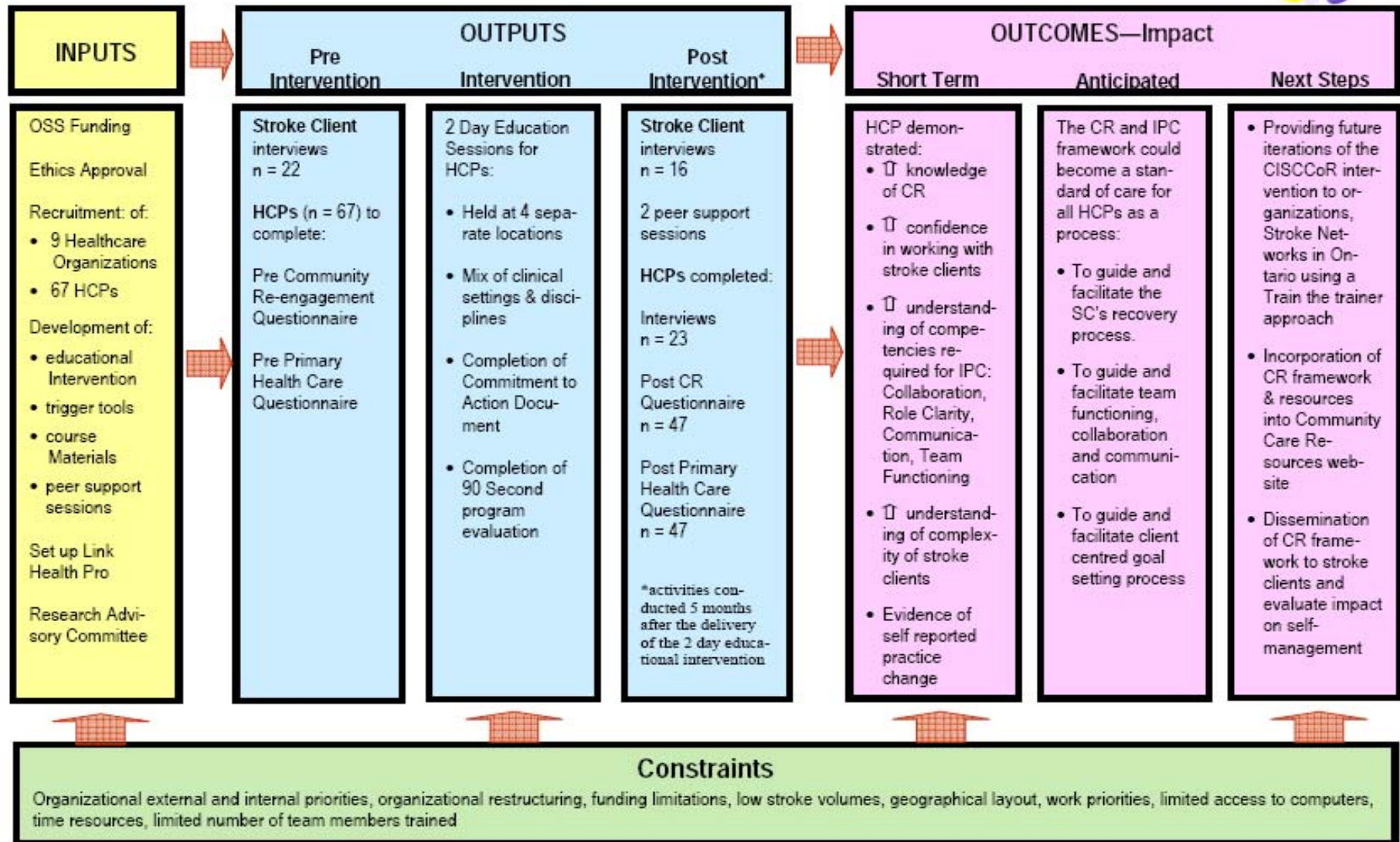
The CISCCoR study has demonstrated value in raising awareness and increasing knowledge and confidence of HCPs in the areas of IPC and CR. Ongoing research is still required. An ethnographic follow up study would provide more robust data on the effects of the CISCCoR intervention on HCPs' practice change versus the current self-reported practice change. Following the latter study, a more longitudinal study evaluating HCPs' change in practice at the level of the stroke client (and caregiver) would reinforce the impact of the CISCCoR intervention.



Collaborative Interprofessional Stroke Care in Community Re-engagement (CISCCoR) - Flow Diagram



Purpose: To evaluate the effectiveness of a new innovative interprofessional educational intervention integrating concepts of IPC patient-centered care and CR on HCPs' day to day practice and on their delivery of optimal stroke care.



1.0 BACKGROUND AND RATIONALE

Stroke remains the third leading cause of death in Canada and the leading cause of disability in Ontario¹ despite medical advances in its prevention and treatment over the past decade. Three quarters of the people who survive the acute stroke will return home, but may experience some limitation in their activities of daily living impacting their quality of life¹.

Stroke recovery is a complex process. An important element of the recovery process is community re-engagement (CR), yet it is a process that is poorly understood. CR is defined as a holistic approach to the reorganization of physical, bio-psycho-social characteristics so that an individual can resume well adjusted living after illness (stroke)³. Stroke best practices define the following eight components of community re-engagement that should be considered by the healthcare community when providing patient-centered care: health management, support network, environment, life roles, mobility, caregiver network, communication⁴ and financial management[◇]. These eight components make up the community re-engagement *framework*.

Parallels can be drawn between this holistic view of stroke care and the World Health Organization's (WHO)⁵ belief that each dimension of a person's well-being should be treated as interactive and dynamic rather than linear or static. The WHO classification on Functioning, Disability and Health⁵ provides a unifying framework for classifying the consequences of disease such as stroke. Functioning and disability are viewed as a complex interaction between the health condition of the individual and the contextual factors related to the environment and personal factors. Participating in valued roles and taking into account of variety of contextual factors is integral to achieving a state of positive well-being.

Stroke best practice guidelines in community re-engagement^{4,6} have been developed, refined and disseminated at provincial and national levels. However there exists a gap in the uptake of stroke best practices across the care continuum between what should be done and what is being done⁶. Research has shown that the blind dissemination of best practice material alone to HCPs is not enough to evoke change in practice^{7,8}. A review of the literature on health services delivery demonstrates that active educational interventions are more likely to induce change in practice⁹. Furthermore, the use of multi-component interventions are more effective than single strategies in changing practices influencing clinical outcomes^{10,11}.

A pilot project conducted by Cheung and McKellar (2008) evaluated a newly developed multifaceted educational intervention based on stroke best practices in community re-engagement (CR) and the adoption of these by HCPs working in community settings¹². A CR trigger tool, built on the eight components of CR stroke best practices framework was created and used by HCPs in group activities during the education sessions. The trigger tool includes a list of reflective questions for each of the eight components of CR. These questions served as a guide for HCPs when engaging stroke clients in meaningful conversations.

[◇] Financial management was added to the list because this area impacts on all of the other components



The twenty-eight HCPs who participated in the pilot study revealed that the education was informative and interactive. HCPs self-reported practice change. Results demonstrated that many HCPs incorporated the CR framework into their assessments and goal setting. Others reported increased comfort and confidence levels in providing stroke care. The trigger tool assisted in supporting a more reflective practice¹². Additionally, HCPs reported that ongoing peer support, education about CR and existing resources for stroke clients were important tools for the uptake of knowledge. Findings from the pilot study supported the use of a multi-faceted approach to learning as a viable strategy for educating community HCPs.

Several key recommendations emerged based on feedback from this pilot project and helped to shape the current research project “Collaborative Interprofessional Stroke Care in Community Re-engagement” (CISCCoR) including:

- The CR framework and education strategy need to be disseminated across all clinical settings within the eleven regions of the Ontario Stroke System;
- The tools and materials used in the education sessions need to be adapted and promoted to further support HCPs in their roles;
- The educational intervention required further strategies to support practice change and connections among HCPs within and across organizations;

Although evaluating the stroke client perspective and the impact of education on their experiences of health care delivery was not a recommendation articulated in the pilot, it was seen as an important element for the next investigation by the study team, one which warranted further exploration for the CISCCoR study.

To further enhance the educational intervention, the concept of an IPC approach to care was considered. The ability to work with professionals from other roles/professions to deliver collaborative, patient-centred care is considered a critical element of professional practice requiring a specific set of competencies¹³. According to the Canadian Interprofessional Health Collaborative (2010), the following six competency domains “highlight the knowledge, skills, attitudes and values that shape judgements essential for IPC: interprofessional communication, patient/client/family/community-centered care, role clarification, team functioning, collaborative leadership, and interprofessional conflict resolution”¹⁴.

The use of an IPC approach to care within acute care and rehabilitation teams has been found to impact outcomes for people living with stroke. Research looking at team functioning and patient outcomes in stroke rehabilitation, found that three measures of team functioning namely: task orientation, order and organization, and utility of quality information, were significantly associated with patient functional improvement¹⁵. In a more recent study, stroke patients treated by staff who participated in a team training program were more likely to make functional gains than those treated by staff receiving information only. The training emphasized team dynamics, problem solving, use of performance feedback data and action plans for process improvements¹⁶.

IPC and interprofessional education (IPE) have received a great deal of attention since Commissioner Roy Romanow released his report in 2002 on the Future of Health Care in Canada¹⁷. He wrote...“in view of...changing trends, corresponding changes must be



made in the way health care providers are educated and trained. 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)¹⁷. In more recent years, there has been an influx of research evaluating the impact of IPE on patient outcomes and IPC for both pre-licensure and post-licensure HCPs. Although some headway has been made in this area, more work is required for shifting from a culture of health care silos to a system of cooperating independent equals who contribute to a common vision of health ¹⁷. Delivering IPE requires a special skill set to both prepare and support facilitators of interprofessional learning ^{18,19}

While human resources and organizational structures exist to provide continuity of care, the various players within the system have not yet mobilized to enhance and fully leverage how they work together. They are a set, but not an integrated system. While the individual entities function well, collaboration among team members and clinical settings needs to happen in order to promote a shared sense of purpose and to improve their ability to support people living with stroke (and their families) as part of one system rather than a sequence of separate, often segregated and frustrating, experiences²⁰.

Incorporating IPC into the educational intervention also addressed two of the 2006 OSS Rehab Consensus Panel Standards Recommendations: “delivering care in a collaborative care model” and “Interprofessional teams will facilitate linkages for stroke survivors and their families”²¹. A preliminary gap analysis conducted in 2008 within the Toronto West and South East Toronto Stroke Networks revealed that acute care and rehab stroke programs saw their programs/teams as only partially meeting these recommendations ²².

The CISCCoR study was designed to address the above mentioned gaps by enhancing the educational intervention with an IPC approach to care. Within this study, IPC is defined as “a process of developing and maintaining effective interprofessional working relationships with student learners, practitioners, patients/clients/ families and communities to enable optimal health outcomes”¹⁴. Collaboration is a “client-centered process of communication and decision making that enables the separate and shared knowledge and skills of healthcare providers to synergistically influence the care provided”²³.

Stroke recovery requires a coordinated approach that goes beyond the physical and medical aspects of their well-being. This project was designed to influence the shift currently underway in healthcare from a purely curative and siloed model of care to one that is client-centered and addresses bio-psycho-social needs, in interaction with their personal and environmental contexts. The CISCCoR intervention attempts to break down some of the silos and allow HCPs to leverage their expertise to respond to the multiplicity of needs experiences by persons living with stroke²⁴. Understanding and responding to the complexity of stroke CR in a holistic and integrated manner can translate into positive outcomes for stroke clients and HCPs alike.



Purpose

This research project evaluated the impact of an innovative educational intervention (integrating concepts of IPC patient-centered care and CR) on HCPs' day to day practice and on their delivery of best practice based care to persons living with stroke.

The specific objectives were:

1. To investigate HCPs' perceptions, perspectives, knowledge and understanding of a CR framework and IPC team approach pre and post intervention.
2. To document the experiences of HCPs with respect to self-reported change in practice post intervention.
3. To identify the impact of the educational intervention across the continuum of care.

A secondary purpose was to discover if the intervention translated into perceived changes in the delivery of care from the perspectives of stroke clients post intervention.

In keeping with the research purpose, the design and delivery of the educational intervention needed to align with theoretical approaches that support interprofessional learning. IPE is described as “occasions when two or more professionals learn with, from and about each other to improve collaboration and the quality of care”²⁵. To create a sound education module that would foster best practice uptake and interprofessional learning, a number of teaching strategies and educational theories were used: classic theories of adult education (Knowles, 1980), reflection on practice (Schon, 1987), problem-based learning (Barrows & Tamblin, 1980, Parsell & Bligh, 1998) and experiential learning (Kolb, 1984, Hall, 2005, D'eon, 2005)^{25,26}. A blend of didactic and interactive teaching, small group case-based learning, individual and group reflections, peer support and networking were included in the design to ensure relevance to the learners. The design of the intervention study was informed by results of the pilot project by Cheung and McKellar (2008) and a systematic review of the literature by Oandasan and Reeves (2005)²⁵.

2.0 ETHICS APPROVAL

Commitment to participate in the CISCCoR study was received from nine participating organizations[†] representing acute, rehab and community organizations within four Stroke Networks[◇] of the Ontario Stroke System[▽] in early summer 2009. Ethics

[†] Downsview Services to Seniors' B.O.O.S.T. Program, Providence Healthcare, Ross Memorial Hospital, Rouge Valley Health System, Toronto Grace Hospital, Toronto Rehabilitation Institute, Toronto Western Hospital, Trillium Healthcare, and William Osler Health Care.

[◇] South East Toronto, Toronto West, West GTA and Central East Stroke Networks

[▽] Each region within the Ontario Stroke System (OSS) is a network or partnership working toward the same common goal and supporting the key functions of the OSS: Best practice implementation, promote equity and access, build capacity, foster innovation, system change, quality improvement, coordination/integration of services, voice for the system with LHINs. Each region is accountable for effective governance, leadership and fiduciary responsibility for collaborative regional stroke system planning, implementation, improvement across the care continuum.



approvals were sought from each participating organization's Research Ethics Board and final approval was received from all sites by August 2009.

3.0 RESEARCH ADVISORY COMMITTEE

A Committee was formed to serve in an advisory capacity on the CISCCoR study. The principal investigator, co-investigator and research coordinator reported to the members of the committee on the processes and progress related to the study. Membership was comprised of two Regional Stroke Program Managers, one Stroke Rehab Coordinator and two Community and Long Term Care Stroke Specialists from two of the four participating Stroke Networks, along with managers and/ or professional practice leaders from each participating teams' organization.

4.0 THE EDUCATIONAL INTERVENTION and STRATEGIES TO PROMOTE KNOWLEDGE TRANSLATION

The investigators refined and delivered the education module in keeping with the multifaceted approach of their pilot project¹² and evidence based stroke best practice research in CR (as referenced in the Background section of this report). The CR framework and trigger tool were also included in the curriculum. A consultant with expertise in IPC developed and delivered the education module on the principles and skills of IPC and interprofessional client-centered goal-setting. Following is an overview of the educational intervention layout. A more detailed layout can be found in Appendix 1.

The first day (total of 6 hours) introduced the foundational concepts of CR and its relationship to IPC. HCPs learned about the factors that impact effective collaboration in their settings and the tools that enable IPC. In addition, best practice based evidence related to the eight components of the CR framework (and associated trigger tool and resources) and practical strategies to address each area were discussed at length.

The second day of the intervention (total of 6 hours) focused on applying the knowledge and competencies from the first day for effective goal setting with stroke clients. This was done through group activities and strategies to address different professional roles involved in all areas of CR. Ways of understanding teams (e.g. stages of group development, task and process) were addressed via interactive lecture and small group discussions building on participants' experiences and expertise with a focus on four IPC competencies: team collaboration, communication, role clarity and team functioning. HCPs created strategies and individualized plans for implementing learning into practice.

4.1 Format of the Educational Intervention

Participating HCPs had the option of attending one of four dates for each of the two education sessions. The 2 sessions were one month apart. Each session had a mix of providers from different organizations, and clinical settings. A total of twelve hours of education was delivered over the two day program (in September, 2009 and in October, 2009).



The one-month interval between days 1 and 2 gave HCPs the opportunity to “reflect-on”, and “reflect-in-action”, two strategies that serve to reshape what HCPs are doing while they are actually doing it²⁵. HCPs were asked to report back on their experiences and reflections at the second session (Day 2). Participating HCPs were provided with a Certificate of Training, in order to acknowledge their two day commitment to participating in the education sessions.

4.2. LinkHealthPro

LinkHealthPro²⁷ is an online knowledge network and collaboration tool designed specifically to support mentoring and IPC. HCPs were given a tutorial on how to navigate the online system and were encouraged to open a free profile. LinkHealthPro provided an informal communication vehicle through which HCPs could connect with one another and share any information or questions pertaining to their practice. The research team encouraged the use of this tool by posting CISCCoR materials, relevant articles, questions and upcoming activities related to the project.

4.3 Participant Package

HCPs received a package that included the Community Re-engagement Trigger Tool Bookmark (Appendix 2); activity sheets (Appendix 3), outcome measures recommended by the Canadian Best Practices in Stroke Rehabilitation Outcomes Expert Panel (2006) (Appendix 4); a Team Performance Checklist (Appendix 5), and printed versions of the slide decks from both education days, a 90 second program evaluation form (Appendix 6), a Commitment to Action Document (Appendix 7) and Community Re-engagement Questionnaires (Appendix 8) and the Primary Health Care Questionnaire©

4.4 Commitment to Action Tool

A commitment to action document was introduced at the end of the second education session. The goal of this document is to foster self directed learning and motivate practice change. This approach was selected because such instruments are intended to provide an opportunity to document, track and facilitate the implementation of learning into practice²⁸ by enabling HCPs to set their own realistic and measurable goals.

To foster self-directed learning and enable practice change, HCPs were asked to set a personal, realistic and measurable goal that could be attained within 5 months. The goal was to be relevant to the learnings of the educational intervention.

4.5 Peer Support Sessions

Two peer support sessions were held via videoconference, the first in November 2009 and the second in February 2010. Attendance was optional. The purpose of these sessions was 1) to facilitate further networking and sharing of information on the application of knowledge in practice, 2) to discuss strategies to facilitate uptake, 3) to discuss case scenarios with HCPs across the continuum of care and 4) discussed new initiatives that emerged from the intervention.



5.0 METHODS

The CISCCoR study employed a mixed-methods pre-post test design, entailing the collection of qualitative and quantitative data before and after the introduction of the educational intervention. Qualitative and quantitative data for this research were collected between July 2009 and March 2010 and included two pre and post questionnaires (“Community re-engagement” and “Primary Healthcare”) administered to HCPs and post educational intervention interviews with HCPs (n = 23). In addition, stroke clients were interviewed pre and post intervention (n = 22, 16 respectively). This section of the report provides a brief overview of each of the data sources as well as the recruitment process for the HCPs.

5.1 Recruitment, Sampling and Description of Training Participants

A total of 35 organizations representing acute care, rehabilitation and community care settings, across the boundaries of the four participating Stroke Networks, were approached to participate in the study. Of these, nine organizations agreed to participate: two acute care units, four rehabilitation programs and three community organizations. The investigators anticipated having 10 organizations participate with a projected number of 90 HCPs involved. The project team (principal investigator, co-investigator and research coordinator) offered a brief on-site presentation to interested staff at the participating organizations. Multiple emerging corporate priorities, limited funds to backfill staff, and low stroke volumes at the health care sites are among the reasons cited for a lower than projected and longer time frame for engagement of organizations in the study.

The sample consisted of 72 HCPs who voluntarily came forward and provided informed consent to participate in the project. In the early phases of the project, 5 HCPs withdrew from the project stating competing work priorities, inability to participate in both education days and change of workplace as reasons for withdrawal.

A detailed breakdown of the HCPs involved in the study is included in Table 1.



Table 1 Sample Demographics of Participating HCPs

| Profession | | % (n) | No of yrs working in present setting | % (n) |
|---|--------------|--------------|---|--------------|
| Dietician | | 6.0 (4) | 0-4 years | 55.2 (37) |
| Nurse - RN/RPN | | 26.9 (18) | 5-9 years | 19.4 (13) |
| Occupational Therapist | | 14.9 (10) | 10-15 years | 13.4 (9) |
| Physiotherapist | | 14 (10) | 20+ years | 11.9 (8) |
| Physiotherapy Assistant or Occupational Therapy Assistant | | 7.5 (5) | | |
| Personal Support Worker | | 4.5 (3) | | |
| Recreational Therapist | | 3.0 (2) | | |
| Speech Language Pathologist | | 6.0 (4) | | |
| Social Worker | | 4.5 (3) | | |
| Other* | | 11.9 (8) | | |
| No. of people in your team | % (n) | Age | % (n) | |
| 1-3 | 0.0 (0) | 20-29 | 32.8 (22) | |
| 4-6 | 4.7 (3) | 30-39 | 29.9 (20) | |
| 7-10 | 21.9 (14) | 40-49 | 16.4 (11) | |
| 11-14 | 23.4 (15) | 50-59 | 17.9 (12) | |
| 15+ | 50.0 (32) | 60+ | 3.0 (2) | |

*Other included: Clinical Educator, Pharmacist, Program Activationist, Discharge Planner, Program Facilitator, Director

5.2 Ninety second Program evaluation

The purpose of this evaluation was to capture satisfaction scores using a 5 point Likert scale and overall comments on the education sessions. Questions included what resonated most with them from the content and what they planned to do differently with their learnings. This evaluation was filled out at the end of each of the 2 education sessions.

5.3 Questionnaires

HCPs were asked to complete two questionnaires a) Community Re-engagement Questionnaire, and b) Primary Health Care Questionnaire®, to be administered pre and post intervention. Both questionnaires were completed by HCPs (n=67) on the first day of the education session. Pre-intervention questionnaire data collection was done in-person, at the beginning of the first day of the educational workshops. It was re-administered to HCPs (n=47) via Survey Monkey®, (a secure online survey database), five months post-intervention. Ratings on the pre- and post-intervention questionnaires were compared to detect any changes in responses. A rigorous process for collecting online survey responses at the post-intervention phase was required to ensure sufficient



response rates. This included sending out reminder notes thru Link Health Pro, personal email notices, and follow up courtesy phone calls to HCPs. A total of 47 responses were obtained for the post questionnaire resulting in an overall follow-up response rate of 70%.

i) Community Re-engagement Questionnaire (Appendix 8)

A community re-engagement questionnaire developed by Cheung and McKellar (2008)¹² in their pilot project was administered. This questionnaire did not undergo any formal validation process, but was reviewed by HCPs in the pilot. It captured information relevant to knowledge and use of the eight components of CR. It employed both closed and open-ended questions. This questionnaire was developed as no validated tool could be identified to capture this information.

ii) Primary Health Care Questionnaire©

The Primary Health Care Questionnaire© is a valid and reliable tool developed by Poulton and West²⁹. It is designed to measure team effectiveness in Primary Health Care teams and includes rating scales to measure aspects of team performance and team viability. The questionnaire specifically addresses the following areas: team objectives, team participation, team attitudes towards change and innovation, roles and role understanding, concern with quality of healthcare, team effectiveness, mutual support, cohesion, demographic and job-related information³⁰.

5.4 Interviews

Qualitative methods are particularly suited for understanding the lived experiences of individuals about whom there is relatively little research related to those individuals on a particular subject^{31,32}. The qualitative research methodology enabled the research team to inquire into participants' subjective experiences of health care for people living with stroke and those HCPs who work with them. (See Appendix 9 for stroke client interview guide and Appendix 10 for the HCP interview guide).

The Research Coordinator conducted all individual semi-structured interviews with stroke clients in person. Based on availability and/or preference, he conducted all individual interviews with HCPs either in-person or via phone in a confidential interview room. Following each interview, field notes were taken to compare how the ideas, stories and themes discussed were similar or different from what was heard in earlier interviews. No substantive differences in interview quality, information received or themes identified were detected between the two modes of interviewing.

5.4.1 Healthcare Provider Interviews

The purpose of the post intervention HCP interviews was to gain insights into their perceptions regarding their application of the knowledge (imparted via the educational intervention) into day-to-day practice and explore their experiences through concrete examples and stories. HCPs were asked to comment on the achievement of their

commitment to action goal and to share successes and challenges in applying learnings from the CISCCoR intervention into their clinical practice

The semi-structured HCP interviews were conducted five months post educational intervention. All interviews occurred at a time and place convenient to the participants and ranged from 20 to 45 minutes in length (average time = 30 minutes). A semi-structured interview guide was administered by the research coordinator.

23 HCPs agreed and gave written consent (Appendix 11) to take part in an optional post-intervention interview with the Research Coordinator. The sample size was adequate in providing necessary information required to capture a variety of experiences and reach thematic saturation.

Sample heterogeneity (profession, years of experience and work setting: acute, rehab, community) was achieved for capturing a range of HCP experiences. Interviewees were recruited from all three practice groups acute care n = 4, rehabilitation n = 11 and community settings n = 8. In keeping with qualitative methodology, participants with a wide range of professional backgrounds also contributed (e.g. Occupational Therapists, Physiotherapists, Speech Language Pathologists, Nurses, Dieticians, Social Workers, Personal Support Workers, etc.).

5.4.2 Stroke Client Interviews

Individual semi-structured interviews were conducted with stroke clients by the Research Coordinator to elicit information on their lived experiences of the health care process. The stroke client interviews addressed a range of topics including their life prior to their stroke, the complexity of needs after their stroke, areas of importance or goals in the eight areas of community re-engagement and their perception of how their healthcare team collaborates and communicates in their delivery of stroke care.

The interviews varied between 15 and 60 minutes in length, depending on the stroke client's tolerance and/or comfort level and the time they needed to answer questions. Pre-intervention stroke client interviews (n=22) were conducted between July and August 2009 and post intervention interviews (n=16) were conducted between February and March 2010. Where possible, the same stroke client was included in both interviews (n=9). An identified contact person within the client's circle of care was designated to obtain initial consent from the stroke client (Appendix 12). Clients were required to have stroke related symptoms, be receiving stroke related services from a participating organization involved in this study, able to speak English, and express interest, willingness and ability (non-aphasic and cognitively intact) to participate in the interview process.

Table 2 provides a breakdown of all stroke clients interviewed pre and post intervention, by setting type.



Table 2 Interviewed Stroke Client Demographics Pre and Post Intervention

| | Age range | Gender | Acute | Rehab | Community | Total |
|--|-----------|-----------------|-------|-------|-----------|-------|
| Pre Intervention | 44- 93 | M = 13 F = 9 | 2 | 9 | 11 | 22 |
| Post Intervention | 44 – 88 | M = 13 F = 3 | 1 | 5 | 10 | 16* |
| <ul style="list-style-type: none"> *9 interviews were with clients who had been interviewed in the pre intervention. Of these 9 interviews, M = 7, F = 2, across all community settings | | | | | | |

5.5 Focus Groups

Four optional semi-structured focus groups were scheduled to be convened in March 2010. The purpose was to capture HCPs stories on perceived changes in practice and on the tools and strategies that facilitated this process. Although 41 HCPs gave their initial consent to be contacted by the project team for the optional focus groups, this data collection activity was cancelled due to low enrolment (n=5). HCPs stated challenges related to time, work priorities and having to complete many of the concurrent post intervention data activities.

5.6 Method of analysis

5.6.1. Qualitative Interview Analysis (Stroke Clients and HCPs)

All interviews audio recorded were transcribed verbatim, audio-checked for accuracy and thematically coded using QSR Nvivo ® 7 –a qualitative software program that facilitates data storage, coding, retrieval, comparing, and linking. The data was coded according to standard qualitative coding techniques³³. The data analysis began with an inductive descriptive process of sorting and defining the data. This process involves dividing the text of the transcripts into segments of text and labelling descriptive codes of analysis to these segments³⁴. The labelled codes were then grouped into general topic-oriented categories and all text segments belonging to the same category were compared in summary tables³⁵. The summary tables allowed for the research team to efficiently review coded data. Ultimately, the topic-oriented categories were further refined by the research team and formulated into fewer analytical categories through an inductive, iterative process of reading through the categorized quotes from HCPs and via discussions and analysis.

Data analysis occurred in conjunction with data collection, a process referred to as interim analysis³⁶. Inter-rater reliability was established by cross checking independently coded HCP and stroke client transcripts amongst the research team. For open-ended response data on the questionnaires, qualitative analysis was undertaken exploring the textual data for common themes.



5.6.2. Quantitative Survey Data

With respect to the quantitative data, Chi-square or Fishers exact tests were used to examine differences between clinical settings, and non-parametric methods used to examine the differences pre- and post-test. All statistical analyses were performed using SAS Version 9.2 (SAS Institute, Cary, NC) by an experienced biostatistician. The small sample size made it difficult to run comparisons between professional groups, age and years of practice.

6.0 KEY FINDINGS

The findings are presented in a descriptive format in accordance with the objectives of the study. Data from the 90 second program evaluation will be presented first, followed by quantitative data from both the CR and PHC questionnaires. The qualitative analysis with its emergent themes from the HCP and stroke client interviews will be presented after.

6.1 Educational Intervention – 90 Second Program Evaluation Results

Based on the results of the 90 second program evaluation, overall feedback on the format (including session facilitation, environment, timing, mix of participants and settings) and content (material and methodology) of the two education days was positive.

- 95% (n= 58) of HCPs reported being “very satisfied” or “extremely satisfied” with the educational intervention,
- 5% (n= 3) gave a rating of “satisfied”.

HCPs appreciated the interactive nature of the sessions. They reported feeling engaged in the activities and discussions and truly valued the opportunity to meet people from various professional backgrounds and settings. HCPs commented in their program evaluations that “*the material was presented in a comprehensive and cohesive way*” (Community provider) with the trigger tool serving as a “*good visual reminder and starting point for interprofessional discussions*” (Rehab provider). While for some, the content was not new, it did serve as a “*good refresher or reminder of the things that we need to continue to do*” (Acute Care provider).

The following qualitative comments from the “90 Second” program evaluation are representative of how HCPs felt about their learning experience:

“This would be excellent for all healthcare teams”

“Clients will benefit greatly from professionals learning these tools”

“Great time and my outlook has changed for the better”

* ratings were based on a 5 point Likert scale with 5 being extremely satisfied to 1 being not at all satisfied



"I have gained several valuable insights about myself and my colleagues"

"Good opportunities for group work and individual work as well. Always good to have an opportunity to share experiences and learn from other teams."

"Very informative and beneficial to know about other professional roles – a holistic approach is really the most beneficial for the client and they are what matters most"

"Use some more detailed/specific client scenarios for goal setting exercise"

"Having more professionals present – Drs and family/caregivers, individuals with stroke"

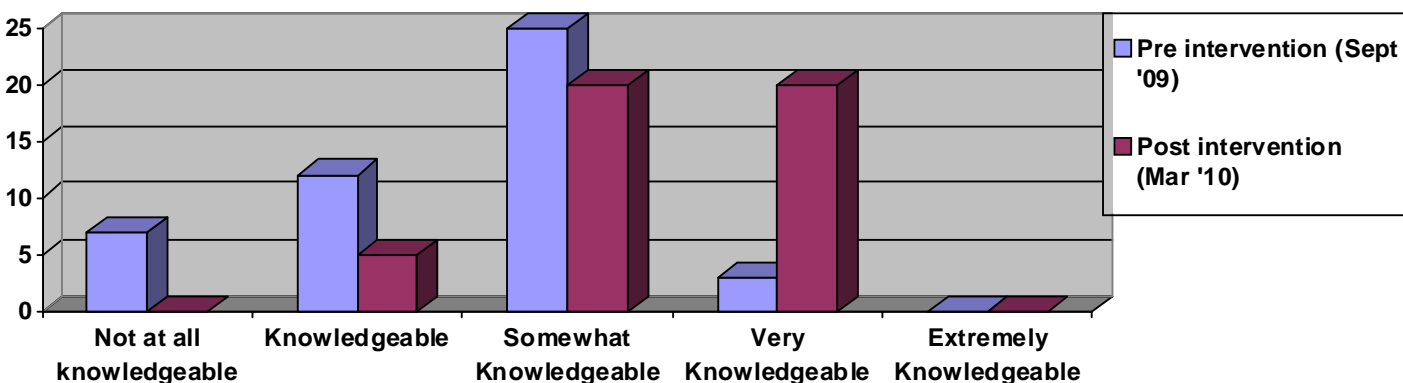
"I would like to see more variety in representation of programs/facilities"

6.2 Impact of the Educational Intervention – Community Re-engagement and Primary Healthcare Questionnaire Results

There were many examples offered by HCPs demonstrating how the CISCCoR educational intervention increased their knowledge and provided them with a better understanding of CR as a framework for interprofessional collaborative patient centered care, thus increasing their confidence in working with this population.

HCP were asked to rate their level of knowledge about stroke care practices in CR both prior to and 6 months following the delivery of the educational intervention (Figure 1). There existed a statistically significant, (p value > 0.001) change from pre and post the intervention related to HCPs knowledge regarding community re-engagement.

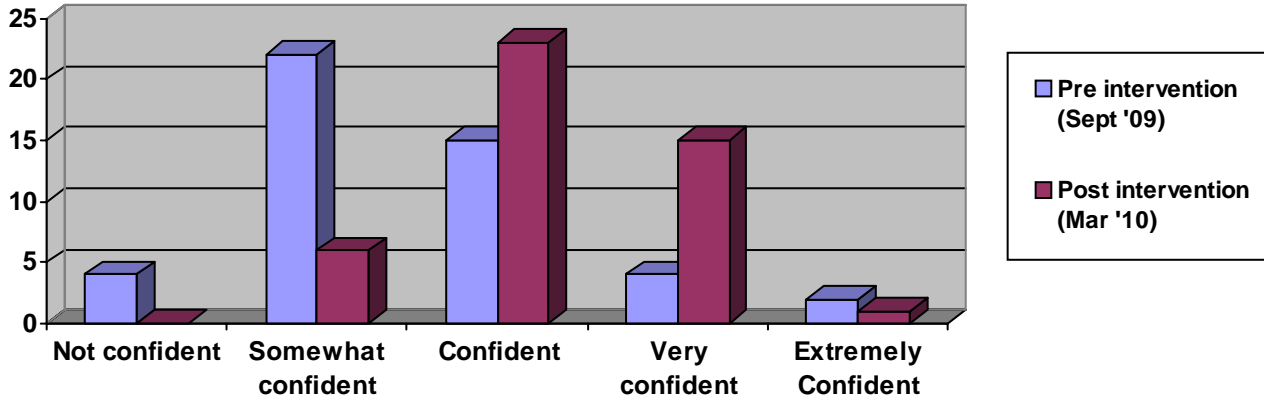
Figure 1 Level of Knowledge of CR Stroke Care Practices (n = 67)



Along with increased ratings on knowledge of CR, there was a statistically significant increase in HCPs' level of confidence when working with stroke clients post-intervention (p value > 0.001) (Figure 2).



Figure 2 Level of confidence of HCPs (n = 67) in working with stroke clients



Individual HCPs also demonstrated a greater understanding of CR in their comments regarding their definition of CR (Table 3). These definitions (three examples chosen from many) offered by the same HCPs in the CR questionnaire, indicate a shift in their perceptions from those that are simplistic to more holistic and inclusive.

Table 3 HCPs definitions of CR pre and post intervention

| HCP ID | Pre (September 2009) | Post (March 2010) |
|--------|---|---|
| 2001 | "Entering back into the community after being away" | "When a person is coming back into their community and their needs (health management, social network, caregiver support, life roles, financial management, environment, communication and mobility) are met in order to live a well adjusted life" |
| 4002 | "Re-enter their previous lifestyle and activities if possible. Finding alternative ways to define oneself in the community" | "Ensure all aspects of a client's community needs for normal engagement are addressed via interprofessional collaboration in hospital teams" |
| 5001 | "Connecting with community partners when a client returns to the community" | "This is a process to enhance a stroke victims' changes of adapting their life to cope with the effects that a stroke has had on every aspect of their life. This involves professionals from many disciplines working together to promote the well being of the client". |

In the Community Re-engagement Questionnaire, HCPs were asked to identify among the eight areas of CR, the ones they commonly addressed with their stroke clients. Analysis comparing pre and post data was done overall (Table 4) and by clinical setting: acute, rehabilitation and community (Table 5).



Table 4 Areas of CR commonly addressed pre and post intervention overall

| Variable | Pre n = 47 (%) | Post n = 47 (%) | p values >0.001 |
|--|-------------------|--------------------|--------------------|
| <i>Q5: When working with stroke clients, please indicate which of the following areas you address with them.</i> | | | |
| Health management | 33 (70.2) | 34 (72.3) | 0.82 |
| Life roles | 27 (57.5) | 30 (63.8) | 0.53 |
| Social network | 26 (55.5) | 27 (57.5) | 0.84 |
| Environment | 29 (61.7) | 29 (61.7) | 0.99 |
| Communication | 22 (46.8) | 19 (40.4) | 0.53 |
| Mobility | 31 (66.0) | 30 (63.8) | 0.83 |
| Caregiver support | 31 (66.0) | 33 (70.2) | 0.66 |
| Financial management | 12 (25.5) | 13 (27.7) | 0.82 |

While there was a relatively equal distribution amongst all of the areas of CR across the entire sample, there seem to be more emphasis on areas such as *Health Management, Mobility and Caregiver Support*, while psycho-social issues (i.e. *Social Network and Life Roles*) receive less attention. Issues pertaining to *Financial Management* were least likely to be addressed by HCPs, yet should be addressed because of its impact on whether clients and families can follow through on specific prescriptions and recommendations from different services.



Table 5 Areas of CR commonly addressed pre and post intervention by HCPs by care setting (n = 47)

| Variable | Acute (n = 13) | | Rehab (n = 21) | | Community (n = 13) | | Total | | chi-square p value | |
|--|----------------|---------------|----------------|---------------|--------------------|---------------|--------------|---------------|--------------------|-----------------|
| | Pre n (%) | Post n (%) | Pre N (%) | Post n (%) | Pre n (%) | Post n (%) | Pre n (%) | Post n (%) | Pre > 0.001 | Post > 0.001 |
| <i>Q5: When working with stroke clients, please indicate which of the following areas you address with them.</i> | | | | | | | | | | |
| Health management | 9(69.2) | 11(84.6) | 14(66.7) | 14(66.7) | 10(76.9) | 9(69.2) | 33(70.2) | 34(72.3) | 0.92 | 0.59 |
| Life roles | 3(23.1) | 6(46.1) | 17(81.0) | 17(81.0) | 7(53.9) | 7(53.9) | 27(57.4) | 30(63.8) | 0.003 | 0.07 |
| Social network | 5(38.5) | 6(46.1) | 14(66.7) | 16(76.2) | 7(53.8) | 5(38.5) | 26(55.3) | 27(57.4) | 0.27 | 0.07 |
| Environment | 3(23.1) | 6(46.1) | 15(71.4) | 15(71.4) | 11(84.6) | 8(61.5) | 29(61.7) | 29(61.7) | 0.003 | 0.33 |
| Communication | 3(23.1) | 3(23.1) | 10(47.6) | 11(52.4) | 9(69.2) | 5(38.5) | 22(46.8) | 19(40.4) | 0.07 | 0.25 |
| Mobility | 5(38.5) | 6(46.1) | 16(76.2) | 15(71.4) | 10(76.9) | 9(69.2) | 31(65.9) | 30(63.8) | 0.07 | 0.34 |
| Caregiver support | 8(61.5) | 7(76.9) | 14(66.7) | 15(71.4) | 9(69.2) | 8(61.5) | 31(65.9) | 30(63.8) | 0.99 | 0.78 |
| Financial management | 3(23.1) | 2(15.4) | 6(28.6) | 7(33.3) | 3(23.1) | 4(30.8) | 12(25.5) | 13(27.6) | 0.99 | 0.59 |

No statistically significant changes were noted in the data as shown in the table above. Noteworthy however are changes in the acute care settings around health management, life roles and environment. An attempt to analyze data by job groupings was made, but the small sample size did not allow for a logical clustering of similar roles to provide an informative analysis.

Analysis comparing pre and post data from the Primary Health Care Questionnaire© did not reveal any statistically significant changes for any of the questions. Further analysis by clinical setting did not show any changes.

6.3 Link Health Pro

63 HCPs activated their account to join the CISCCoR online group. The majority of activity on the site was initiated by the research team with only one question posted by a HCP to the group.



6.4 Commitment to Action Document

61 HCPs wrote a commitment to action goal. Only those HCPs (n = 23) who were interviewed, were asked to comment on the achievement of their commitment to action goal. Of those 23 HCPs, 17 were either working towards achieving, or had achieved their goal. These goals aligned with existing program projects or were set according to their current work initiatives. Many of these goals were smaller in scope and required action by only the HCP setting the goal, rather than relying on others for achievement.

6.5 Peer Support Sessions

17 HCPs were in attendance at the November 2009 peer support session and 12 at the February 2010 session, with representation from acute care, rehabilitation and the community. Those in attendance shared that the sessions provided a refresher of the content from the educational intervention and enabled them to review and reflect on their commitment to action goal. Participants found it helpful to learn about new initiatives and enhanced processes at some organizations which resulted from the educational intervention.

6.6 Impact of the Intervention on HCP Practice

In addition to the questionnaires, at five months post intervention, in-depth follow up interviews were conducted with 23 HCPs in order to understand their experiences delivering stroke care since receiving the intervention. HCPs were asked to comment on the achievement of their commitment to action goal and to share successes and challenges in applying learnings from the CISCCoR intervention to their clinical practice. HCPs spoke at length regarding their perceptions regarding the impact of the educational intervention on their clinical practice with stroke clients. The findings from the interviews are organized into four main themes: 1) *enhanced understanding of IPC* (which included four sub-categories of related competencies – *enhanced interprofessional communication, better role understanding, enhanced collaboration, and team functioning*), 2) *enhanced understandings of the complexity of stroke*, 3) *self-reported accounts of practice change*, and 4) *constraints to practice change*.

6.6.1 Enhanced Understanding of Interprofessional Collaboration

HCPs told of addressing areas of CR they never previously considered relevant to their work or were considered outside of their scope of practice. They recounted that team discussions and collaborative interprofessional goal-setting practices were occurring following their attendance at the educational intervention. An enhanced understanding of IPC emerged as a major theme, which subsequently was comprised of four of the competency domains needed for IPC. Their accounts reflected each of the following competencies emphasized in the educational intervention: enhanced interprofessional communication, better role understanding, enhanced collaboration and team functioning.

The following table offers illustrative quotes from HCPs on these IPC competencies.



Table 6 HCP Quotes Related to IPC Competencies

| | |
|---|--|
| <p>Enhanced Communication</p> | <p><i>I think having a framework allows us to do that because now we have it on paper [...] So that gave us a common agenda and language to communicate at team meetings now. (Rehabilitation)</i></p> <p><i>[...] I have seen increased communication ... I've noticed since we've done that, the therapists and nurses are making more of an effort to communicate with each other and I do think it's helped (Rehabilitation)</i></p> |
| <p>Better Role Understanding</p> | <p><i>I find a new congeniality between us. I always thought of them and us, like the nurses get dumped on to do everything else that they (therapists) don't do. But I just found there's a new equality between us, that I understood what their jobs were and that was an important part of our two days. (Acute Care)</i></p> |
| <p>Enhanced Collaboration</p> | <p><i>I just think that our team became much more collaborative because we have that common understanding, we have that common trust and we know we have a common ability to trust each other, to talk about issues because we all went to the same training. (Rehabilitation)</i></p> |
| <p>Team Functioning</p> | <p><i>Then that's when you start to really question how we're doing in terms of team functions, are we meeting our goals and covering all the bases. So I think that really helped starting that discussion and pushing the team forward to move up to the next level. (Rehabilitation)</i></p> |

6.6.1.1 Enhanced Interprofessional communication

The interview transcripts were replete with examples offered by participants of how the intervention fostered interprofessional communication. In particular, HCPs reported how the CR framework provided them with a common language and foundation from which to communicate and collaborate when working with persons living with stroke. Participants remarked that from this improved communication came a shared sense of purpose and direction as a team. The exploration of acronyms in a group activity during the educational intervention continued to have a positive impact on the HCPs in their care settings. HCPs reported being more specific and clear in their reporting, discussions and documentation. Many HCPs indicated that they came to a realization that the use of acronyms in documentation can lead to miscommunication and more importantly patient care errors.

6.6.1.2 Better Role Understanding

Role clarification is an important competency of IPC and was another theme evident in the transcripts. Inherent to role clarification is the awareness of one's own perceptions of other professions. In their interviews, HCPs recounted that during the intervention, the use of an interprofessional goal setting activity using the CR framework offered a new found self awareness of the value of one's own role and more importantly, the role of others within the team. Some HCPs openly admitted in their interviews that they were



underutilizing others' expertise due to their lack of knowledge about a particular profession.

*I have learned to value other people's professions because I know that honestly without our PSW support, we would not be able to run [our program]
(Community)*

Many HCPs indicated that acquiring an enhanced understanding of other roles was a goal in their commitment to action document. By getting to know the roles of their team members, HCPs said they gained a new appreciation for the contributions that others can make to the team and to patient care. According to some HCPs, this resulted in better communication, collaboration and goal setting for their stroke clients.

I've had opportunity to have more discussions with the dieticians and the SLP clinicians and that's been a great eye opener to understand their involvement within some of the goal settings that the different patients and families want to achieve within the program. ... the workshop really highlighted to me that the goals are not just around physio and OT but they need to encompass the other team members as well. (Community)

6.6.1.3 Enhanced Collaboration

There were numerous accounts in the HCP interviews of skills enhanced by the intervention that, as a result, fostered a climate for collaborative practice. HCPs also remarked that, in order for CR to be successful, it requires an orchestrated effort from multiple HCPs as well as engaging the stroke client in that process. A nurse provided a powerful story of collaborative teamwork, communication and problem solving skills using a holistic interprofessional client-centred approach to care.

We had one lady that was ...very trying, was angry, was threatening to report everybody to their professional college, ...unacceptable behaviour, you know like screaming in the dining room, very abusive. Actually the nurses, therapists kind of all got together and we said we need an intervention here because this isn't right. We pulled the manager in who talked to this lady and the team came up with an acceptable plan of care and boundaries on her behaviour, that sort of thing. I had never seen that before, that we could all work together to help... we did take in this lady's psychosocial and her social history and her needs and by the end of it she had come around and was apologizing to everybody for her behaviour and just was like a genesis. We got this new person out of it. So it was nice. We could work together....

Trust was commented on as an important element of collaboration in a number of interviews. HCPs noted that attending the intervention with their colleagues built trust through more open communication and comfort in approaching other members of the team with concerns or suggestions around patient care.

Collaboration was discussed by HCPs as being enhanced because of a common framework and language they were all using. HCPs spoke of being more aware of integrating the elements that were needed to work as a team. Due to the intervention, trust, appreciation and respect among team members were reported as impacting on the way they functioned and subsequently on the way care was being provided to clients.



So if I don't cover [an area of CR] I know somebody else will be capable of doing so. There is a lot less distrust (or) competition in that sense (Rehabilitation).

6.6.1.4 Team Functioning

Another theme from the HCP interviews addressed team functioning. In contrast to the findings from the Primary Health Care Questionnaire©, HCPs reported gaining awareness of the skills and competencies required for IPC during and after the intervention. The HCP interviews brought to the forefront how using the CR framework and the competencies for IPC acted as a catalyst for minimizing silos and creating a more cohesive team through increased communication, interprofessional goal setting and valuing of each others' roles. There was recognition for the need to shift away from working in silos and to communicate and collaborate with others as one team with a common purpose.

we've been trying to have more of a focus on inter-professional collaboration rather than working in silos.... how can we work better together to serve our patients, what are we getting from this and how does it impact not only our patients and families but also our team (Rehabilitation).

Many HCPs set and followed through on their goal to coordinate their work and reflect back on how they are collaborating as a team. They recounted that the educational intervention fostered discussions on team functioning and action steps to setting a goal for the team.

I really got from the workshop was talking about what are the goals of the inter-professional team at the team level. So not talking about the patient goals but talking about more of the goals at the team level. ..I've shared that with a few people and I think then we've all been looking at our work in a slightly different context of how we work together rather than just how we're working together for the patient but instead how we work together in general. (Rehabilitation)

6.7 Enhanced understanding of the complex needs of persons living with stroke

The HCP interviews in this study provided insights into their broader understanding of the stroke client's needs and how the intervention shifted their interactions with the stroke clients to improve outcomes. HCPs commented on having a new appreciation for the many areas of needs experienced by stroke clients as they transition across the continuum of care. This heightened awareness extended to how the eight components of CR are all interrelated and instrumental in getting the bigger picture of the stroke client in their broader context. The interview data indicated that the CR framework was important for HCP participants, to view and understand their clients more holistically as illustrated through these excerpts:

I found it helpful because sometimes I can be so mobility focused as a physiotherapist. After attending the workshop and kind of talking more about all these different areas that relate to community re-engagement, I think that it's helped me to look at the patient a bit more broadly and to think about what are we not addressing or what are going to be some barriers once they go home. I just feel like in general my perspective on discharge planning has been broadened. I'm looking at the patient more holistically (Community)



I've nursed for a lot of years, but to always be aware of the bigger picture, make sure that I'm asking questions and that sort of thing, just not to skim the surface but just to jump in there and see what they need and how we can help (Rehabilitation)

Not only has the intervention allowed HCPs to have a renewed sensibility to the stroke client in their broader social context, but for one nurse, it fostered a sense of putting herself in a client's shoes. She realized that it wasn't all about the medical issues and that she hadn't thought much about financial considerations before. It made her reflect more on her own life, and that of the patients she cares for:

I just assumed everyone had a mountain of money to go buy whatever assistive devices they needed or whatever and then now I'm thinking how much does that cost, can they afford that or is there any resources in the community that we can use to support them going home So just kind of looking at the whole picture now, not just whether their blood pressure is okay and that they've had their medication. [...] when I compare what my husband and I make to what some families are living on, it's not apples and apples. There's a lot of difference in people's socioeconomic status. Now we're actually looking at it and talking and saying can this person afford this. (Rehabilitation)

6.8 Self Reported Accounts of Practice Change

A number of HCPs interviewed indicated how they perceived change in their practice. HCPs were more cognizant of the eight CR components and the importance of probing further on each one. After the intervention, a majority of HCPs reported that they thought more holistically and delved into specific CR components that they had not done before. Further, the majority of HCPs indicated that the accessibility and portability of the CR trigger tool bookmark and the eight components of CR, cued them to probe further during their assessments, discharge planning and goal setting process with their clients. Eliciting more relevant participation statements from their stroke clients was also highlighted by the HCPs as key to generating more specific, measurable, achievable, relevant and timely (SMART) goals.

when the patient comes in we set goals with them and often patients will say I want to be able to walk, I want to be able to climb the stairs, very basic things. So I'm finding now I'll probe them a little bit more; so you want to be able to walk, does that mean you want to be able to walk in the community, do you want to go shopping, are you going to be the one that's cooking, do you need to be able to walk around your kitchen? So kind of finding how walking enables them to do their life roles, (Rehabilitation)

In addition, HCP told stories of self reported practice change at a team level, where teams were contributing to making positive changes to their program in the area of collaborative patient centred goal setting. Table 7, provides examples of accounts of actions taken by HCPs in integrating their learnings from the intervention into their practice. These types of changes may have a more long lasting, sustained impact on HCPs' practice.



Table 7 Self Reported Practice Change at a Team Level

| | |
|--|---|
| Communication strategies | <i>We did review (prior to the intervention), our current communication methods, and made some improvements based on the intervention (i.e. incorporating daily bullet rounds with physician; communication sheet with physician; continued use of white board; and improving kardex rounds). We have also been more effective in coming up with client goals (i.e. previously mostly individual discipline specific goals prior to discussing with the rest of the team). (Acute Care)</i> |
| Drafting a new patient goal tool | <i>The team has drafted a new tool for capturing patient goals. We will be better able to list the goals, if there's no progress or if there's progress and what else is needed to be done for the patient to reach that goal.. So now it's being revised and it's being revised to capture more. It has different areas, different sections to get other information to fill in that section. So I think that's a great step (Community)</i> |
| Development of patient conference tool | <i>....We realized that our family meetings were not overly productive. They were sort of random. We weren't getting out of them what we really wanted to get out of. So the OT, the SLP and the PT on the floor and I got together and developed a patient conference summary tool where it's just a document where all the professionals contribute their piece about how the patient is doing and also the patient and family become part of the team and they also contribute their piece (Rehabilitation)</i> |
| Integration of the Trigger Tool bookmark | <i>Most times only basic CVA education is provided, and apparent deficits are addressed (i.e. areas related to health management; mobility; environment; communication; etc). However in incorporating the bookmark, it was noted that there were also concerns regarding continuing life roles, along with concerns regarding finances and caregiver support. These concerns were not addressed by the patient, until she was cued to do so, therefore the tool helped in providing more holistic care, which may have been missed under normal circumstances. The trigger tool of resources were also utilized to provide community resources. (Acute Care)</i> |

6.9 Constraints on practice change

There were a number of challenges that HCPs alluded to in their interviews for achieving greater IPC and providing more comprehensive care to persons living with stroke. These constraints operated at multiple levels: organizational, professional socialization individual and workplace. Many of these themes have been reported in the knowledge translation and IPC literature^{13,37,40,43, 44}.

Teams are often confronted by the stress of shifting health care systems driven by economic factors³⁸. HCPs reported in their interviews that program cutbacks, staff attrition and internal restructuring have made it challenging for HCPs to work as a cohesive team. Budget restrictions and the inability to backfill positions, replace staff, or



provide paid education days limited the number of HCPs within a team that could attend the educational intervention sessions.

They've announced layoffs. There are a couple of team members of ours that are going to be relocated. So there have been a lot of emotional struggles around that, that everybody kind of feels like our cohesive unit is being torn apart. (Rehabilitation)

HCPs stated that the geographical layout of an organization added to the complexity of the collaborative process. The lack of a dedicated stroke unit or a stroke team added to the complexity of allowing staff to work together with persons living with stroke.

HCPs discussed issues of “us and them”³⁹ or a power imbalance where there are overlapping competencies and responsibilities, preconceptions that professional have of their own role, and stereotypic perceptions that professional hold of members of other professions⁴⁰. These HCPs recounted a tension between working in an interprofessional manner and following one’s own professional identity as follows:

In terms of my profession we would be told don't look at that, that's not part of your scope of practice, why are you being inefficient by looking into things that other professionals do (Acute Care)

I guess I'm not traditionally trained to talk about some of the dimensions involved (Rehabilitation)

Regardless of the type of clinical settings, HCPs said that they recognized that change requires a concerted effort on the part of the entire team. Staff turnover, staff scheduling, program priorities, and a lack of time or opportunity to connect with other team members to talk about and reflect back on cases led this, and other HCPs to fall into old patterns and routines.

But I just think you come back and it's busy and you're back into the routine of just you know kind of... sometimes your days just go by trying to see people before they're discharged.(Acute Care)

Although HCPs recognized the value of effective and improved communication, good intentions are not enough to evoke a change in behaviour. Time and heavy caseloads were among the reasons offered as to why communication is not always done in an effective way. Not having all members in a team attend the intervention made communication a challenge once HCPs returned to their clinical settings. HCPs identified the need for support from their managers to build in processes that encourage time to share knowledge, to continue building trust and understanding. HCPs also identified the need for team members to develop strategies for integrating knowledge into practice.

It was apparent that the perceived amount and type of self reported practice change varied depending on the level of experience of the HCP and their practice setting. Busy caseloads across the care continuum were a source of frustration for many. HCPs expressed that pressures to see a large number of stroke clients took away from the time they would like to spend with them to fully appreciate the complexity of their needs.



Section 6.10 Findings from Stroke Client Interviews

While many stroke clients' spoke of positive experiences with their healthcare teams, their in-depth interviews did identify various CR components that were not consistently and openly discussed with their HCPs. Appendix 13 highlights how each component is complex in and of itself. Some examples of these complexities include:

- Both client and caregiver are in need of (health) support, but were financially underprivileged/ uninformed about available resources;
- Clients are overwhelmed by the recovery process and not having awareness of ways to 'move forward';
- Ongoing limitations that still require treatment/support due to lack of assessments that go beyond the physical side of the stroke;

6.10.1 Stroke Clients' Perceptions of the Delivery of Care

Accounts from stroke clients in their pre and post interviews, provide numerous examples of positive experiences with health care services. Stroke clients commented that they were 1) included in the goal setting process (thus, having client-centered goals), 2) noticed HCPs consulting and communicating with other HCPs during service provision and 3) observed HCPs working collaboratively.

Caregiver: *Well they do interact with each other in discussing their progress or any relevant immediate setback. They do discuss it between themselves and then they let (name) know their evaluation of it. So they do interact well with each other.*

Interviewer: *How do you have a sense of that? I'm really interested to hear about that.*

Caregiver: *Well it encourages you when you know that they are interested both in each other's work in their separate fields and in him as a result of their efforts. (Client, post intervention)*

Setting goals may not be a familiar term for many stroke clients, but they did remark that they saw the team working towards getting them better, more mobile and safe to return home. However, many clients stated that explicit goal setting for addressing issues beyond physical impairment was not promoted or even raised with clients/caregivers.

Stroke client accounts also highlighted how they relied on the HCPs for guidance and information to facilitate optimal re-engagement. Stroke clients were not always aware of what to expect or what questions to ask in their recovery process. The responsibility falls to HCPs to direct this discussion in a comprehensive and holistic way. The following quote eloquently captures this thought.

Interviewer: *So how do you find your information about this situation?*

Client: *By going after it myself.*

Interviewer: *So that's what I was wondering. What kind of things, like Internet?*

Client: *Mostly pamphlets from the different hospitals. I just pick up the pamphlets from the walls.*



The educational intervention did not demonstrate an obvious impact on the stroke clients' perceptions of their experiences with their healthcare team pre and post intervention. Accounts from stroke client interviews pre and post intervention did attest to the complexity of their recovery process. HCP interviews demonstrated that their broader understanding of the complexity did impact on the care they provided. The CR framework was being used to work with the client more holistically. The degree to which this directly impacted on the stroke client was not noted in the stroke client interviews. Most insightful from the stroke client interviews was their reliance on the HCP to guide and assist them through the recovery process due to their lack of knowledge of what the process entails.

To summarize, at the study's outset, baseline data identified sizeable gaps in HCPs understanding of CR. Health management and physical recovery were focal points in their provision of care to persons living with stroke. Post intervention data showed considerable differences in HCPs understanding of CR. HCPs confidence in working with stroke clients in the area of CR was also enhanced. HCP interviews revealed self reported accounts of changes to their individual practice at multiple levels. They began using the CR trigger tool bookmark and the eight components of CR to probe further in their assessments, discharge planning and goal setting process with their clients. HCPs were probing deeper and eliciting participation statements from their stroke clients. HCPs reported an enhanced understanding of the competencies of IPC and its inter-relatedness with CR, thus enhancing their treatment planning process with persons living with stroke.

7.0 INTERPRETING THE FINDINGS

The CISCCoR study was designed to promote the active participation of each profession in the re-engagement of persons living with stroke in an IPC manner. The intervention integrated tools to enhance IPC client-centred goals and values, mechanisms for communication and optimizing HCP participation in clinical decision making within and across professions, thus fostering respect for all contributing professions⁴¹.

Overall feedback on the content and format of the education sessions was positive. HCPs felt that the material was presented in a comprehensive and cohesive way with the CR trigger tool bookmark serving as an effective visual reminder for facilitating practice change. The interactive nature of the sessions, individual and group reflections and the balance of group and individual case-based learning made for a positive learning experience. The intervention provided HCPs with opportunities for reflection-in-action (reshaping what they are doing while they are actually doing it) and reflection-on-action (look back on experiences and come to an understanding of how outcomes have come to pass), two important elements based in the theory of reflective practice²⁵.

The knowledge translation strategies and tools used in the educational intervention demonstrated a positive impact on HCPs level of knowledge, confidence and perceived change in practice.

Reviewing the quantitative and qualitative data with respect to IPC provided some interesting findings. The Primary Health Care Questionnaire© did not reveal any statistically significant changes in any of the competency areas. This may have been because teams were too heterogeneous, with different experiences of HCPs spanning



the care continuum, to see any significant change. Another explanation may be that HCPs initially rated higher scores on this questionnaire pre-intervention, but through the intervention gained an awareness of the skills and competencies required for a more collaborative practice. Still another reason for the lack of change may have been because the tool was intended to be used with many members of a single team, rather than selected members of many teams coming together for an intervention (that in turn impacted different individuals in different teams in different facilities and practice settings in different ways).

In contrast to the quantitative data, HCPs spoke to their increased understanding of the values of each others' roles and the contributions of different professions to their team. The literature suggests that to understand one's own contributions within a team, HCPs need to understand the roles of those in other professions, and use this knowledge appropriately to establish and achieve patient goals¹⁴. The literature also highlights how insight on role understanding shifts care from provider-driven to patient-centered and is a step closer to the core intent of collaborative practice^{13,25,43,44}. There are repeated accounts from HCPs on how the intervention contributed to a new appreciation for other team members resulting in enhanced patient care.

HCPs recounted that they found that the majority of their own team members who attended the education, expressed an enhanced element of trust within their team. Trust and respect are common to all the elements of successful collaborative practice⁴⁵. Each provider must be able to depend upon the integrity of the other as the foundation for their professional relationship⁴⁵. From the intervention, trust, appreciation and respect among team members were reported as impacting on the way they functioned and subsequently on the way care was being provided to clients.

Each profession has its unique way of thinking and acting; its own culture and brings with it a different set of values about teamwork based on professional socialization, personal experiences and beliefs⁴⁰. Similar to our findings, a study by Kvarnstrom (2008) also identified the challenge of HCPs trying to manage their own identity with interprofessional teamwork⁴⁶.

The literature suggests that such experiential interprofessional learning opportunities can help to break down silos, misconceptions and stereotypes that HCPs might harbour towards other professions working within, and across, health care settings⁴⁷. HCP participants said they were more consistently aware of and integrating the elements that were needed to work as a team. They told how they began to enhance existing team collaboration and functioning by appreciating the contributions that everyone makes to the team. There are repeated accounts from HCPs on how the intervention contributed to breaking down silos both within teams and across clinical settings.

These types of individual and team transformations are consistent with findings in the literature where changes are usually around the organization of care; referral practices between professions, working patterns, processes and improved documentation⁴⁸. Forsetlund (2003) states that it can take upward of 1.5 years of learning essential knowledge and skills to observe evidence being used in practice⁴⁹. Developing skills for evidence-based practice involves a major change in values and priorities, habits and routines at an individual and organizational level⁵⁰. Being able to hear accounts of such perceived changes in practice five months after the education was encouraging.



HCPs reported the value of meeting people from various roles/professions and clinical settings, broadening their perspective on the complex needs of persons living with stroke as they transition across the continuum of care. Using the CR framework gave the HCPs a broader understanding of the complex needs of the stroke client. HCPs reported that the CR framework, the CR trigger tool bookmark and concepts of IPC have a broader application beyond the stroke population. As such, they identified the advantage of having all HCPs within their care setting trained in these areas for the provision of optimal care.

Stroke client interviews indicate the intervention had no impact on their perceptions of the care they received from HCPs. Possible reasons as to why no changes were perceived could be linked to 1) only 9 clients participated in both the pre and post interviews and were all from the same setting; 2) the HCPs were still focusing on their own learnings and integration, timeframe did not allow to see impact on the clients yet. However, these interviews did highlight how they rely on HCPs for guidance and information to facilitate their recovery process due to their lack of knowledge of what the recovery process entails.

A better understanding of the complexity of stroke is fundamental for HCPs to assist stroke clients to meet their needs which are by extension complex as well. This understanding was enhanced by the intervention, most likely because it improved knowledge of stroke best practices in CR and a shift in HCPs' attitudes and behaviour.

There is an obvious shift required in the current health system structures to support opportunities for teams to work in an IPC model of patient centered care as well as to find a balance between being task and process oriented. Endorsement of those in leadership positions within organizations is required to make strategic decisions to support initiatives to enhance interprofessional education for collaborative patient-centred practice²⁵. Additionally, Orchard et al (2005) believe that there is a requirement for altering existing health professionals' values, socialization patterns and workplace organizational structures⁴⁰ for this culture shift to occur. Structures within larger organizations create separate uniprofessional communities of practitioners each of which communicates and changes internally, but diffusion across boundaries between professionals is generally hindered by a lack of shared work experience³⁹. As well, the Canadian Stroke Best Practice Recommendations 2008, and the Ontario Rehab Consensus Panel Recommendations (2006), identify that having a dedicated stroke unit with a dedicated interprofessional team could be a way of transforming some of the identified barriers into enablers.

The stroke recovery process is complex, not only for the person who sustained a stroke and their family, but for HCPs as well. This study demonstrated the importance of interweaving principles of IPC and the CR framework. The delivery of the educational intervention enhanced HCPs daily practice in the delivery of stroke best practices care. The CR framework and IPC approach provided HCPs working across the care continuum with a common framework and language when setting interprofessional client centered goals with persons living with stroke.



Limitations

As with most studies, this investigation had limitations. One of the intents of this study was to compare the effect of the CISCCoR intervention between urban and rural settings. However, a comparison was not feasible because of limited study enrolment from rural settings due to program closures, organizational restructuring and low stroke volumes.

Another limitation to the study was the small sample size of HCPs. Although, many organizations expressed an interest at the outset of the project, unforeseen circumstances such as organizational restructuring, low stroke volumes and corporate priorities made it difficult for organizations to commit to the study. Funding to backfill staff restricted the number of HCPs from specific teams available to participate in the study, resulting in lower than projected enrolment and a rather heterogeneous group.

A lengthy organizational engagement process resulted in a shift in the study's timeline, subsequently impacting HCPs ability/willingness to participate in the peer support groups and post intervention data collection activities. A decision was made to cancel planned focus groups and only conduct two of the three planned peer support sessions with HCPs.

The recruitment of stroke clients appropriate for interviews was challenging in a number of ways: failure to meet the inclusion criteria, low stroke volumes at the time of recruitment, medical instability of clients, and a large proportion of clients for whom proficiency in English was an issue. Additional constraints were encountered during the interviews such as: stroke client's recall of events, dysarthria, fatigue levels, emotional lability and cognitive changes.

Change in practice or behavioural change can be viewed as the individual's transfer of learning to their practice setting and their changed practice³⁹. The HCP interviews provided rich qualitative data to understand how and perhaps why the intervention produced a certain type of response or outcome³⁹. Relying on interview accounts only provides participants' perceptions of the phenomenon, but there is no overt observational data to catalogue actual practice events. Thus, the interviews may not be regarded as robust data and may not necessarily detect actual change, but it does demonstrate a person's perception of change⁴⁸. We recognize this as a limitation and have tried to account for it throughout. In addition, the amount and type of practice change can vary depending on the level of experience of the HCP and the practice setting they are in.

In order to continue fostering the interactive nature of the CISCCoR intervention, all participants were encouraged to use LinkHealthPro, an online collaborative knowledge networking website. Many participants acknowledged the value and functionality of the site; however, competing work demands, time constraints and a lack of available computers limited the impact of what was originally envisioned for this website.

8.0 RECOMMENDATIONS

Several key recommendations emerged from the findings and highlight ongoing work required to build on and help inform the work currently underway in CR stroke best



practice and IPC. The recommendations of this study include: 1) *Further iterations of the CISCCoR intervention*; 2) *Education intervention on the Community Re-engagement framework for stroke clients*

8.1 Recommendations for further iterations of the CISCCoR intervention

Taking into account HCPs' positive feedback from the education sessions and the study's findings, it is recommended that the CISCCoR intervention be implemented broadly across the province. Conversations with other Networks within the Ontario Stroke System have generated interest in the intervention given their need for more education around IPC and CR. Furthermore, participating HCPs reported the application of the content has broader reach beyond the stroke population.

Based on the findings of this study, it is strongly recommended that, as much as possible, complete teams be trained in the CISCCoR intervention to support continuity of care. The sessions must continue to have a mix of HCPs from a range of clinical care settings and roles/professions to enable organizations from across the continuum to share information, network and gain further insights into the stroke client's recovery process.

Findings from the CR questionnaire revealed that *Financial Management* was least likely to be addressed by HCPs. However, this component of CR should be addressed by HCPs because of its impact on stroke clients/caregivers' ability to follow through on specific prescriptions from different services. In future iterations of the CISCCoR intervention, more emphasis should be placed on the interplay between the eight components of CR for meeting the complex needs of stroke clients.

In light of the feedback received, it is also highly recommended that those leading/providing future iterations of CISCCoR participate in 'train the trainer' education in order to prepare them for this role. It is recommended that this training initially be provided to Community and Long Term Care and/ or Rehab coordinators within the Ontario Stroke System. Those trained as trainers would need to demonstrate the skills required in team facilitation and a strong knowledge base around IPC and stroke best practice based care in CR. Wide spread training of the CISCCoR intervention poses significant challenges and opportunities for collaboration. The need to engage leadership across organizations is critical for sustainability. Barriers should be anticipated and strategies in place to build in the supports required for ongoing interprofessional learning and collaboration.

8.1.1 Sustainability

Additional practical methods of implementing the learnings must be incorporated into the education for sustainability to happen at the team and client levels. Change in practice requires time and support from the organization. This could include: dedicated time for teams to review their goals, processes and celebrate successes, provide or support mentorship opportunities and shared learning. The following strategies are recommended to sustain the teachings beyond the two day educational sessions for participating HCPs and to reach other HCPs who have not attended the workshops:



- Involve the organizational leaders throughout the project so there is commitment and support for opportunities for interactive learning of the CISSCoR content and materials (this may include inviting them to the entire education/ a portion in which they learn from the participants more about their learning and how it could be applied in a specific context);
- HCPs along with their team identify a quality improvement initiative integrating CR and IPC during the educational intervention. This initiative may be situated within a team/organization or span across organizations and teams.
- Facilitators to follow up with teams on a regular basis to discuss learnings, impact on the quality improvement project and progress, and share strategies/approaches across the continuum of care;
- Offer ongoing videoconference peer support sessions to provide updates in stroke best practices, and self assess their knowledge and experiences through case-based discussions;
- Develop strategies with HCPs and their team to enhance visibility and portability of the CR trigger tool bookmark. This would allow for CR-related information to be readily accessible to both HCPs and stroke clients/families.

8.2 Recommendations for education intervention on the Community Re-engagement framework for stroke clients

It is evident that the needs and issues faced by persons living with stroke are complex, and that stroke clients rely heavily on the HCPs to guide and direct them in their care. A self management approach in CR is needed to reduce the negative impact of stroke and foster empowerment. A recommendation is put forth to develop an education intervention on self-management incorporating the CR framework and the CR trigger tool bookmark that could be taught to stroke clients (and their caregivers) in order to facilitate self-management in a holistic manner.

9.0 NEXT STEPS

9.1 Incorporation of CR Framework and Resources in the Community Care Resources' Website

The Toronto Central Community Care Access Centre expressed a strong interest in incorporating the CR framework and stroke resources into their Community Care Resources (CCR) Website. This website was developed as part of a Local Health Integration Network initiative to help individuals find a variety of health services to maintain their health, independence and quality of life. The CCR website can serve as a primary vehicle for HCPs and stroke clients (and their caregivers/family) to navigate and access the array of stroke specific community support and health agencies in their communities. By listing the resources within the CR framework, HCPs are prompted to think holistically and coordinate care to meet the complex needs of their clients. Moreover, stroke clients are better able to self manage their care needs in a holistic manner.



9.2 Further research

Zwarenstein and Reeves (2006) state that research that addresses interprofessional education, interprofessional collaboration, knowledge translation and evidence-based practice and the interplay between them is needed³⁹. Although the CISCCoR study has demonstrated value in raising awareness and increasing knowledge and confidence of HCPs in the areas of IPC and CR, further research is required. A long term ethnographic or observational follow up study (6, 12 and at 18 months) could provide more robust data on the effects of the intervention on actual practice change versus accounts of practice change. Follow up with all HCPs on who achieved, partially achieved or did not achieve their Commitment to Action goal into these studies, would offer interesting findings around the enablers for success.

Further to this, a more longitudinal study is needed to study the impact of practice change and at the level of the stroke client and caregiver. If the CR trigger tool bookmark is used with clients and caregivers, additional research would be needed to explore its benefit and impact on the re-engagement process of persons living with stroke.

10.0 CONCLUSION

The delivery of the educational intervention enhanced HCPs daily practice in the delivery of stroke best practices care. The CR framework and IPC approach provided HCPs working across the care continuum with a common framework and language when setting interprofessional client centered goals with persons living with stroke. The incorporation of a CR trigger tool bookmark built on the CR stroke best practices framework supported a more reflective practice and further improved confidence levels in assisting persons living with stroke to successfully re-engage into the community.

Efforts must be made for wider dissemination across the province so HCPs can become aware of, and understand, the benefits of the education intervention and the positive impact it can have on the stroke clients they serve. Activities have already begun to share the concept of and initial findings related to the CISCCoR intervention (Appendix 14).

In sum, the CR and IPC frameworks could become a standard of care for all HCPs as a process for guiding and facilitating all clients in their recovery process. As one HCP emphasizes:

“[The intervention]’s timely, it’s good, it should happen and it is proven that people will work better if you put all your heads together right as opposed to doing your own thing.”



REFERENCES

1. Ministry of Health and Long Term Care and the Heart and Stroke Foundation of Ontario, Towards an Integrated Stroke Strategy for Ontario, June 2000, Report of the Joint Stroke Strategy Working Group
2. www.toronto.communitycareresources.ca
3. Wood-Dauphinee S, Williams, J., Reintegration to Normal Living as a proxy to quality of life. *Journal of Chronic Disease*, 1987; 40: 491 – 502.
4. Heart and Stroke Foundation of Ontario, Best Practice Guidelines for Stroke Care: A Resource for Implementing Optimal Stroke Care, 2003.
5. International Classification of Functioning, Disability and Health (ICF), Centres for disease control and prevention, World Health Organization, <http://www.cdc.gov/nchs/icd/icf.htm>
6. CSS Best practice recommendations Lindsay, P, et al, Canadian best practice recommendations for stroke care (updated 2008), *CMAJ*, December 2, 2008, 179 (12), p. E1
7. Bassand, JP., Priori, S, Tendera, M., 2005, Evidence-based vs. 'impressionist' medicine: how best to implement guidelines, *European Heart Journal*, 26, 1155-1158.
8. Bekkering, GE, Hendriks, HJM, van Tulder, MW, Knol, DL, Hoeijenbos, M, Oostendorp, RAB, Bouter, LM, 2005, effect on the process of care of an active strategy to implement clinical guidelines on physiotherapy for low back pain: a cluster randomized controlled trial, *Quality and Safety in Health Care*, 14: 107-112.
9. Wensing, Michel, Bosch, M, Grol, Richard, Developing and Selecting interventions for translating knowledge to action, *CMAJ*, Feb 2010, 182 (2), pp. 85-88
10. Cheater, F.M. and Closs, S.J., 1997, The effectiveness of methods of dissemination and implementation of clinical guidelines for nursing practice: a selective review, *Clinical Effectiveness in Nursing*, 1, 4-15.
11. Richens Y et al, 2004, Getting guidelines into practice: a literature review, *Nursing Standard*, 18, 50, pp. 33-40
12. Cheung, D and McKellar, J (2008), A Multifaceted Approach for Implementing Community Re-engagement Stroke Best Practice Care within Four Community Settings, Final Report.
13. Suter, Esther, Arndt, Julia, Arthur, Nancy, Parboosingh, John, Taylor, Elizabeth and Deutschlander, Siegrid, Role understanding and effective communication as core competencies for collaborative practice, 2009, *Journal of Interprofessional Care*, 23: 1, 41-51



14. Canadian Interprofessional Health Collaborative, A National Interprofessional Competency Framework, College of Health Disciplines, University of British Columbia, Feb., 2010
15. Strasser DC, Falconer, JA, Herrin JS, Bowen SE, Stevens AB, Uomoto J, Team functioning and patient outcomes in stroke rehabilitation, *Arch Phys Med Rehabil*, 2005, 86, 403-409
16. Strasser DC, Falconer JA, Stevens AB, Uomoto JM, Herrin J, Bowen SE, Burridge AB, Team training and stroke rehabilitation outcomes: a cluster randomized trial, January 2008, *Arch Phys Med Rehabil*, vol 89, 10-15.
17. Herbert, Carol, 2005, Editorial, Changing the culture: interprofessional education for collaborative patient-centred practice in Canada, *Journal of Interprofessional Care*, May 2005, Supplement 1:1-4).
18. Lindqvist, S., & Reeves, S. (2007). Facilitators' perceptions of delivering interprofessional education: a qualitative study. *Medical Teacher*, 29, 403-405.
19. Kwan, D., Barker, K., Austin, Z., Chatalalsingh, C., Grdisa, V., Langlois, S., Meuser, J., Moaveni, A., Power, R., Rennie, S., Richardson, D., Sinclair, L., Wagner, S., Oandasan, I. Effectiveness of a Faculty Development Program on Interprofessional Education: A randomized controlled trial. *Journal of Interprofessional Care*, 2006; 20(3): 314 – 316.
20. Creed, C et al, The Potential Group in partnership with the Toronto West Stroke Network, Transition Improvement for Continuity of Care Initiative, 2010, Unpublished.
21. Heart and Stroke Foundation of Ontario, Consensus Panel on Stroke Rehabilitation Consensus Panel Report, Submitted to the Provincial Stroke Steering Committee and Heart and Stroke Foundation of Ontario, May 2000.
22. Rehabilitation Consensus Panel Survey Results, South East Toronto Stroke Network June 2009, unpublished
23. Way, D., Jones, L. & Busing, N., 2000. Implementation Strategies: "Collaboration in Primary Care -Family Doctors and Nurse Practitioners Delivering Shared Care": Discussion Paper written for The Ontario College of Family Physician.
24. Robbins, L, Brock, D., et al., Piloting team simulations to assess IPC skills, *Journal of Interprofessional Care*, June 2008, 22(3) 325-328
25. Oandasan, I and S. Reeves, Key elements for interprofessional education. Part 1: The learner, the educator and the learning context, *Journal of Interprofessional Care*, May 2005, Supplement 1:21 pp.21-38
26. D'eon, Marcel, A Blueprint for Interprofessional Learning, *Journal of Interprofessional Care*, May 2005, Supplement 1:21 pp.49-59



27. Link Health Pro website: <https://www.linkinghealthprofessionals.com/index.html>
28. Lowe, Mandy, Hebert, Debbie, Rappolt, Susan, ABCs of CTCs: An introduction to Commitments to Change, *Occupational Therapy Now*, Vol 11 (2) pp. 20-23.
29. Poulton, Brenda and West, Micheal, Primary Healthcare Questionnaire©, 1994 Medical Research Council, UK.
30. Poulton, Brenda and West, Michael, Effective multidisciplinary teamwork in primary healthcare, *Journal of Advanced Nursing*, 1993, 18, 918-925.
31. Abma, T. A., Nierse, C. J., & Widdershoven, G. A. M., Patients as partners in responsive research: Methodological notions for collaborations in mixed research teams. *Qualitative Health Research*, 2009, 19(3), 401-415. doi: 10.1177/1049732309331869
32. Binding, L. L., & Tapp, D. M., Human understanding in dialogue: Gadamer's recovery of the genuine. *Nursing Philosophy*, 2008, 9(2), 121-130. doi: 10.1111/j.1466-769X.2007.00338.x
33. Denzin NK, Lincoln YS., Collecting and interpreting qualitative materials. Thousand Oaks, Calif.: Sage, 1998.
34. Glesne C, Peshkin A., Becoming qualitative researchers: An introduction. White Plains, NY: Longman, 1992.
35. Kuckartz U., Case-oriented quantification. In: Kelle U, ed. Computer-aided qualitative data analysis. London: Sage, 1995; 158-166.
36. Miles M, Huberman A. Qualitative data analysis. London: Sage, 1984.
37. Oandasan, I and S. Reeves, Key elements for interprofessional education. Part 2: Factors, Processes and Outcomes, *Journal of Interprofessional Care*, May 2005, Supplement 1:21 pp.39-48
38. Hall, Pippa. Interprofessional teamwork: Professional cultures as barriers. *Journal of Interprofessional Care*, May 2005 Supplement 1: pp 188 – 196
39. Zwarenstein, M and Reeves, S. Knowledge Translation and Interprofessional Collaboration: Where the rubber of evidence-based care hits the road of teamwork. *The Journal of Continuing Education in the Health Professions*, 2006, Vol 26, pp46 - 54
40. Orchard, C.A, Curran, V, Kabene, S, Creating a culture for interdisciplinary collaborative professional practice, *Med Education Online* 2005; 10:11, <http://www.med-ed-online.org>
41. Way and Jones, Health Canada 2001 cited in IPE and Core competencies Literature Review, CIHC, 2007



42. Canadian Interprofessional health Collaborative, A national interprofessional competency framework, Feb 2010
43. D'amour, Danielle, Oandasan Ivy, Interprofessionality as the field of interprofessional practice and interprofessional education: An emerging concept, *Journal of Interprofessional Care*, 2005, Volume 19, Issue S1, pp.8-20.
44. Parsell, Glennys & Bligh, John, The development of a questionnaire to assess the readiness of health care students for interprofessional learning, 1999, *Medical Education*, 33, 95-100
45. Way, D., Jones, L., Busing, N, Implementation Strategies: Collaboration in Primary Care, The Ontario College of Family Physicians, 2000.
46. Kvarnstrom, Susanne, Difficulties in collaboration: A critical incident study on interprofessional healthcare teamwork, *Journal of Interprofessional Care*, March 2008, 22(2), 191-203
47. Parsell, G & Bligh, J, Interprofessional Learning, *Postgrad. Medical Journal*, 1998, 74, 89-95.
48. Reeves et al. Knowledge Transfer and Exchange in Interprofessional Education: Synthesizing the Evidence to Foster Evidence-based Decision-making, 2008 Available at: http://www.cihc.ca/resources-files/The_Evidence_For_IPE_July2008.pdf
49. Forsetlund, L et al. Randomised controlled trial of a theoretically grounded tailored intervention to diffuse evidence-base public health practice. *BMC Medical Education*, 2003, 3:2, pp 1 - 12
50. McCluskey, Annie and Lovarini, Meryl. Providing education on evidence-based practice improved knowledge but did not change behaviour: a before and after study. *BMC Medical Education*, 2005, 5:40 pp 1 – 12.



Appendix 1: Educational Intervention Layout

DAY ONE

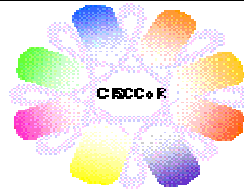
- The first day will start with an opportunity for participants to complete the pre-tests followed by a brief orientation/welcome, small group icebreaker and group norm discussion.
- An interactive large group lecture will then introduce the concept of community re-engagement and its relationship to interprofessional collaboration.
- Individually, participants will work through a case study in which they will reflect on their own approach to goal setting with respect to community re-engagement.
- An interactive lecture will build on participants' understanding of interprofessional collaboration, evidence linking IPC to patient outcomes and consideration of what factors impact effective collaboration in their own settings through reflecting on concepts related to team collaboration (using a variety of interactive approaches such as think pair share). They will also be introduced to tools that address interprofessional collaboration specifically.
- Next, participants will learn about the first 3 of 8 components of the community re-engagement model (and associated trigger tool and resources) including evidence related to each area and practical strategies to address each area (e.g. health management).
- After lunch, the remaining 5 components of the model will be addressed. This learning will be reinforced through applying learning to a case study through small interprofessional group discussions. This interprofessional group experience will be contrasted with the individual case study and reflection from the morning.
- Opportunities to apply learning from the day in daily practice will be addressed as well as participants will leave this session with a practical tool that supports them in further enabling community re-engagement in their client populations.
- The day will end with a wrap up and evaluation.

DAY TWO

- The second day will start with a welcome, re-orientation and interactive lecture regarding patient/client and family-centered goal setting and related concepts (e.g. impairment, participation) and evidence.
- Competencies required for effective goal setting with patients will be discussed including opportunities to practice these in a supportive environment (e.g. goal interviewing and SMART goal setting from both uni and interprofessional perspectives), strategies to address challenges and professional roles across community re-engagement areas (including resources re: professional roles and scopes).
- Interprofessional collaboration, specifically ways of understanding teams (e.g. stages of group development, task and process) will be addressed via interactive lecture and small group discussions re: strategies that build on participants' experiences and expertise.
- After lunch, participants will continue with above and report back to the larger groups re: their work (small group reports).
- Participants will then create strategies and individualized plans for implementing learning into practice.
- Day two will end with a wrap up, participants completing the commitment to change document and evaluation.



Appendix 2: CR Trigger Tool Bookmark



SUPPORTING STROKE SURVIVORS IN COMMUNITY RE-ENGAGEMENT

The purpose of this Trigger Tool is to guide your practice in a reflective process and engage your client in their stroke recovery journey towards successful community re-engagement. The eight components of community re-engagement seek to maximize life participation, independence and meaning in a holistic manner.

Health Management

Is the client/caregiver/family educated on the type of meds being taken and when to take them?

Do they need reminders/adaptations to take their meds, e.g. blister packs?

Does the client have access to a primary healthcare provider?

Has the client been educated on the signs and symptoms of stroke, prevention of stroke and risk factors management?

Does the client have swallowing difficulties? Have they been screened or assessed for dysphagia?

Has your client been screened for bowel and bladder incontinence and retention?

Are they experiencing pain, is it well controlled?

Is the client's cognitive/perceptual status impacting on their ability to manage/direct their care?

Is the client eating well and able to prepare their meals and aware of his/her dietary needs?

Does the client require further services in the home to manage their ADLs and IADLs?

Mobility

Does the client have an understanding of their functional mobility? Is there a need for ongoing rehab?

Are there any safety concerns? Does the client understand their strengths and limitations? Have seasonal strategies been discussed with the client?

Has your client expressed a fear of falling? Do they or their caregiver/family know what to do in the event of a fall?

Does the client have the necessary assistive devices in place? Has the client's transportation needs been addressed?

Was the client driving prior to their stroke? Are they wanting to drive again? Have they been assessed?

Is the client able to get their prescriptions filled, access desired leisure activities, pick up their groceries, do their banking, etc.?

Environment

Does the client's environment (home, work, community) support maximum independence in life roles and routines within his/her abilities? E.g. equipment needs, home & vehicle modifications, house-keeping services.

Does the environment they live in lend itself to their cognitive, visual and perceptual conditions?

Does the client require alternate housing to support and maximize independence?

Social Network

Is the client able to navigate/access the range of contacts, agencies, resources to support their goals and decisions?

How are the client's relationship with their caregivers, family members and friends?

Is the client currently involved or have an interest in any social, recreational or fitness programs?

Is the client or his/her family aware of potential risks of depression?

Are there any signs of depression? Have you screened for depression?

Is the client or his/her family managing their stress post-stroke?

Do they require coping strategies?

Have cultural or linguistic needs been considered?

Life Roles

How does your client/caregiver perceive their current participation in life roles? Is the client's insight, capacity and behaviour conducive to these roles?

Are there any family dynamics or cultural beliefs that could impact the client's role within the family or community?

Are the client and caregiver adjusting to their potential new roles?

Does the client plan to return to work? Does the client want to volunteer?

Is the client interested in learning new skills or participating in group activities? Can they coordinate these on their own?

Is it important for them to resume their spiritual beliefs/activities?

Has the issue of sexual intimacy been addressed?

Caregiver Support

Has the caregiver received enough education to manage the stroke survivor's care needs? Are they able to transfer these skills in different day to day situations?

How is the caregiver coping emotionally? Are they showing signs of depression?

Does the caregiver require respite care?

Has the caregiver expressed their current, anticipated and perceived overall needs?

Can the caregiver navigate/access resources and services to maintain his/her physical health, emotional and social well-being?

Communication

What does living with a communication difficulty mean to them?

Is the client able to communicate at an optimal level to express needs, goals and desires?

Can the client participate in desired social interactions or are they feeling isolated?

Does the client require any specialized devices to assist with communication?

Does the client and family have access to strategies to assist with communication?

Financial Management

Does the client have access to the necessary funding sources to support his or her health, psychosocial, physical and environmental needs?

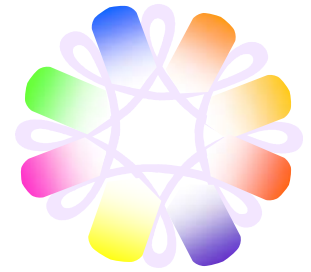
Is the client able to manage his or her financial affairs independently?

Do they have a power of attorney for both finances and care? Do they need to access the Office of the Public Guardian and Trustee? Are there signs of financial abuse?



Appendix 3: Activity Sheet – Jargon/Acronym Quiz

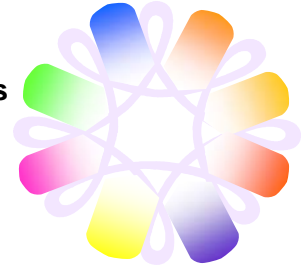
Jargon/Acronym Quiz



| | Word/Phrase | What does it mean? |
|-----|-------------|--------------------|
| 1. | ADL | |
| 2. | PRN | |
| 3. | NPO | |
| 4. | PSW | |
| 5. | ADP | |
| 6. | CCAC | |
| 7. | ODSP | |
| 8. | FIM | |
| 9. | PROM | |
| 10. | HWW | |
| 11. | LBQC | |
| 12. | LOC | |
| 13. | LOS | |
| 14. | MBS | |
| 15. | MOW | |
| 16. | OESS | |
| 17. | MRSA | |
| 18. | SPC | |
| 19. | QID | |
| 20. | SDM | |



Appendix 3: Activity Sheet – Reflecting on Attitudes Towards Others



Reflecting on Attitudes Towards Others

What is your opinion/perception/attitude about people in other roles?

List the roles on your team across the top of the table below (in the shaded boxes)

Check the boxes that apply in your opinion (place a check mark if you agree with the statement for each role). You will not be asked to share your specific results as they are intended to provide you with an opportunity to reflect on your own attitudes individually.

| | Team Member Roles: | | | | | | | | | |
|---|--------------------|--|--|--|--|--|--|--|--|--|
| | | | | | | | | | | |
| Understands and values my role | | | | | | | | | | |
| Collaborates well with my role | | | | | | | | | | |
| Has a role in community re-engagement | | | | | | | | | | |
| Is patient/client-centred | | | | | | | | | | |
| Possesses good interpersonal skills with patients/clients | | | | | | | | | | |
| Helps the team to function more effectively | | | | | | | | | | |
| Communicates successfully and openly with team members | | | | | | | | | | |
| Collaborates well with others | | | | | | | | | | |
| I understand the scope and responsibilities of this role | | | | | | | | | | |
| I value this role on our team | | | | | | | | | | |
| Total checkmarks (/10) | | | | | | | | | | |

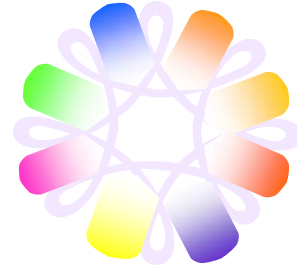
Review your responses making note of the higher scores and lower scores. In reflecting on your responses, consider the following:

What surprised you about your attitudes?

How might your attitudes influence your work on the team?

What next steps should you consider? (e.g. learn more about a role that you are less familiar with, look for opportunities to collaborate with a particular role, seek evidence of effective communication, share information about your role, etc.)





Appendix 3: Activity Sheet – Role Play

Client/Patient Role Play 1:

AT FIRST:

When asked, you indicate that your goal is:

“I want to be like I was before”

At first, be vague and unclear.

NEXT:

When reasonably probed for additional information, use the goals and participation statements below.

| Goal | Participation Statement |
|------------------------------|---|
| 1. I want to return to work. | 1. I need to be a good provider for my family – it is important that I can continue to take care of them. |
| 2. I want to golf again. | 2. I need to connect with my golf buddies again – they are very important to me. |
| 3. I want to have sex again. | 3. I feel disconnected from my partner – sex was a big part of how we used to show how much we love each other. |

Client/Patient Role Play 2:

AT FIRST:

When asked, you state:

“You’re the expert...you tell me what goals to work on”

“I have never had a stroke before – can’t you tell me what my goals should be?”

NEXT:

When reasonably probed for additional information, use the goals and participation statements below.

| Goal | Participation Statement |
|--|--|
| 1. I want to be able to get dressed by myself. | 1. It is important for me to be able to take care of myself and not be a bother for my family. |
| 2. I want to walk to the corner store for my cigarettes. | 2. Smoking and getting out both let me get rid of my stress – this way I can feel better. |
| 3. I want to not have so many money concerns. | 3. I want to be able to provide for my family – to be a good partner again. |



Appendix 3: Activity Sheet – Imagining Success

Imagining Success

PART 1:

Imagine it is June 2011. As a team member, you have collectively achieved outstanding results in enabling community re-engagement for people with stroke. You have generated results that far and away exceed anything you could have hoped for!

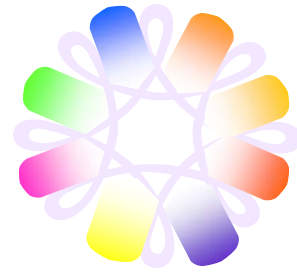
Write a letter to yourself telling the story of what's been achieved and your role in enabling community re-engagement for people with stroke.

- What are you most proud of?
- What are clients, families, staff, leaders and students now saying about your team's role in community re-engagement for people with stroke?
- What has made the greatest difference?

PART 2:

- Go around the table and read your responses
- Listen carefully to the responses and take note of what interests or inspires you most – jot down words or phrases that resonate with you
- What themes are emerging in your group about the future of teams and community re-engagement for people with stroke?





Appendix 3: Activity Sheet – Reflecting on Collaboration

Reflecting on Collaboration: When it worked well

Find a partner:

- Choose an A and a B –
 - A will be the interviewer – he/she will ask their partner the questions below
 - B will be the interviewee – answer in full detail
- After 5 minutes, change roles and repeat

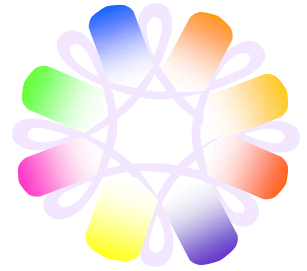
1. Describe a time when you were part of or observed an extraordinary display of collaboration between team members.

2. What do you think enabled this team to function at its best (e.g. people, processes, structures)? What made the difference? What made it possible?



Appendix 3: Activity Sheet – IPC Goal Setting Form

**Interprofessional Collaborative Care Plan
Goal Setting Form**



Patient's Goal

“ _____

 _____”

Participation Statement(s)

“ _____

 _____”

Community Re-engagement Components –
 Health Mgmt, Life Roles, Mobility, Environment, Social Support, Caregiver Support, Communication, Financial Mgmt

| SMART Goals (Smart Measurable Achievable Relevant Timely) | What Intervention/Action Plan | Who Who will do what |
|---|--|---------------------------------------|
| | | |
| | | |
| | | |



Appendix 4: Canadian Best Practices in Stroke Rehabilitation Outcomes: Report of the Expert Panel

| Domain | Selected Measure |
|--|--|
| Measures of Stroke Severity | Orpington or National Institute of Health (NIH) Stroke Scale |
| Medical Comorbidities | Charlerson Comorbidities Scale |
| Upper Extremity Structure and Function | Chedoke – McMaster Stroke Assessment (CMSA) |
| Lower extremity | Chedoke – McMaster Stroke Assessment |
| Spasticity | Modified Ashworth Scale + Spasticity Subscale of CMSA |
| Visual Perception | Comb and Razor Test (interdisciplinary admin) Behavioural Inattention Test (Sunnybrook Neglect Assessment Protocol or SNAP) Line Bisection (Unilateral Spatial Neglect) Alternates- Rivermead Perceptual Assessment Battery, OSOT (Ontario Society of Occupational Therapists) Perceptual Evaluation and Motor-Free Visual Perception Test (MVPT) |
| Language | a) Screening in Acute and follow-up: Frenchay Aphasia Screening Test (FAST) b) for Rehabilitation: Boston Diagnostic Aphasia Assessment |
| Speech Intelligibility Tool | No tool in published literature |
| Cognition | a) Screening as per SCORE = Mini Mental State Examination (MMSE) and Line Bisection + Semantic Fluency b) Initial selection Cambridge Cognitive Examination (CAM-COG) Note: no single tool; therefore, need to seek further consultation to consider which domains are important i.e., attention, memory, executive skills, processing speed |

Activity Assessment Scales

| Domain | Selected Measure |
|---|--|
| Arm Function | Chedoke Arm and Hand Activity Inventory Box and Block Nine Hole Peg Test |
| Walking/Lower Extremity | Chedoke Lower Extremity Disability Inventory Timed “Up and Go” Test 6 – Minute Walk Test Alternate – Rivermead Mobility Index |
| Balance | Berg Balance Scale (BBS) |
| Functional Communication | Amsterdam-Nijmegen Everyday Language Test (ANELT) Alternate – American Speech – Language – Hearing Association Functional Assessment of Communication Skills for Adults (ASHA-FACS) |
| Self-Care Activities of Daily Living | FIM™ (Functional Independence Measure) |
| Instrumental Activities of Daily Living | Reintegration to Normal Living Index Leisure section of the Assessment of Life Habits (LIFE-H) |

Participation Assessment Scales

| Domain | Selected Measure |
|---------------|---------------------|
| Participation | Stroke Impact Scale |



Appendix 5: Team Performance Checklist

Team Performance Checklist

The following is a checklist of factors a Family Health Team can use to assess its team performance

Goals

- . There is an agreed upon vision of where the Family Health Team wishes to be
- . The goals are clear, specific, measurable, and written
- . The goals support the strategic direction/vision of the Family Health Team
- . Work assignments are clear, with time frames for their completion
- . There is an evaluation process for follow-up, to ensure goals are being met
- . Accomplishments and achievements are celebrated

Roles

- . The roles of all Family Health Team members are clear
- . Job descriptions exist for all staff
- . There is a process for identifying/clarifying role overlap

Communication

- . Staff are polite, courteous, and friendly to each other
- . Communication is effective during stressful situations
- . Issues are confronted and problems resolved as they arise
- . There is an environment of openness and trust
- . Leaders/administrators are available and willing to listen
- . Confidentiality is respected
- . There is a Family Health Team newsletter/website or email for all staff

Processes for team tasks

- . There is an effective decision-making method
- . There is an effective conflict-resolution mechanism in place
- . There is an orientation procedure (and packages) for new staff
- . There are recruitment criteria when hiring new staff
- . Performance evaluation is provided regularly
- . Training and skill enhancement is readily available
- . There are mechanisms for continuing improvement of programs
- . The effectiveness of programs/activities is reviewed regularly
- . There is a long-term strategic planning process in place

Working Together

- . Personal and professional differences amongst team members are valued
- . Staff demonstrate sensitivity to each other's feelings, problems, and needs
- . Staff have the necessary skills to function effectively
- . New staff are welcomed to the Family Health Team
- . Team members have a sense of mutual trust and willingness to share
- . The contributions of all staff members are acknowledged
- . There are opportunities for staff to meet socially as a Family Health Team



Team Performance Checklist

Leadership

- . The leader(s) roles are understood by all staff
- . The leader(s) are visible and available
- . Responsibilities of leadership
- . The leader(s) communicate regularly and clearly
- . The leader(s) are committed to high quality, patient-centred care
- . The participation of all team members is encouraged
- . The leader(s) invites feedback on his or her performance
- . The leader(s) provides specific feedback on team members work

Organizational Structures/Meetings

- . Meetings have a clear agenda which is completed during the meeting
- . Meetings start and finish on time
- . All staff attend meetings on a regular basis and have an opportunity to participate in the discussion
- . Decisions made are documented
- . Educational events/meetings occur

From:

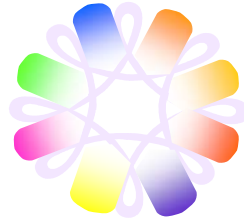
Government of Ontario (2005). Family Health Teams - Advancing Primary Health Care: Guide to Collaborative Team Practice

Complete Guide available at:

http://www.health.gov.on.ca/transformation/fht/guides/fht_collab_team.pdf



Appendix 6: 90 Second Evaluation



90 SECOND EVALUATION

Date: _____

Rating: **What was your overall satisfaction of this session (please circle below)?**

| | | | | |
|----------------------|--------------------|-----------|----------------|---------------------|
| 1 | 2 | 3 | 4 | 5 |
| Not at all Satisfied | Somewhat Satisfied | Satisfied | Very Satisfied | Extremely Satisfied |

Describe what resonated with you most today and why you think it made a difference for you?

How can we build on the strengths of today's session for future participants? What may make this session even better?

What one thing will you and/or your team do differently in the coming weeks based on the information you learned today?

Additional comments

Thank you!



Appendix 7: Commitment to Action

| |
|--------------------------------|
| Participant Code: _____ |
|--------------------------------|

Collaborative Interprofessional stroke Care in Community Re-engagement (CISCCoR)

| Action Plan – Commitment to Change Tool | | | | |
|--|---|------------------|------------------|-----------------------------|
| Date: | | | | |
| Specific Areas to Enhance / Change in your practice: (describe the distinct activities/tasks to be achieved) | | | | |
| Problems to Overcome: (Describe the barriers that must be eliminated/reduced and how this will be done) | | | | |
| Detailed Specific Actions in Sequence (activities, discreet steps that are realistic, measurable and attainable) | Responsible Person(s) by designation** | Resources | Date/Time | Changes to look for: |
| Step 1 | | | | |
| Step 2 | | | | |
| Step 3 | | | | |
| Step 4 | | | | |
| Step 5 | | | | |
| Commitment of Support: I support the action plan described above and will complete the actions assigned to me. If I am unable to complete an activity, I will help make arrangements to modify the plan accordingly. | | | | |

Source: Adapted from "Transfer of Learning: A Guide for Strengthening the Performance of Health Care Workers," Prime II Project, University of North Carolina, JHPIEGO Corporation, Baltimore MD, March 2002

**Do not list names of individuals





| |
|------------------------------|
| Participant Code #: _____ |
|------------------------------|

Appendix 8: Community Re-engagement Questionnaire

Collaborative Interprofessional Stroke Care In Community Re-engagement (CISCCoR)

Community Re-engagement Questionnaire

The following information will help us to analyze the results of this survey and will be reported as group information only. It will NOT be used in an attempt to identify you.

Community Re-engagement

1. How would you define community re-engagement?

2. How would you rate your current level of knowledge about stroke care practices related to community re-engagement?

- | | | | | |
|-----------------------------|---------------|---------------------------|-----------------------|----------------------------|
| 1 | 2 | 3 | 4 | 5 |
| Not at all Knowledgeable | Knowledgeable | Somewhat Knowledgeable | Very Knowledgeable | Extremely Knowledgeable |

3. At present, how confident are you in your ability to assist the stroke client and their family in working towards re-integrating back into their community and participating in life activities?

- | | | | | |
|---------------|-----------------------|-----------|----------------|------------------------|
| 1 | 2 | 3 | 4 | 5 |
| Not confident | Somewhat confident | Confident | Very confident | Extremely confident |

4. Can you provide specific examples of what you have done in the last 6 months that was helpful in facilitating community re-engagement for stroke clients?

5. When working with stroke clients, please indicate which of the following areas you address with them.

| | |
|--|--|
| <input type="checkbox"/> Health management <input type="checkbox"/> Life roles <input type="checkbox"/> Social network <input type="checkbox"/> Environment | <input type="checkbox"/> Communication <input type="checkbox"/> Mobility <input type="checkbox"/> Caregiver support <input type="checkbox"/> Financial management |
|--|--|





Appendix 9: Stroke Survivor Pre and Post Interview Questions

Code #: _____

Collaborative Interprofessional Stroke Care In Community Re-engagement (CISCCoR)

Stroke Survivor and/or Caregiver Pre and Post Interview

Preamble:

Thank you for agreeing to speak with me today. I'm a research coordinator conducting a series of interviews as part of the study Collaborative Interprofessional Stroke Care In Community Re-engagement. This study is designed to evaluate the benefits of a newly developed education intervention for healthcare providers. It was developed for healthcare providers to see if it would assist the healthcare provider to better guide stroke clients in their recovery process and community participation. It is believed that with appropriate knowledge and tools, the healthcare provider can play an important role in helping clients like you, to reintegrate back into the community after an illness. In order to know if this new education intervention is effective, we are interviewing some stroke clients about the care they have been receiving. The questions serve as a guide only. If there are other topics that you think are important, please feel free to share these.

This is purely a voluntary activity. You may stop the interview at any time. If any question I ask makes you uncomfortable, tell me and we can skip it. If any question doesn't make sense, let me know and I can rephrase it. If you wish to speak off the record, let me know and I will temporarily stop recording. Please be assured that you will not be identified in any way. Please do not give your name or the names of anyone else on the tape, and your real name will not appear anywhere in the written transcripts of, or reports concerning, your interview. We are audio taping the interview so that we do not lose any details of the conversation, however only the study personnel will hear your tapes. Any identifying information from the interview will be substituted with pseudonyms or codes in any reports or publications coming from this evaluation. Please be assured that the information provided by you will be kept strictly confidential. We hope you will feel comfortable to speak freely. We genuinely want to hear your perspectives so that we can improve the way we care for stroke clients

The interview will likely last anywhere between 30 and 60 minutes. However the amount of time we spend and what you choose to say is entirely up to you. Do you have any questions or concerns about the process? If not, let's begin....

Please provide your:

Age _____

Ethnic Background _____

Gender _____

1) Prior to your stroke, what did your life look like?

Potential Probes:

- Do you live alone, if not, who is at home to help you
- What kind of services / support did you receive,
- Were you fully independent, or did you receive some sort of support, for example from community agencies
- Would you have liked to receive any support which you didn't get?
- How long ago did you have your stroke, was it your first stroke?

2) What were some of the important things that you wanted to work on after your stroke?



Potential probes:

Were you able to reach your goals in the following areas, did you feel you were part of the process of setting your goals?

| | Yes | No | Comments | Were you able to achieve |
|--|-----|----|----------|--------------------------|
| Your health | | | | |
| Your emotional health | | | | |
| Adapting to your stroke | | | | |
| Being able to do the things you like to do | | | | |
| Ensuring your environment such as your home, car is accessible | | | | |
| Having a good social and support network | | | | |
| Being able to express the things you need to family/ friends/ others | | | | |
| Being able to move and Get around | | | | |
| Ensuring your caregiver is also doing well | | | | |
| Managing your finances | | | | |
| Having access to financial assistance resources | | | | |
| Other | | | | |

3a) In the past 1-2 months since your stroke, how would you describe the care you have been receiving from (name of organization)?

Can you share a story about this?

Potential Probes:

- What kind of care have you received, what went well? What didn't?
- Do you feel the care contributed to you being better engaged in reintegrating back into the community, your life roles and activities
- Do you feel the care was well coordinated, is there anything you would have liked to receive support with that you didn't get, etc

4) How do you think the team is working together to meet your goals?

- Who do you perceive to be providing your care?

Can you provide a story about this?

Potential Probes:

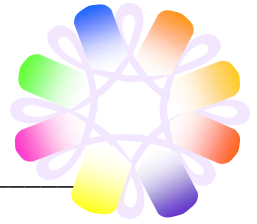
- Do you feel there is consistent communication among your team members?
- Do you feel the team members are aware of what each other are doing for you?
- Do you feel the team respected and supported one another?
- Do you feel the team valued your input on the goals you wanted to achieve?

5) Do you have any final thoughts or comments you would like to make?



Appendix 10 : Interview Guide Healthcare Provider

Code #: _____



Collaborative Interprofessional Stroke Care In Community Re-engagement (CISCCoR)

Healthcare Provider Interview (Post-implementation)

Preamble:

Thank you for agreeing to speak with me today. I'm a research coordinator conducting a series of interviews as part of the study Collaborative Interprofessional Stroke Care In Community Re-engagement. The specific focus of this evaluation is related to health care providers' education needs related to stroke clients' satisfaction with the community re-engagement process. As you know, we have designed an education intervention to enhance healthcare providers' capabilities to support the stroke clients return into the community and I understand that you have participated in this study. In order to know if this new education intervention is effective and meets your needs, we would like to interview some participants about what they thought about the intervention. We would like to know what you liked about it as well as things that you did not like. We would also like to know about what your experience has been with stroke clients community re-engagement, and any suggestions you have as to how this might be improved and whether the intervention should be changed to address those needs. The questions serve as a guide only. If there are other topics that you think are important regarding information and education needs, and methods of interprofessional collaboration, please feel free to share these.

This is purely a voluntary activity. You may stop the interview at any time. If any question I ask makes you uncomfortable, tell me and we can skip it. If any question doesn't make sense, let me know and I can rephrase it. If you wish to speak off the record, let me know and I will temporarily stop recording. Please be assured that you will not be identified in any way. Please do not give your name or the names of anyone else on the tape, and your real name will not appear anywhere in the written transcripts of, or reports concerning, your interview. We are audio taping the interview so that we do not lose any details of the conversation, however only the study personnel will hear your tapes. Any identifying information from the interview will be substituted with pseudonyms or codes in any reports or publications coming from this evaluation. Please be assured that the information provided by you will be kept strictly confidential. We hope you will feel comfortable to speak freely. We genuinely want to hear your perspectives so that we can improve the way we care for stroke clients

The interview will likely last anywhere between 30 and 60 minutes. However the amount of time we spend and what you choose to say is entirely up to you. Do you have any questions or concerns about the process? If not, let's begin....

- 1) Please describe why you were able or not able to reach your stated goals in the commitment to change document?

Potential probes:

What are your goals, have your goals been covered by the education initiative, what do you need in order to achieve this change, why have you or haven't you reached your goals.

- 2) Please share your experiences with respect to the interprofessional collaboration framework and concepts.

Can you provide a story about this?



Potential probes:

- describe what your understanding of the framework is,
- how you can use it, or have been using it,
- what worked well, what didn't work well,
- Do you think this is a good way to share information and knowledge between health professionals?
- Are there other ways that specialists could share information/communicate with you that you think would be better? What do these methods look like?
- How do you collaborate/communicate with other specialists/ care providers? What information do they usually provide you with?
- Do you feel the collaboration could be improved?
- Do you feel able to provide the care you would like to these clients?

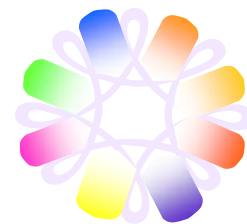
- 3) Please share your experience in applying the new knowledge you have learned from this study, into your own clinical practice. If you have been unable to apply this new knowledge, please comment on this as well.

Can you provide a story about this?

Potential probes:

- What information provided through the intervention did you find most useful in caring for your patients? Tell me more about that.
- Was there any information included in the program that was not helpful or confusing? What changes would you recommend?
- What did you think about the format of the training program (the set-up, timing, location, etc)
- Was there any information missing in the training program? Was there information you were hoping to get that you did not find?
- Do you think it helped you to be more involved in the care of you stroke clients?
- Do you feel better able/ more skilled/ more confident to support the community re-engagement process?





Appendix 11: Consent Form - Healthcare Provider (Main Study)

Introduction

Before agreeing to participate in this research study, it is important that you read and understand this research consent form. This form provides all the information we think you will need to know in order to decide whether you wish to participate in the study. If you have any questions about the study, please ask one of the investigators or study staff. You should not sign this form until you are sure you understand the information. All research is voluntary. You may also wish to discuss your participation in the study with a family member, colleague or close friend.

Background

You are being asked to consider taking part in this new education intervention study (main study) because you are a healthcare provider working with stroke clients to re-integrate them back into the community. Before agreeing to take part, it is important that you understand the procedures, potential benefits and potential risks of this study. Please remember that your participation is strictly voluntary. You can refuse to participate or withdraw at any time without any affect on your current or future employment status. You are encouraged to say only what you feel comfortable saying. You should understand the potential risks and benefits in order to be able to make an informed decision. Should you wish to participate in this study, please ask one of the investigators or study staff to explain any words you do not understand and make sure all your questions have been answered to your satisfaction before signing this consent form.

Purpose of the Study

This study is designed to evaluate the benefits of a newly developed education intervention in community re-engagement stroke best practices. This education incorporates an interprofessional collaborative and goal setting framework. It was developed for healthcare providers to see if it would assist them to better guide the stroke client in the stroke recovery process and community participation. It is believed that with appropriate knowledge and tools, the healthcare provider can play an important role in supporting stroke clients reintegrate back into the community.

If proven to be a beneficial strategy, we hope this information will help support and educate other healthcare providers in the province of Ontario, so they may provide their stroke clients with the best possible stroke care.

Description of the Study

There are several components to this study, some of which are central to the main study and some of which are optional (as indicated), as follows:

- Completion of pre-training intervention questionnaires. Demographic information (such as gender, age, job title) will be collected. Information will be collected regarding your perceptions and understanding of a community re-engagement framework and an interprofessional collaborative team approach. These questionnaires will take approximately 10-20 minutes to complete.
- The education intervention will consist of training workshops on interprofessional collaborative stroke client centered goal setting and a community re-engagement framework. This will involve the equivalent to two full-day workshops or approximately 12 hours of your time.
- Completion of a commitment to change document at the end of the training. This document will act as a tool and will consist of items such as identifying specific areas to enhance/change in your practice, problems to overcome and proposed actions. This document will take approximately 15 minutes to complete.



- After completion of the formal training workshops you will be requested to integrate stroke best practices into your practice, to work with, communicate and learn from your team in an interprofessional collaborative manner, and to work with your stroke clients to set stroke client centered goals using a community re-engagement framework.
- You will have an opportunity to attend up to three 90-minute face to face peer informal support engagements which will take place approximately 1 month, 2 months and 5 months after the completion of the formal training. You will also have the opportunity to participate in on-line peer support during this time.
- At approximately 3 months after the training intervention completion, the research coordinator will contact you to enquire about your progress with respect to your self-selected commitment to change objectives. This component of the study will take approximately 30 minutes of your time.
- Completion of post-training intervention questionnaires. At approximately 6 months post-training intervention, information will be collected via an on-line survey regarding your perceptions and understanding of a community re-engagement framework and an interprofessional collaborative team approach. These questionnaires will take approximately 20 minutes to complete.
- Participation in a focus group (optional). At approximately 5-6 months post-training intervention, focus groups will be conducted to give healthcare providers participating in the main study an opportunity to discuss the effectiveness of the educational strategies and to share perceptions and experiences with interprofessional care and stroke client centered goal setting, practice changes and opportunities for improvement. It is expected that there will be approximately 6-8 healthcare providers participating in each focus group. The focus groups will be audio taped. If you wish to participate in the focus group, you will also be required to review and sign the focus group consent form prior to participating in this optional component of the study. Participation in a focus group will take approximately 90 minutes.
- Participation in an in-depth interview (optional). At approximately 5-6 months post-training intervention, in-depth interviews will be conducted with a select group of healthcare providers to look at perceptions in the application of the knowledge in day-to-day practice and to explore any changes in behaviour through concrete examples. The in-depth interviews will be audio taped. If you are requested to participate in an in-depth interview and you wish to take part, you will also be required to review and sign the interview consent form prior to participating in this optional component of the study. Participation in an in-depth interview will take approximately 30-60 minutes.

There may be approximately 90 healthcare providers participating in this study from approximately nine participating organizations spanning the four Stroke Networks (South East Toronto; Toronto West; Central East; West Greater Toronto Area).

Up to approximately 40 stroke clients will also participate in an interview component of this study. You will be required to give permission to having an identified staff member at your facility informed by the study team that you are participating in this study in order for this staff member to identify your stroke clients who may be eligible to participate, and who may or may not participate in an interview for this study. In order to make sure that this study is as objective as possible, you should not discuss study participation with your stroke clients.

Potential Risks

There is no known risk involved in participating in this study. As with any educational intervention or study, there is a small unknown risk of persons being psychologically distressed by participating, but participation is entirely voluntary and you can withdraw at any time.



Potential Benefits

There may be no direct benefits to you from taking part in the study. The information that you provide to us will be used to help us to modify or tailor interventions that will allow healthcare providers to use best practice information and tools in their day-to-day practice.

Confidentiality and Privacy

All of the information we obtain from you will be held in strict confidence and will be securely transported to and stored at St. Michael's Hospital in Toronto, Ontario. The study team will keep all of your study information confidential to the extent permitted by law. You will be assigned a study identification number (ID #) which will be used for study data collected instead of using identifying personal information. The information collected for the main study will be securely stored for 3 years after the study is completed or once the results of the study have been published. We will keep all your study information in paper forms in a locked filing cabinet. We will keep all your study information that is stored electronically or on the computer in files that are coded. The only people who may see the code that links your name to the study information collected are the study investigators and study team and the St. Michael's Hospital Research Ethics Board, who may look at study records for the purpose of monitoring the study. We, the investigators, will never give out your name or other identifying personal information about you to anybody else unless a court of law requires us to do so.

The data (information) provided by you may be used in academic publications. However, your identity will not be revealed.

It is important to understand that despite the confidentiality and privacy protections being in place, there continues to be the risk of unintentional release of information. The investigators and study team will protect your study records and keep all your study information confidential to the greatest extent possible. The chance that any study information will be accidentally released is small.

In no way does signing this consent form waive your legal rights nor release the study investigators, sponsor or involved institutions from their legal and professional responsibilities.

Costs and Reimbursements

There will be no costs charged to you for participating in the main study. There will be no reimbursements to you for participating in the main study. Refreshments and lunch will be provided during your participation in the training workshops. Refreshments and a light snack will be provided at the peer informal support engagements. You will be reimbursed up to \$10.00 for parking/ transportation costs incurred for workshop attendance for this study

Participation and Withdrawal

Your participation in this study is voluntary. You can choose not to participate or you may withdraw from the study at any time, without giving a reason. Whether you participate or do not participate or withdraw from participation in the study, this will not affect your current or future employment status. In addition, you may choose not to answer any questions or parts of questions at any time.

Research Ethics Board Contact

If you have any questions about your rights as a research participant, please contact Dr. Julie Spence, Chair, St. Michael's Hospital Research Ethics Board at (416) 864-6060 ext. 2557 during business hours.

Study Contacts

If you have any questions or concerns that need to be addressed before participating in the study, or at any time during the study, kindly contact Donna Cheung, Principal Investigator at (416) 864-6060 ext. 3832 or Jocelyne McKellar, Co-Investigator at (416) 603-5800 ext. 3693.



Consent

The research study has been explained to me, and my questions have been answered to my satisfaction. I have the right not to participate and the right to withdraw from the study at any time without affecting my current or future employment status. As well, the potential harms and benefits (if any) of participating in this research study have been explained to me. I have been told that I have not waived my legal rights nor released the investigators, sponsor, or involved institutions from their legal and professional responsibilities. I know that I may ask now, or in the future, any questions I have about the study. I have been told that records relating to me will be kept confidential and that no information will be disclosed without my permission unless required by law. I have been given sufficient time to read the above information.

I agree to having my participation in this research study disclosed by the study team to an identified staff member within my facility in order that this person may identify potential stroke client study participants.

Please check the appropriate box, and initial, to indicate your decision:

Yes, _____ Initial I agree to be contacted to discuss possible participation in the optional **focus group** component of the study.

No, _____ Initial I do not agree to be contacted to discuss possible participation in the optional **focus group** component of the study.

Yes, _____ Initial I agree to be contacted to discuss possible participation in the optional **in-depth interview** component of the study.

No, _____ Initial I do not agree to be contacted to discuss possible participation in the optional **in-depth interview** component of the study.

I consent to participate in this study. I will be given a signed copy of this consent form.

Name of Participant (please print)

Signature of Participant

Date

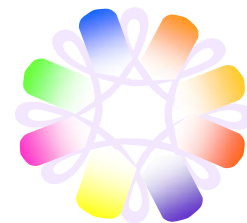
Name and Position of Person
Conducting Consent Discussion (please print)

Date of Consent Discussion

Signature of Person Conducting Consent Discussion

Date Consent Form Signed





Appendix 12: Stroke Client Interview Consent Form

Study Title: Collaborative Interprofessional Stroke Care In Community Re-engagement (CISCCoR)

Introduction

Before agreeing to participate in this research study, it is important that you read and understand this research consent form. This form provides all the information we think you will need to know in order to decide whether you wish to participate in the study. If you have any questions about the study, please ask one of the investigators or study staff. You should not sign this form until you are sure you understand the information. All research is voluntary. You may also wish to discuss your participation in the study with your family doctor, a family member or close friend.

Background

You are being asked to consider taking part in this research study because you are a stroke client receiving services from a healthcare provider involved in the study. Before agreeing to participate in this study, it is important that you understand the procedures, potential benefits and potential risks of this study. Please remember that your participation is strictly voluntary. You can refuse to participate or withdraw at any time without any penalty or loss of any benefits or services you are receiving. You are encouraged to say only what you feel comfortable saying. You should understand the potential risks and benefits in order to be able to make an informed decision. Should you wish to participate in this study, please ask one of the investigators or study staff to explain any words you do not understand and make sure all your questions have been answered to your satisfaction before signing this consent form.

Purpose of the Study

This study is designed to evaluate the benefits of a newly developed education intervention for healthcare providers. It was developed for healthcare providers to see if it would assist healthcare providers to better guide stroke clients in the stroke recovery process and community participation. It is believed that with appropriate knowledge and tools, the healthcare provider can play an important role in helping clients like you, to reintegrate back into the community after an illness.

If proven to be a beneficial strategy, we hope this information will help support and educate other healthcare providers across the province of Ontario, so they may provide their stroke clients with the best possible stroke care.

Description of the Study

A research coordinator will interview you in person at a location that is most convenient to you. You will be asked about the care you have been receiving and about your goals of re-engaging back into the community after your stroke. The interviewer will ask you some other questions about yourself, like your stage of recovery, your employment status, your age, ethnic background, your primary source of support, what your life was like before your stroke and what are some important things you wanted to work on after your stroke. The interview should last no more than 30 to 60 minutes, however the length of time may vary depending on the conversation which may result from one or more of the questions asked. The interview will be audio taped and the interviewer will also take notes during the interview. You may stop the interview at any time or refuse to answer any questions during the interview if you wish. Once the interview is completed, the audio tape recording will be securely delivered to the transcriptionist.

There will be up to approximately 40 stroke clients participating in this study. Approximately two to four stroke clients from each of the nine participating organizations across the four Stroke Networks (South East Toronto; Toronto West; Central East; West Greater Toronto Area) will be selected. You may be asked to participate in one or two interviews for this study. You will be informed after the first interview if there could be a second interview, which may take place approximately 5-6 months after the first interview. At that time, if you are once again asked to consider taking part in



an interview and if you are interested in participating in this second interview, you would be requested to provide your agreement to be contacted by the study team. If you choose to participate in the second interview, you will once again be required to review, and sign and date the consent form.

There will be approximately 90 healthcare providers participating in the education intervention study from the participating organizations across the four Stroke Networks, including the organization where you are receiving services. In order to make sure that this study is as objective as possible, during the time you are participating in this study, you should not discuss study participation with any of the healthcare providers from the participating organization who are working with you.

Potential Risks

There is no known risk involved in participating in this study. As with any study, there is a small unknown risk of persons being psychologically distressed by participating in an interview, but participation is entirely voluntary and you can withdraw at any time.

Potential Benefits

There may be no direct benefits to you from taking part in this study. The information that you provide to us will be used to help us to modify or tailor interventions that will allow healthcare providers to use best practice information and tools in their day-to-day practice.

Confidentiality and Privacy

All of the information we obtain from you will be held in strict confidence and will be securely transported to and stored at St. Michael's Hospital in Toronto, Ontario. The study team will keep all of your study information confidential to the extent permitted by law. The electronic files (i.e., audio tape recording and transcript of the audio tape recording) will be assigned identification numbers (ID #'s). The transcriptionist hired for the study will have access to the audio tape recording for the purpose of transcribing the information recorded. The audio tape recording will be securely stored and handled, and then it will be securely destroyed after the information has been transcribed and verified to be accurate. The other study information, including the transcription will be securely stored for 3 years after the study is completed or once the results of the study have been published. We will keep all your study information in paper forms in a locked filing cabinet. We will keep all your study information that is stored electronically or on the computer in files that are coded. The only people who may see the code that links your name to the study information collected are the study investigators and study team and the St. Michael's Hospital Research Ethics Board, who may look at study records for the purpose of monitoring the study. We, the investigators, will never give out your name or other identifying personal information about you to anybody else unless a court of law requires us to do so.

The data (information) provided by you may be used in academic publications; for example, we might use a quote by you and say in the publication whether the quote was from someone with your perspective. However, your identity will not be revealed, and a pseudonym or code will be used instead.

It is important to understand that despite the confidentiality and privacy protections being in place, there continues to be the risk of unintentional release of information. The investigators and study team will protect your study records and keep all your study information confidential to the greatest extent possible. The chance that any study information will be accidentally released is small.

In no way does signing this consent form waive your legal rights nor release the study investigators, sponsor or involved institutions from their legal and professional responsibilities.

Costs and Reimbursements

There will be no costs charged to you for participating in this study. There will be no reimbursements to you for participating in this study.



Participation and Withdrawal

Your participation in this study is voluntary. You can choose not to participate or you may withdraw from the study at any time, without giving a reason. Whether you participate or do not participate or withdraw from participation, this will not affect the care or services you are receiving from the participating organizations. In addition, you may choose not to answer any questions or parts of questions at any time.

You are free to contact one of the investigators at any time and request erasure of all or part of your interview audio tape recording or transcript.

Research Ethics Board Contact

If you have any questions about your rights as a research participant, please contact Dr. Julie Spence, Chair, St. Michael's Hospital Research Ethics Board at (416) 864-6060 ext. 2557 during business hours.

Study Contacts

If you have any questions or concerns that need to be addressed before participating in the interview process, or at any time concerning the study, kindly contact Donna Cheung, Principal Investigator, at (416) 864-6060 ext. 3832 or Jocelyne McKellar, Co-Investigator, at (416) 603-5800 ext. 3693.

Consent

The research study has been explained to me, and my questions have been answered to my satisfaction. I have the right not to participate and the right to withdraw from the study without affecting the quality of care I am receiving for me and for other members of my family. As well, the potential harms and benefits (if any) of participating in this research study have been explained to me. I have been told that I have not waived my legal rights nor released the investigators, sponsor, or involved institutions from their legal and professional responsibilities. I know that I may ask now, or in the future, any questions I have about the study. I have been told that records relating to me and my care will be kept confidential and that no information will be disclosed without my permission unless required by law. I have been given sufficient time to read the above information.

I consent to participate. I will be given a signed copy of this consent form.

Name of Participant (please print)

Signature of Participant

Date

Name and Position of Person
Conducting Consent Discussion (please print)

Signature of Person Conducting Consent Discussion

Date

Appendix 13: Stroke Client Quotes on the complexity of their recovery and CR

| CR Components | Stroke client comments on the complexity of their recovery process | Stroke client comments on the community re-engagement components being addressed | |
|--------------------------------------|--|--|--|
| Health Management (Emotional) | <i>It's frustrating because the person isn't always reacting the way you think that they should and that irritates you and you tend to get cross with them. It's overwhelming because there's so much to do on every level and it's stressful because it's all combined and of course you're always worrying. So, all those negative aspects are all compounded, as far as I'm concerned.(#15, post)</i> | Client: Interviewer: Client: Interviewer: Client: | <i>I was kind of scared. [...]</i> <i>Was there anyone to help you to deal with this feeling of being scared?</i> <i>No. [...]</i> <i>You dealt with it on your own?</i> <i>Yeah. (Client #6, pre)</i> |
| Caregiver Support | <i>I'm worried about she's reaching a stage where she'll be 80 the end of this year. So physically it's getting harder for her to prepare meals and so on and so forth, go shopping. She does all the shopping and drives me around. It's getting harder and harder and now she's quite well to do it all (Client #4, post)</i> | Interviewer: Client: Interviewer: Client: | <i>At the hospital, did anyone ever talk to you about ways how you can worry less about your caregiver, ... make sure that things are fine for her?</i> <i>No, nobody. Nobody talked to me about that.</i> <i>Like issues around caregiver support.</i> <i>No. (Client #2, post)</i> |
| Communication | <i>Sometimes I'm stuck trying to... I can't try to tell you what I'm trying to say you know. Sometimes I get, you know I go around it kind of thing or I go... I want a coffee but I can't... you know, I go moo juice you know, hot stuff, oh yeah it's coffee (#3, post)</i> | Interviewer: Client: Interviewer: Client: Interviewer: Client: | <i>Do you ever have any problems in expressing things to like family and friends or other people around you?</i> <i>Sometimes.</i> <i>Like what kind of times?</i> <i>It doesn't like... say now I'll talk to you and tell you stuff and then a minute from now I won't be able to tell you what I said or wanted to say.</i> <i>Are there any healthcare providers that you kind of work with on speech related issues?</i> <i>No. (Client #11, pre)</i> |
| Environment | <i>"Well from when I got a stroke, me and my wife is fighting to get a cheaper place to live, not a free place, cheaper place... You know, apartment is expensive. That's the same</i> | <i>Well, the wife and myself...otherwise, there's nobody else. Well, I have a physiotherapist and I've talked to her and she said I'll try it (walker) out here and so on. So it's initiated by the wife and I and we go to the people involved. You're always</i> | |



| | | | |
|-----------------------------|--|--|--|
| | <i>reason why we sold our place and move out apartment and we live to a basement right now and right now I couldn't even go home... I said there's no way I [plan] to go home because ...I would have to slide on my back side to get down there because I can't walk... how am I going to escape [the building] if there is a fire or something (Client #15, pre)</i> | <i>pushing and these things don't happen just like that." (Client #10, pre)</i> | |
| Mobility | <i>"You can't walk. I mean I'm fortunate, I didn't lose my speech. Will my arms come back along ways? In the beginning, I was totally paralyzed on the left side, totally. The only thing I could do is move my thumb. Of course, the therapists worked really well. I'm really happy with their part of it." (Client #2, pre)</i> | <i>Well I can attribute it to the girls you know at the hospital. They were just wonderful. They'd come everyday and I had about two sessions a day. They'd take me for a walk and stuff like that. At first when they started down there I couldn't get out, I couldn't get out. (Client: #9, post)</i> | |
| Life Roles | <i>"Now you go from a productive individual to dead stop which is major, mentally as well as physically. Like it's a life adjustment that you never thought would happen. Like anything that you thought you could do, you know you can't do it now." (Client #2, pre)</i> | Client: | <i>Well I don't feel independent anymore. I can't do some of the things that my livelihood depends on right. I can't use this hand, I can't write, I can't do a lot of stuff right now</i> |
| | | Interviewer: | <i>What kind of healthcare providers are you working with in order to get this whole process facilitated?</i> |
| | | Client: | <i>Well actually they've been pretty good with me so far. (Client: #16, post)</i> |
| Financial Management | <i>I want to recover fully and support for my family. But if I cannot do that I have also to get a goal how to support my family this time now because my wife is not earning anything (Client #2, post)</i> | Client: | <i>My husband was on a drug, it wasn't covered. He had Parkinson's and cancer and he said "what are we going to do?" So instead of cooking steak, I cooked hamburger.</i> |
| | | Interviewer: | <i>Did they ever introduce you to any financial assistance resources?</i> |
| | | Client: | <i>No (Client #9, post)</i> |



| | | | | |
|-----------------------|--------------|--|--------------|--|
| Social Network | Client | <i>I come here because I don't like to stay home, what am I going to do home, fight with the wife...</i> | Interviewer: | <i>Do you have any problems in having a good social support around you? Do you ever feel lonely?</i> |
| | Interviewer: | <i>Do you have a good social support network around you?</i> | Client: | <i>I feel lonely at times, yeah, depressed.</i> |
| | Client: | <i>I feel alone (Client #13, post)</i> | Interviewer: | <i>Depressed? Do you want to tell me about that, why?</i> |
| | | | Client: | <i>I don't know why but.</i> |
| | | | Interviewer: | <i>Do you ever get to talk with someone because of this because depression is something that usually it's helpful to have a professional to speak to? Do you ever get to speak to someone?</i> |
| | | | Client: | <i>No. (Client # 14, post)</i> |
| | | | Interviewer: | |
| | | | Client: | |



Appendix 14: Research Knowledge Transfer Activities

From the onset of the CISCCoR Study, project milestones and baseline data have been broadly disseminated at St. Michael's Hospital and local/provincial stroke-related conference and symposium. The following is a list of peer-reviewed posters presented to date:

Cheung, D., McKellar, J. *Collaborative Interprofessional Stroke Care in Community Re-engagement: The Impact of a Healthcare Provider Education Intervention*, 1st Canadian Stroke Congress, Quebec City, June 7 & 8.

McKellar, J., Cheung, D., Bereket, T. (2010) *Community Reengagement and Stroke Care: Theory versus Practice among Healthcare Providers*, Central East Stroke Network's 2nd Stroke Symposium; Discovering the Mosaic of Stroke, King City, ON, April 14th.

Bereket, T., Cheung, D., McKellar, J. (2010) *Client Centered Goal Setting: Collaborative Interprofessional Stroke Care in Community Reengagement*, GTA Rehab Network: 2010 GTA Best Practices Day, Toronto, March 1st.

McKellar, J., Bereket, T., Cheung, D. (2010) *Community Reengagement and Stroke Care: Theory versus Practice among Healthcare Providers*, West GTA Stroke Network: Stroke Symposium, Mississauga, February 11th.

Bereket, T., McKellar, J., Cheung, D. (2010) *Client Centered Goal Setting: Collaborative Interprofessional Stroke Care in Community Reengagement*, West GTA Stroke Network: Stroke Symposium, Mississauga, February 11th.

Cheung, D., Bereket, T. McKellar, J. (2010) *Challenges to Interprofessional Collaboration among Healthcare Providers in Stroke Care*, 9th Stroke Symposium & 31st Annual Meeting of the Inter-Urban Stroke Academic Association, Toronto, January 28-29.

McKellar, J., Bereket, T., Cheung, D. (2010) *Community Reengagement and Stroke Care: Theory versus Practice among Healthcare Providers*, 9th Stroke Symposium & 31st Annual Meeting of the Inter-Urban Stroke Academic Association, Toronto, January 28-29.

Cheung, D., McKellar, J., Bereket, T. (2009) *Collaborative Inter-professional Stroke Care in Community Re-engagement (CISCCoR): Important Milestones and Future Directions*, Inner City Health Innovations Day, St. Michael's Hospital, Toronto; September 18.

In addition, our Research Team will be giving site-specific presentations for each partnering organization in order to report back to participating HCPs and other project stakeholders. Moreover, we will closely work with our partnering Stroke Networks and the Heart and Stroke Foundation to place project information on their websites. Furthermore, our final project results will be presented in upcoming conferences through 2010 and 2011. Finally, academic manuscripts will also be developed and submitted to peer-reviewed journals for broader dissemination beyond Ontario.

