RGPs OF ONTARIO

CERAH
Centre for Education and Research on Aging & Health

North East-Specialized Geriatric Services
Services gériatriques spécialisés du Nord-Est
North East Centre of Excellence for Seniors Health
Centre d'excellence sur la santé des personnes âgées du Nord-Est

ACREU
Arthritis Community Research & Evaluation Unit

GiiC
geriatrics
interprofessional
interorganizational
collaboration

Final Report
GiiC

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1.0 Introduction

This project is a province-wide Knowledge to Practice (KTP) initiative designed to develop a cadre of 200 facilitators situated within Family Health Teams (FHTs) and Community Health Centers (CHCs) to serve as a resource to their organizations on the core competencies for frailty focused healthcare. The three competencies are geriatrics, interprofessional practice and interorganizational collaboration (GiiC). The project was funded by a Health Force Ontario Interprofessional Care Grant.

1.1 Purpose and Objectives

Our specific goals were to:

1) Establish a GiiC Knowledge to Practice Network with hubs in the RGPs of Ontario Academic Health Sciences Centres in Hamilton, Kingston, Toronto, London, Ottawa and in Northern Ontario linked to the Centre for Education and Research on Aging and Health (CERAH) at Lakehead University and the North Eastern Ontario Specialized Geriatric Services Interest Group both affiliated with the Northern Ontario School of Medicine

2) Develop a team of GiiC consultants within the RGPs of Ontario, the Centre for Education and Research on Aging and Health at Lakehead University and the North Eastern Ontario Specialized Geriatric Services Interest Group to provide training, coaching, and mentoring of GIIC facilitators and to support a GiiC Knowledge to Practice Network.

3) Develop a province-wide cadre of 200 geriatrics, inter-professional practice and inter-organizational collaboration (GiiC) facilitators situated in FHTs and CHCs to assist their teams and organizations in the delivery of collaborative shared care to frail seniors.

We used a blend of KTP strategies when developing GiiC facilitators for their role: an initial 16 hour multi-method training process, ongoing coaching, a follow-up training day, edumetric activities (including results of a surveys of their teams), and structured knowledge to practice tools supported by GiiC resource consultants and on-line resources.

Given the time frame under which we were working (14 months) it was unlikely that there would be sufficient time to identify changes in team process and clinical care at the level of the FHTs and CHCs as a result of the KTP initiative. The evaluation therefore focused on the process of training of the GiiC facilitators and implementation of the GiiC facilitator role rather than team and clinical outcomes. However, we used measures that could be utilized as baseline measures in subsequent follow-up studies should funding become available.

2.0 Background

Ageing demographics will have a significant impact on human resource planning and development in all professions working in many health care contexts across the circle of care (McKnight et al. 2003).

Providing care to the expanding population of frail seniors requires an increase in the numbers of care providers and in their skill sets. The set requires expertise in three broad competencies - geriatrics, inter-professional practice and inter-organizational collaboration. Competence in geriatrics is required because the clinical presentations of frail seniors are unique and include the 'geriatric giants' of dementia, delirium, falls, continence and poly-pharmacy often co-occurring in complex ways. Competence in inter-professional practice is required because the complexities of these clinical presentations are such that optimal care requires an interdisciplinary team. Inter-professional teamwork is the care delivery method of choice in caring for frail seniors (Geriatrics Interdisciplinary Advisory Group, 2006). Finally, competence in inter-organizational collaboration is required because the management of frail seniors requires the sharing of care across many organizational boundaries from primary and community based care to emergency and hospital-based services.

Inter-professional practice is an essential characteristic of health care delivery in the real world, preparation for inter-professional practice must be formally incorporated into the academic and continuing education of health professionals. Simply putting people together to work does not necessarily create effective teamwork. In formative academic training health professionals must build attitudes and expectations supportive of inter-professional practice that with appropriate support can be refined in the workplace to improve the quality of services to patients (Barr, 2000).

The Inter-professional Care: Blueprint for Action and the emergence of Local Health Integration Networks in Ontario also guide us towards the importance of inter-organizational collaboration in the delivery of effective health care. But, just as simply putting people together to work does not necessarily create effective teamwork, so simply requiring organizations to work together does not necessarily lead to effective shared care. Inter-professional practice and inter-organizational collaboration require ongoing coaching, support and facilitation. Resources to meet this ongoing need are seldom available in the workplace.

Repeated surveys demonstrate that curriculum time devoted to geriatrics in the academic preparation of health professionals is insufficient. In our own surveys, for example, frailty-focused service 'specialists' in all disciplines tell us that they when they graduated they lacked the confidence and skill sets to care for frail seniors. They tell us that they required extensive continuing education that was acquired through informal 'on the job' processes, specific time-limited educational events and pilot projects though groups such as the RGPs of Ontario. These findings from the inter-professional geriatric 'specialists' appear independent of year of graduation (Ryan & Kirst, 2005). Limitations on geriatrics training are a challenge to the health systems capacity to meet the needs of an aging population.

The need for renewed focus on preparing health professionals for inter-professional practice has recently been documented in the Health Force Ontario, Inter-professional Care: Blueprint for Action (Oandasan & Closson, 2007).

Between Specialized Geriatric Service providers affiliated with the Regional Geriatric Programs of Ontario and Family Health Teams and Community Health Centres who are and will increasingly be the primary source of care for the growing population of frail seniors, there exits a combination of skill sets and needs that can respond to the issues of human resource scarcity for geriatric care and the need to provide practice based training in inter-professional practice and inter-organizational collaboration as outlined in the Blueprint for Action.

3.0 Methodology

We used multiple methods including a blend of knowledge to practice (KTP) and qualitative methods, edumetrics, survey research and social network analysis.

3.1 Recruitment and Training of GiiC Consultants

Each of the project partners in the RGPs of Ontario, the CERAH and the North Eastern Ontario Specialized Geriatric Services Interest Group were asked to recruit 1.0 FTE human resources to serve as the projects GiiC consultants with the following credentials:

A health professional with experience in frailty focused services, experience as a clinical and/or academic educator, a strong interest in inter-professional practice and inter-organizational collaboration, comfort with communication technologies and willing to maintain a project log and coordinate online edumetric exercises with facilitators in her/his region.

Experience in project management or research would be an asset, as would skills and knowledge in the core competencies. The final consultant team comprised 10 health professionals from a variety of professional backgrounds: Nursing (3), Social Work (2), Occupational Therapy (2), and Physiotherapy (2).

GiiC consultant training took place in a series of face-to-face team meetings and workshops, individual coaching between the principal investigator and consultants, role playing and simulation, team teleconferences and email mediated discussions. The initial team meeting was blended into a two day Ontario Hospital Association conference on Inter-professional Education on May 5, 2008. The consultants self-selected responsibility for the development of training modules which was guided by a common template that included topic overviews, quick facts, pocket guides, clinical tools, patient handouts, teaching case studies and teaching slides. A consensus was developed on the training delivery design that included lectures, interactive knowledge cafes, interactive small group exercise, the build a case method, a communication technology workstation and networking activities.

The consultants role-played the design during a day-long meeting of the RGPs of Ontario focused on the GiiC initiative on May 29, 2008. Between May 5 and September 16 the consultants participated in 56 hours of team training and development in addition to individual face-to-face coaching and email mediated discussion.

3.2 Sampling for GiiC Facilitators

The GiiC Facilitators were primary health care providers working in FHTs and CHCs in Ontario.   Nominated by their host organizations (FHTs and CHCs) these individuals were regulated health professionals with: an interest in geriatrics, inter-professional practice and inter-organizational collaboration; experience in clinical education and an interest in the core competencies; have the qualities of an informal opinion leader or influential: e.g. they like to stay up to date on a wide range of topics, enjoying answering questions and coaching colleagues; and, have a humanitarian attitude that leaves others feeling as if they have spoken with an equal.

3.3 Recruitment of GiiC Facilitators

Recruitment of GiiC facilitators took place using the following protocol that received ethics approval from: Sunnybrook Health Sciences Centre, University Health Network, McMaster University, University of Western Ontario, Queen's University, University of Ottawa, Lakehead University, North Eastern Ontario CCAC and Laurentian University.

1) An invitational letter was sent out to the contact person for each of the

FHTs and CHCs in the Province. The letter was followed up by a face-to-face

meeting with the regional GiiC Consultant.

2) The FHT/CHC contact person was asked to nominate (with his/her

agreement) a member of their FHT or CHC to be the team's GiiC facilitator.

3) The evaluation team sent the nominated facilitator an information sheet

and consent form outlining in detail the expected role of the GiiC facilitators.

4) The regional GiiC consultant contacted the nominated facilitator with

respect to the date and time of the initial 16-hour training workshop, and

travel arrangements.

3.4 KTP Activities

3.4.1 Preliminary Pilot Work With FHT/CHCs

Prior to beginning the training of the GiiC consultants and development of

the content of the training workshops, we conducted a pilot study of FHT/CHCs.

We utilized a focus group approach incorporating the 'build a case method' to

identify issues with respect to: 1) challenges with respect to the management of

elderly patients in these primary care settings; 2) interprofessional teamwork

within FHTs and CHCs; and, 3) interorganizational collaboration between FHTs

and CHCs, and other community and health services agencies. We met with four

teams (one urban FHT, one rural FHT, one urban CHC and one rural CHC).

During these focused discussions built around the 'build-a-case' method, interprofessional groups of FHT and CHC providers from rural and urban settings described the types of elderly patients they see, the challenges they face in addressing the needs of this group of patients, the members of the interprofessional team involved in the care of these elderly patients, and the types of linkages they have with other organizations with respect to care of elderly patients. Focused discussions were audio-taped, transcribed verbatim and reviewed for common issues and themes.

3.4.2 Sixteen Hour Training Workshops

Formal training of GiiC facilitators took place within LHINs adjacent to each RGP hub and across the Northeast and Northwest LHIN regions. The training hub in Northwestern Ontario was the Centre for Education and Research on Aging and Health at Lakehead University in collaboration with St. Joseph's Care Group and the Northern Ontario School of Medicine. The training hub in the North East was the North East Specialized Geriatric Services in Sudbury and took place in North Bay, Ontario. In each instance the GiiC consultant team provided the geriatrics-training component supported by guest speakers from their region. The Project Director provided the inter-professional practice and inter-organizational training components.

Training Workshop Design

The range of geriatrics training modules was developed through literature review, pilot process focus groups, expert consensus and the ongoing work of experts within each region. Geriatric modules were developed in the following areas: Advance Directives, Capacity Assessment, Care-Giver Support, Delirium, Dementia Screening and Assessment, Depression, Driving Capacity, End-of-Life Care, Falls, Incontinence, Oral Health, Osteoporosis, Pain, the Periodic Health Exam and Polypharmacy. Two additional modules were developed on inter-professional practice and inter-organizational collaboration.

Module design followed a standard format developed by the consulting team and approved by the project steering committee. For each module the format required topic overview, Quick FAQs, pocket guides, algorithms and clinical tools, patient handouts, and slide materials including – slides and teaching case studies. Each module included an embedded inter-professional and inter-organizational component.

With the assistance of Louise Baillargeon, Administratrice du service de traduction/Traductrice, Services de santé en français, Système de santé de Niagara/Niagara Health System, all of the Toolkit's patient handouts were translated into French.

A standard workshop design which enabled variation to accommodate regional needs guided the eight 16 hour training procedures.

Developed by the consulting team and guided by knowledge to practice best practices, the design included the following elements: 1) local geriatricians speaking on frailty, 2) presentations by local FHT/CHCs with developed or developing geriatrics services, 3) two '7-station' knowledge café's conducted by GiiC consultants on the geriatrics modules, 4) an evaluation coaching session, 5) a lecture and knowledge café on inter-professional practice 6) an interactive session on personal styles and their impact on teamwork, 7) build-a-case exercises, 8) a lecture on inter-organizational collaboration issues and an inter-organizational build-a-case session, 9) a workstation for registration and practice with the projects website and online toolkit, 10) staged distribution of hard copy resources such as the Toolkit in Flash Drive format, Geriatrics at your finger-tips, and the Blueprint for Interprofessional Care, 11) staggered draws and games, and a networking banquet.

Evaluation of Workshops

At the end of each workshop GiiC facilitators were asked to complete evaluations with respect to: knowledge attained, satisfaction with the process and confidence re: their ability to undertake the facilitator role when they return to their teams. The questionnaires were collected by the Evaluation Team for data entry and analysis. Modifications were made to later training workshops based on feedback from initial training workshops if necessary.

3.4.3 2-3 Month Period Where GiiC Facilitators Return to their Teams

Following the training workshops, GiiC facilitators returned to their teams to undertake their facilitator roles. Throughout the process GiiC facilitators were contacted intermittently by the GiiC consultants for mentoring and advice. GiiC consultants were also available for requests for engagement from the GiiC Facilitators such as coaching, mentoring and other ongoing forms of facilitation occur using a blend of face-to-face, telephone/email and web-mediated approaches. The latter included a repository of the training resources, access to curriculum modules for self-directed learning, and a range of communications tools (e.g. email lists, blogs) in response to facilitator interest. GiiC consultants kept logs as to their contact with the GiiC facilitators.

The GiiC Toolkit

When the 17 modules were developed using the standard format, the net result was 1678 page toolkit – too much material for the hard copy manual that was originally anticipated. The team decided to present the toolkit in an external USB Flash Drive format. Three hundred 2 gigabyte GiiC Toolkits in USB Flash Drives were developed each drive containing the 1.4 gigabytes of material developed by the consulting team and approved by the project steering committee. The format of the USB flash drive emulated the Toolkit as it appeared on the project's websites.

Web Resources

Initially two websites were developed to support the project. One website enabled the development of training modules by the GiiC Consultants, project investigators, evaluators and the steering committee. In addition to the 17 training modules, the site included social networking capabilities, up and downloading functions, integrated chat, a translated document utility and a calendar. The second, website emulated the form of the USB Toolkit and served the needs of the GiiC facilitators. The two sites were then integrated into a single site with the URL http://giic.rgps.on.ca. All websites have required registration, an approval process, and a login password. The final website at URL http://giic.rgps.on.ca provides for four different kinds of membership – GiiC facilitators, GiiC consultants, site administrators and other health professional users.

For all but "other health professional" members the site provides secure social networking capabilities, chat, calendar and access to the GiiC modules. "Other health professional" members have access to the GiiC Toolkit modules with a limited capacity to contact website administrators with questions and or comments.

The site is constructed using the Drupal content management system an open source software utility. The site has been updated twice as a result of the development of new modules and refreshed resources.

An automated site updating mechanism is under developing for GiiCPlus – a continuation of GiiC funded by Health Force Ontario.

3.4.4. Edumetric Process re: Team Functioning

At the end of the workshops, GiiC Facilitators and their teams were invited to participate in an Edumetric Process to examine team functioning. Edumetrics refers to the process of providing the results of surveys (or other measures) to the users in a manner that helps them to learn the concepts underlying the survey. With this KTP perspective on measurement, measurement becomes more explicitly education and measurement - hence edumetric.

If FHT/CHCs chose to participate they were requested to:

1) Complete a Team Profile Form that collected general information about the team, plus a Team List of the names and roles of all members of the FHT/CHC.

These Team forms were submitted directly to the Evaluation Team at ACREU.

2) Following receipt of the Team List, the Evaluation Team developed individualized questionnaires specific to each participating FHT/CHC. The questionnaires consisted of three sections:

Section A: Demographic Information such as age, gender and professional affiliation of the respondent.

Section B: The Dimensions of Teamwork questionnaire, developed by the Project Director is a 56-item scale developed using standard psychometric principles and validated for use in measuring health care teamwork. The questionnaire compiles team member perceptions of teamwork on seven subscales (i.e. patient & inter-team issues, team member's skills & knowledge, communication & conflict management, roles & interdependence, clarity of team goals, decisions & leadership, and organizational support). The psychometric properties of the DTEAM Survey are presented in Table 1.

Table 1: Psychometic Properties of the DTEAM Survey

Dimension of Teamwork	Internal Consistency (n = 116)	Inter-rater Reliability (n = 28) ****	Test/Retest Reliability (n = 16) ***	Convergent Validity (n = 104)
Customer and Inter-team	0.39**	0.58*	0.84*	0.46*
Team member strengths and skills	0.81	0.69*	0.93*	0.72*
Communication and Conflict	0.77	0.45*	0.96*	0.84*
Roles and Interdependence	0.77	0.58*	0.96*	0.74*
Clarity of Team Goals	0.81	0.60*	0.95*	0.71*
Decision-making and Leadership	0.69	0.46*	0.96*	0.79*
Organizational Support	0.67	0.28	0.97*	0.63*

*   Indicates p<.05
**   Based on 35 cases with improved items. Removal of one item increases alpha to .47
***   Retest interval – 2 weeks
****   Inter-rater reliability based on every 3rd adjacent pair of team member ratings within teams.

Section C: Social Network data about the types of ties or linkages between members of the FHT/CHC. Respondents were asked to identify the types of contacts or ties that they have had with other FHT/CHC members in the previous month and to specify the frequency of those contacts or ties. One month was used as the time frame for reporting to enhance the accuracy of recall and to allow sufficient time to capture a variety of potential interactions.

Three types of ties were examined: 1) receive referral from; 2) send referral to; and 3) exchange information with. Respondents were asked to specify the frequency of these types of ties: once per month, 2-3 times per month, once a week, several times per week or daily.

3) Each participating FHT/CHCs was couriered a set of packages for each team member consisting of: an information sheet, an individualized copy of the questionnaire, and a pre-addressed stamped envelope. In order to conduct the social network analyses, the questionnaires could not be anonymous, but only participant initials were utilized. Each questionnaire was identified with the FHT/CHC member's ID code. The information and consent form clearly explained that the questionnaires were confidential, not anonymous, and explained the reasons why this was necessary. Questionnaires were self-administered and were returned (mailed) to ACREU for data entry and analysis.

4) Once the questionnaires were returned to ACREU, the data were entered using double data entry to ensure data accuracy. Data were analyzed using a range of analytical techniques. Data from Sections A and B were analyzed utilizing SAS and the social network data (Section C) utilizing UCI Network 6 – a software package specifically for the analysis of social network data. From these analyses a Team Profile Summary report of each FHT/CHC was developed and returned to each GiiC facilitator.

Team Profile Summary reports consisted of: a graph and description of key items from the Dimensions of Teamwork Questionnaire; a report of the social network analysis consisting of: two sociograms for each team and a set of 5-6 reflective questions designed to help the team begin to address issues that arose from the data (see Appendix A for a sample report).

The type of report received depended on the response rate of team members on each team. Teams with a response rate of at least 60% received a full report. Teams with a response rate of at least 35% but less than 60% received a partial report consisting of the results of the Dimensions of Teamwork Survey. Teams with a response rate of less than 35% received a letter explaining why it was not possible to complete a report for their team.

5) The GiiC facilitators were requested to conduct an edumetric reflective exercise with all members of their FHT/CHC to share and discuss the summary reports. The facilitators could elect to include their GiiC consultant in the reflection exercise.

The purpose of these sessions is to engage the teams in a process of reflection and to develop a set of actions/goals to address issues raised. Following the reflective exercise GiiC facilitators were requested to submit a Reflective Exercise Report.

3.4.5 Facilitators attend RGP Annual Meeting

On April 30, 2009 the staff of the RGPs of Ontario and other regional project partners, together with all participating FHT/CHCs facilitators were invited for a day of networking, project update and review, training, evaluation focus groups. brain-storming and planning. The occasion was the RGPs of Ontario annual meeting which, for the second consecutive year was focused on the GiiC initiative. Dr. Gina Browne provided a keynote address on inter-organizational collaboration and inter-organizational collaboration was the theme of the day.

During the one-day event, six focus groups were conducted (one per region with one focus group for the northwest and northeast). The purpose of the focus groups was to explore the experiences of the GiiC facilitators once they returned to their FHT/CHC following the training workshop in order to identify the barriers, facilitators, what worked well, and the challenges faced. In total 52 GiiC facilitators took part in the focus groups which ranged in size from 7-10 participants. The focus groups were led by research staff from ACREU and RGP volunteers. The focus group leaders were oriented to the project and the purpose of the focus groups during a teleconference with Drs. Ryan and Cott. Table 2 contains the focus group questions.

Table 2: Focus Group Questions

What aspects of the project were particularly helpful?
- Structured KTP tools supported by GiiC consultants
  - Were these tools useful?
  - Which did you find you utilized most?
  - Did you have much contact with your GiiC consultant?
- Implementation of GiiC facilitator practice activities
  - Were you able to implement any specific activities related to the learning in the workshop?
  - What worked well?
  - What challenges did you face, if any?
- Edumetric activities: Team Profiles
  - Did your team participate in the Team Profile process?
    - Why? Why not?
  - For those who did participate – in retrospect was it a useful exercise?
    - Why? Why not?

Do you think that the way that your team works with the elderly has changed at all as a result of what you learned from this project?

Probes: Can you give me some examples?

What made it easier, what made it harder?

Each focus group was audio-taped, transcribed verbatim and reviewed line by line for common issues and themes.

4.0 Results

4.1. Pilot phase

The results of the preliminary qualitative team interviews highlighted the diversity of practice models particularly within FHT.

In some FHTs, for example, physicians and allied health professionals were organized into sub-teams within the larger organization whereas in others the allied health professionals were co-located but the physicians were off-site, frequently in solo practices. There was also considerable diversity regarding awareness of the issue of frailty and the role of primary care in the care of frail seniors. Whereas CHCs were developed with a specific mandate for care of the elderly and often have well-established geriatric services, FHTs are relatively new to the field and had less knowledge and expertise with respect to care of the elderly. The interviews confirmed the need to develop educational resources with respect to common geriatric issues with a focus on prevention and screening. One participant used the following metaphor to describe the role of primary care in care of the elderly:

"It's like there's this elderly couple driving along the road and they can't see the potholes and hazards ahead of them. It's our job (in primary care) to identify the landmines before they hit them."

4.2 Initial 16 Hour Training Workshops

Workshops comprising sixteen-hours of training were held in each of the projects seven regions and an additional training workshop was held in Toronto to accommodate participants who were unable to attend their regional training workshop. In total 374 participants, representing 181 of the 220 identified FHT/CHCs, attended training workshops. This represents 82% of these organizations in the province on Ontario.

Table 3: Facilitator Workshop Attendance Totals

Region	FHT attending/ number of FHTs	CHC attending/ number of CHCs	FHT/CHCs attended workshop	Total # of Participants
Kingston	11/13 (85%)	4/4 (100%)	15/17 (88%)	25
Hamilton	17/25 (68%)	11/14 (79%)	28/39 (72%)	66
Ottawa	7/11 (66%)	14/19 (74%)	21/30 (70%)	56
London	21 /24 (88%)	8/8 (100%)	29/32 (90%)	35
Toronto	25/31 (81%)	22/25 (88%)	47/56 (84%)	70
North West	4/6 (67%)	8/11 (73%)	12/17 (70%)	53
North East	14/14 (100%)	15/15 (100%)	29/29 (100%)	69
TOTAL	**99/124 (79%)**	**82/96 (85%)**	**181/220 (82%)**	**374**

4.3 Geriatric services in participating FHTs and CHCs prior to the workshops

FHTs and CHCs have different primary care mandates and funding formulas that drive distinct practice patterns. For example, FHT rostering lends itself to ambulatory care while CHC salaried staffing empowers care of housebound clients. Despite these and other differences, the age distributions of the clients in the participating FHTs and CHCs are quite similar. As can be seen in Table 4 approximately 20% of patients are below the age of 25 years, 40% between the ages of 25 and 60, 22% are "young-old' clients between the ages of 60 and 75, while 10-13% are aged 75 years or older.

Table 4: Estimates of the proportion of seniors in FHTs and CHCs

Type of Organization	Mean estimated percentage of seniors			
	>75 years	60-75 years	25-60 years	>25 years
FHT	13.45	21.94	40.76	24.64
CHC	10.06	24.66	43.14	21.53

Table 5: Size of participating FHTs and CHCs and distribution of senior friendly services

Type of organization	Number of sites	Percent of FHT/CHCs making senior friendly service adaptations	Percent of FHT/CHCs with designated geriatric services	Percent of FHT/CHCs with staff who have specialized training in geriatrics
FHT	1.8 (1-9)	80%	16%	52%
CHC	1.5 (1-2)	76%	24%	32%

Table 5 indicates that while the similarities between FHTs and CHCs continue in the presence of senior friendly adaptations, CHCs have slightly more instances of designated services for seniors (24% vs. 16%) although FHTs report a greater likelihood of having staff with specialized training in geriatrics (52% vs. 32%).

Table 6 reveals some of the characteristics of 9 basic geriatric practices in participating FHT/CHCs. The use of standardized clinical tools is most evident in the areas of cognitive and depression screening.

Standardized tools appear less frequent in the areas of abuse screening, falls risk assessment, delirium screening, safe driving assessment, polypharmacy reviews and continence screening.

Table 6 also indicates that assessments typically occur upon the presentation of symptoms rather than in routine 6 month or annual assessments.

Table 6: Profile of geriatric practices in the services provided by participating FHTs and CHCs

Clinical Focus	Type of Team	Never	Only if symptoms	Routinely every 6 months	Routinely every year	Use of Standardized Tools
Continence Screening	FHT	12%	73%	0%	15%	9%
	CHC	0%	62%	4%	35%	10%
Drive Safe Protocol	FHT	12%	73%	5%	12%	26%
	CHC	7%	27%	4%	26%	No data available
Polypharmacy Reviews	FHT	5%	35%	19%	41%	18%
	CHC	5%	27%	32%	36%	14%
Cognitive Screening	FHT	3%	85%	0%	13%	92%
	CHC	4%	58%	8%	29%	83%
Delirium Screening	FHT	24%	73%	0%	2%	32%
	CHC	4%	87%	0%	9%	21%
ADL/IADL Assessment	FHT	11%	74%	3%	18%	41%
	CHC	9%	48%	22%	22%	25%
Depression Screening	FHT	0%	78%	2%	20%	74%
	CHC	4%	74%	9%	13%	71%
Falls Risk Assessment	FHT	13%	64%	0%	23%	29%
	CHC	5%	64%	9%	23%	2%
Abuse Screening	FHT	20%	63%	2%	15%	25%
	CHC	9%	68%	5%	18%	11%

4.4 Overall Workshop Evaluation

Table 7: Overall Workshop Evaluation

Items	Number Respondents	Mean Score (out of 5)
Effective visual aids	**106**	**4.60**
Enhanced my awareness of online resources	**106**	**4.78**
Informative	**106**	**4.72**
Overall well done	**106**	**4.80**
Relevant to my area of practice	**106**	**4.63**
Stimulated my thinking in this area	**106**	**4.82**
Sufficient time for questions	**106**	**4.47**
Well-organized	**106**	**4.76**

Feedback on the workshops was universally positive. Participants were very impressed with the organization and delivery of the materials. They particularly appreciated the adult learning approach that involved small group discussions and sharing of information. The following comments are typical of the ones received informally and on the evaluations.

"I've been a health professional for 25 years and I have never been involved in continuing education that was so well-organized, useful and important" (former outpost nurse)

"This has been a really valuable workshop for me. I can't believe how much I've learned and received on the memory stick. I've been to several other nursing conferences over the last year, I haven't learned anything new and many I don't think I'll go back to". (Nurse)

"You've really made me think that there's a lot more that I can be doing and contributing to my Family Health Team" (Social Worker)

"This is so great. I love the way you've set up the workshop to have different professionals interacting and learning together. I love this format, it's so different from any other conference or learning that I've done" (Physician)

"I'm planning to use the resources you've developed in academia. I like the case studies and how they pull in all the professions and make you think from an interprofessional standpoint" (Physician)

"Wow, there's so much that we need to improve on in primary care. These are great resources. Having access to them means that I can start with one and improve care, then one by one, see how I can incorporate the knowledge and tools into my practice. I've got a lot to work on." (Nurse)

"I didn't know that all these topics were part of what I need to be doing to provide quality care to frail geriatric patients. Thank you for enlightening me" (Nurse)

"I'm so excited about all the information you've shared with us. This makes it so easy for us to get started, implement changes and getting things going that we've had on the back burner for so long. I can't wait to get back to my CHC and show the team all the wonderful resources. We're going to have lots to do and I know that our frail patients will only benefit from this new knowledge we have. Thank you so much for making this possible for us." (Nurse)

Table 8: Trainee Facilitator Ratings of Knowledge Acquisition in   Geriatrics and feelings of confidence in the facilitator role

Topics	Degree of New Knowledge (Where 1= not at all and 5 = a great deal	Confidence in Practice (Where 1= not at all and 5= a great deal)
Advance Directives	**4.09**	**3.92**
Capacity	**4.04**	**3.52**
Caregiver Support	**3.81**	**4.09**
Delirium	**3.80**	**3.89**
Dementia	**3.84**	**4.10**
Depression	**3.56**	**4.03**
Driving Capacity	**4.30**	**4.25**
End of Life Care	**4.06**	**4.09**
Frailty	**3.94**	**4.02**
Incontinence	**4.10**	**4.26**
Oral care	**4.44**	**4.03**
Osteoporosis	**3.78**	**4.21**
Pain	**3.92**	**4.38**
Polypharmacy	**3.71**	**3.81**
Periodic Health Exam	**4.20**	**4.43**

Table 9: Facilitator ratings of knowledge acquisition in the domain of interprofessional teamwork and confidence

Topics	Number of Respondents	Mean Score (out of 5)
Assessing Team Performance	**106**	**4.25**
Describing Issues in Team Performance	**106**	**4.12**
Confidence Conducting Reflective Team Exercise	**106**	**3.62**
Confidence as a Team Facilitator	**106**	**3.92**

Table 10: Facilitator knowledge acquisition and confidence in the domain of inter-organizational collaboration

Topics	Number Respondents	Mean Rating (where 1= not at all and 5 = a great deal)
Knowledge of Inter-Team work	**106**	**4.25**
Knowledge of Network Analysis	**106**	**4.05**
Knowledge of Systems	**106**	**4.20**
Confidence Facilitating Network Building	**106**	**3.94**

At the end of each workshop participants were asked to identify the key 'take-home points' emerging from the 16 hours of training. When the list of 'take-home points' is sorted five categories emerge: general (e.g. it was great to network) (44 items), geriatrics (126 items), inter-professional teamwork (84 items), interorganizational collaboration (48 items) and the resources available on the toolkit and website (60 items).

4.5 2-3 month period where GIIC facilitators return to the FHT/CHC

While end-of-project was common to all teams the scheduling of the training workshops extended from October 2008 to March 2009. As a result, not all participants had similar amounts of time to implement knowledge to practice strategies.

Reports of activities undertaken since the workshops ranged from actually initiating new services for seniors, engaging teams in the edumetric process, to simply sharing workshop information and the toolkit with other team members. The following quotations capture the range and flavour of reported knowledge to practice activities:

"The GiiC information has been helpful to us in the sense that we are just starting actually tomorrow to pilot a screening clinic for our senior population. So we've used a lot of the information from the tool kit to put that together."

"The information was really, really excellent information easy to access, and I'm planning on using it in the fall, doing more programming starting in the fall."

"I don't think in our group it's made a huge impact yet but I really see the potential, especially as the docs and the other professionals start to use the tools. And we're bringing in these other groups from the community and I think that we are going to think about referring to other agencies more often, and so I think the potential is there and ask me six months from now and I'll probably have a good answer."

"I went to the session in March and it was great to be able to take that back because I know that a lot of the professionals and the docs wanted to do something but just didn't really know where to start to it got that going. And it's been wonderful because one of the things we're going to end up doing is more frequent lunch and learns, not just within our team. So I might present something on capacity or that sort of thing, but we're also bringing in other organizations like the Alzheimer's society, arthritis society, the health care service, we've already go those lined up to do lunch and learns too. So it's going to be good."

Table 11 provides information on the nature and frequency of contacts between GiiC facilitators and the participating teams in their regions outside of the 16 hours of training.

Table 11: GiiC Consultant Contacts with FHT/CHCs

	CHC Contacts			FHT Contacts		
	Face to Face	Email	Telephone	Face to Face	Email	Telephone
Average # of Contacts Consultant	19	64	11	16	186	48
Total Number of Contacts	85	514	151	129	1485	337

4.5.1 Challenges for knowledge uptake by the FHT/CHCs

GiiC facilitators reported a number of challenges in bringing workshop knowledge into practice in their FHT/CHCs. These challenges can be grouped into five categories: time, team buy-in, physician buy-in, competing priorities, and changing existing tools. The following comments highlight the challenges faced by new primary care teams as they attempt to get new programs up and running.

<u>Time</u>

"The issue for me as facilitator is how do I get that information, even though it's my role to educate the professionals, I find it difficult to have the forum to do that and I only work two days a week. So that's my challenge."

"I went back to the health center and we have been renovating and have had absolute chaos at our place. So we have not had staff meetings. We've had no time to gather together. And when we finally had one staff meeting and I asked to put this report about the conference on the agenda we never got to that agenda item."

"I think the biggest challenge I see is making time to meet, and even thought there might be a willingness to work together we aren't necessarily, like there have been informal meetings in the hall. Well, that's fine if you're all in the same place but to actually make time for others to come together that's when I see the challenge."

Team buy-in

Although facilitators had been nominated by their FHT/CHC to attend the GiiC workshop, many faced resistance or difficulties in getting their fellow team members who did not attend the workshops to buy into the new information they had brought back.

"When we came away from the conference feeling 'wow this stuff is really good' and everybody is so busy and so to introduce a new concept and get people to buy into it and try it."

They found themselves having to spend a fair bit of time making the case for the value of the new information to their fellow team members:

"For myself our team wasn't ready to have a lot of these things implemented so it's more that we have to do a sales job back home before we can bring something back. And it's not that they don't want to, it's just that you need to put that into all the other things that they are expected to do."

Physicians buy-in

Facilitators identified physicians as particularly key to team buy-in and participation in new learning.

> "The physicians are on board because they're clear that there needs to be better communication and we need to start acting as a team."

However, many identified the challenges of working with physicians in

primary care who were not accustomed to working with other health

professionals and unfamiliar with the roles and skill sets of other

professionals.

"And we do have meetings, doctor based or doctor driven, they don't even all come and they're supposed to. So that shows you right there there's not much interest in the "we". It's all "me" for them still. I think they're still learning even though they've been around for a while. "

"Within our group, the nine doctors, you can tell there's the two lead doctors that are involved with us more and they always refer patients to us. There are about four doctors that do that consistently and the other ones couldn't care less. And when we do meet quarterly and we do say our little spiel of what we're doing, they're just rolling their eyes and they're just discounting the whole thing. You can see it. So if we did anything it would be with our allied health professionals, team building that way or whatever, because they're too hard to reach there's too many roadblocks with the other teams, the other docs."

Competing priorities

The issue of competing priorities was raised time and time again as

a key issue by the facilitators. FHTs in particular are new entities with

numerous demands on staff's time and energy to get new programs up

and running, meet MOH-LTC requirements for implementing various

priorities, and participate in numerous quality improvement and research

projects.

"And plus we've also got the pressure too of electronic health record that we're trying to do that and there's a lot of pressure and time just on trying to get that up and running and we've had workshops and meetings and stuff around all that."

"The primary issues (in our FHT) are addiction and mental health issues. So the fact that this tool kit has come along is very nice and good but it's not the priority issue - it's just dealing with the addiction and mental health issues and keeping these guys somewhat stabilized."

"As a new team, you've got the Ministry initiatives through QUIP, diabetes initiatives, a lot of that is also looking at team building. So, we're a new team so where do we want to put our energies when we're just, even as an organization, trying to develop our own processes, which of these initiatives is going to be the one that we pick up and run with, at least to start?"

Changing existing tools

The final challenge was the difficulty of making changes to existing tools and procedures. FHT/CHCs may have already put time and effort into identifying tools and procedures and the facilitators found it difficult to justify the need for change.

"But the one that I know is not used is the periodic health exam because it's different from the health exam system that we already have set up. So it's like do we have time to change forms and kind of think about it again, so you kind of reuse what's there. So that was a difficulty. Stuff that was brand new and we don't have anything like it, it was grabbed. Stuff that's similar to what we have now that maybe is better but not similar, that's where we kind of stalled."

4.5.2 Geriatrics Tool Kit

Participant feedback from on the Geriatric Tool Kit was overwhelmingly positive. Participants found the Tool Kit accessible, practical and up-to-date. The following are sample comments from the focus groups.

"I think the toolkit will be our bible and we will certainly be using it at all times."

"I think for me, one of the most helpful things was just having the access to good, up to date, evidence-based practice for different areas within our older population and then especially with the frailty as well. That was a really big help. So coming to the sessions and learning but then having those to take home in the tool kit was just great to have it on the USB key. To me that was one of the best things about it."

"It's easy to read stuff. It's not so medical based where we can all understand it easily enough whether you're a dietician, whether you are a social worker or a nurse. And I think that's been the really helpful piece because I'm a social worker on the health team and I don't have a medical background. Everybody else has a medical background. So I felt constantly involved going, 'um I don't know what that means'. Like you have used the abbreviation, I don't know what you're talking about. And I think the language of the toolkit makes it so accessible because I understand it and of course consequently the clients understand it. It's been really, really invaluable."

"One of my contacts at the <name of organization> thought she'd died and gone to heaven when she plugged in the USB key and saw all this."

Although the participants found all of the information in the Tool Kit helpful, they

particularly emphasized the value of the driving component.

"For us the driving one was particularly useful…we have those wonderful seniors that still want to maintain their independence. It's connected to where they live and what they're able to do and who is or is not in their life at the time. So the physicians for sure grabbed it."

4.5.3 Web-based Resources

"I really like this (GiiC Website) ... I like the access to a website of resources and that it's already set up by topic and easy to find."

The GiiC website was launched in August 2008. The website is an online

repository of the information contained in the GiiC Toolkit and distributed to all

workshop participants on a 2.0 gigabyte usb flash drive (memory stick).

In addition to the toolkit, the website also provides a project calendar, internet relay chat, and other social network capabilities. In order to secure the website for use by project participant's access to the site was managed using an online registration and approval process providing the capacity for secure password protected site access.

Initially reserved for project investigators, consultants and FHT/CHC facilitators, users agreed to make the site more widely accessible to other health professionals using the online registration process. As can be seen in Table 11 there are now 508 registered website users. These comprise 30 project staff, 191 FHT/CHC facilitators and 287 other health professionals.

The 287 other health professionals have varied disciplines and come from many kinds of organizations including acute care hospitals, long-term care homes, community care access centers, pharmacies and academe. While 67% of the websites users are Canadian, 19 other countries have registered members including the United States, France, Ukraine, China, Taiwan, Brunei, Japan, South Korea, Malaysia, Australia, Croatia, Singapore, Poland, Hong Kong, United Kingdom, Belgium, Italy, Germany and Ireland. Requests for memberships continue to accrue at the rate of 5-10 per week.

Table 12: Number of registered users of the GiiC Website my member category

User Category	GiiC Website Registered Users
Consultants and Admin	**30**
GiiC Facilitators	**191**
Other Health Professionals	**287**
Total Registered Users	**508**

The social network utilities integrated within the website have yet to see optimized use, with the exception of use by the GiiC consultants during module development. Between website launch (Aug 2008) and July 2009 the site saw 577,911 hits during 12,907 unique visits.

Table 13: GiiC Website Usage Statistics August 2008 – July 2009

	GiiC Website Usage Statistics			
	Hits	Unique Visits	Modules Visited	Number of Tools Downloaded
Average monthly usage	**48159**	**1076**	**37169**	**3463**
Total usage Aug 2008- July 2009	**577911**	**12907**	**446028**	**41556**

As shown in Table 13 the toolkit modules were visited 446,028 times and 41,556 tools were downloaded from the modules. Table 14 presents a rank ordering of the frequency of access for each of the GiiC toolkit modules. Table 14 reveals that all modules have been in use though Falls, Dementia Screening and Assessment, and The Periodic Health Exam were the three modules most frequently accessed at the GiiC website by project participants.

Table 14: Rank Ordering of the Frequency of Module Access

Module	Rank of frequency of online access	Module	Rank of frequency of online access
Falls	1	Delirium	11
Dementia Screening	2	Depression	12
Periodic Health Exam	3	Osteoporosis	13
Capacity Assessment	4	Pain	14
Advanced directives	5	Incontinence	15
Polypharmacy	6	Inter-organizational	16
Driving Capacity	7	End of Life Care	17
Care giver support	8	Oral Health	18
Frailty	9	Frailty	19
Inter-professional	10		

4.6 Team Profile Component: Edumetric Process re: Team Functioning

Half (91/181) of the FHT/CHCs represented at the GiiC workshops subsequently enrolled in the edumetric Team Profile Component. This represents approximately 27% of all FHTs and CHCs in province. Of the 91 that enrolled, 70% (60/91) participated sufficiently to receive at least a partial report. Just under half (46%) received a full report that contained both the results of the Dimensions of Teamwork Survey and the Social Network Analysis. Approximately one fifth (19.7%) received a partial report (results of the Dimensions of Teamwork Questionnaire only). From the perspective of team members, almost half (49%) of all identified FHT/CHC members from teams participating in the edumetric process, returned the Team Profile questionnaire.

Table 15: Participation in Edumetric Team Profile Component

	Teams Enrolled	Teams withdrew	Full Report	DTeam Only	Sorry Letter	Surveys sent out	Surveys returned
Kingston	10/15		8		2	191	121
Ottawa	16/30	3	1	6	6	316	120
London	13/32		12	1	1	207	130
Hamilton	8/39		5		3	202	94
Toronto1	14		5	1	7	260	104
Toronto2	13 27/47		5	1	7	216	106
Thunder Bay	6/12		2	3	1	68	32
North Bay	11/29		7	5	2	191	122
Total	91/204 44.6%	3	45	17	29	1651	829

The feedback regarding the edumetric team profile component was generally positive and many teams have asked for continuing support with their interprofessional teamwork. Some participants felt that the edumetric report helped them to move their team forward. Some felt that the process helped them to learn about their team. While others found that the process confirmed their expectations about their teams' performance. The following comments reflect this range of appreciation:

"Can you come and help our team to move ahead. I think that we need a lot of help"

"I just wanted to let you know that we have received our teamwork profile – and to thank you! This opens up some space and enables our team to turn a corner. It is also my hope that you might be invited to come up and extend some support/encouragement to us – we'll see."

"I was really interested to fill in the survey you sent us. I found it very interesting because really it helped me realize what was the connection I had inside my workplace and who I'm related to and who I'm not, so that was a good exercise, really, really good."

"I can say for me that I think it confirms how I thought of our team in the first place. Because we do have, I think, a very well oiled machine if you want to put it that way, in our center when it comes to our senior services. So for me it just confirmed and reaffirmed the dynamism of our team."

But as already pointed out, while half of the participating teams took

advantage of the edumetric process, half did not. Reasons for non-participation

in the process were grouped around lack of buy-in and competing priorities as

reflected in the following comments:

"Our ED tried to fill it in and he said, oh this doesn't pertain to me. It's all about clinical stuff. But it's not. It's about how you interact with different members of the team. So that was his take on it and I think with that kind of tone set, everybody else decided to take the same tack."

"We went to a workshop that was put on by Pfizer…and it was all about team building and interprofessional relationships. So that was going on. And so similar to what GiiC was doing we just felt that it was kind of overload of interprofessional team building stuff, so we actually haven't done anything with that component."

"..so they were getting double surveyed by diabetes and then the LHIN is constantly sending us surveys, not necessarily about interprofessional collaboration but about E-health use. I think they just sort of feel inundated by surveys."

On teamwork within participating organizations

Table 15 presents a comparison of Dimensions of Teamwork (DTEAM) survey subscale scores arising from the teams participating in the current study with a comparison group of teams from diverse health care settings which have also the DTEAM survey.

The data suggests that FHT/CHC team members perceive the quality of their teamwork in ways that are at or slightly above this diverse comparison group of health care teams. The relative strengths of FHT/CHC teams seem to be in the perceptions of the skills and knowledge of their team members, the teams ability to communicate effectively and manage conflict, flexible roles and the capacity for interdependence, the clarity of team and patient focused goals and the perception that the team has the support of the "organization as a whole".

Table 16: A comparison of the perceptions of teamwork between currently participating teams and a cross section of teams from all health care sectors who have previously completed the survey.

Table 16

Dimensions of Teamwork Subscale	Mean Subscale Scores for GiiC Participating Teams	Mean Subscale Scores for other Health Care Other Health Care Teams who have
Patient and Inter-team focus	**33**	**32**
Team members strengths and skills	**35**	**32**
Communication and Conflict Management	**35**	**29**
Roles and Interdependence	**36**	**32**
Clarity of Team Goals	**36**	**32**
Decision-making and leadership	**36**	**34**
Organizational Support	**36**	**28**

While average levels of performance seem relatively high in comparison with health care teams in general, Table 16 demonstrates that there remain considerable opportunities for improvement in FHT/CHC teamwork. Across the seven domains of teamwork surveyed 68% of participating teams are performing within +/- 1 standard deviations of the group average. Nine or fourteen percent of participating teams appear to be high performance teams as indicated by overall levels of teamwork >1 standard deviation above the group average. And, 16% of the participating teams are performing > 1 standard deviation below the group average.

Table 17: The Level of Perceived Interprofessional Teamwork across Participating Teams

Dimension of Teamwork	Level of Interprofessional Teamwork		
	Below Average Levels of Teamwork (One standard deviation below the group mean)	Teams at Average Levels of Teamwork (Within +/- one standard deviation of the group mean)	High Performance Teamwork (One standard deviation above the group mean)
Patient and Inter-team focus	5 (9%)	40 (73%)	10 (18%)
Team members strengths and skills	7 (13%)	40 (73%)	10 (18%)
Communication and Conflict Management	9 (16%)	39 (71%)	7 (13%)
Roles and Interdependence	9 (16%)	35 (64%)	11 (20%)
Clarity of Team Goals	11 (20%)	35 (64%)	9 (16%)
Decision-making and leadership	9 (16%)	36 (68%)	10 (18%)
Organizational Support	12 (22%)	38 (69%)	5 (9%)

5.0 Evaluation Summary

The time-frame for this project required a process-based rather than an outcomes-based evaluation. Evaluating whether there have been changes in practice which have resulted in changes in client outcomes would require much more time to allow teams to integrate new knowledge into practice and to measure the impact of these changes on care. However, the evaluation results point to a very successful and well-received program.

Returning to the specific goals of the evaluation, it is clear that these goals were met and in some cases exceeded.

We established a GiiC Knowledge to Practice Network with hubs in the RGPs of Ontario Academic Health Sciences Centres in Hamilton, Kingston, Toronto, London, Ottawa and in Northern Ontario linked to the Centre for Education and Research on Aging and Health at Lakehead University and the Northern Ontario School of Medicine. The toolkit developed by the GiiC project is available online and has been evaluated extremely positively by participants. It continues to be used by project participants and attracts new users daily.

We developed a team of ten GiiC resource consultants within the RGPs of Ontario and the Centre for Education and Research on Aging and Health at Lakehead University to provide training, coaching, and mentoring of GIIC facilitators and to support the GIIC Knowledge to Practice Network. Many of these consultants are continuing on in their roles in their regions as part of newly funded projects.

We provided training to 374 health professionals across the province in the core competencies for frailty focused care: geriatrics, interprofessional practice and interorganizational collaboration. This included a cadre of 181 GiiC facilitators situated in FHTs and CHCs to assist their teams and organizations in the delivery of collaborative shared care to frail seniors. Eighty-two percent of existing FHTs and CHCs participated in the training workshops and 27% participated fully in the Team Profile component.

Participants evaluated the training workshops very positively. All reported gaining new knowledge on a variety of topics related to geriatric care and most felt confident that they would be able to share the new information with the rest of the members of their FHT/CHC. Those who participated in the Team Profile component found it valuable even though many teams found that participation was difficult due to lack of team buy-in and competing priorities.

A blend of KTP strategies were used when developing GiiC facilitators for their role. These included an initial 16 hour training process, follow-up training days, edumetric activities (including results of a social network analysis of the teams), and the provision of structured knowledge to practice tools supported by GiiC resource consultants and on-line resources. Particularly successful strategies were the methods of delivering the 16 hours of training using such techniques as, expert lectures, local experts, knowledge cafes and small group learning, the GiiC toolkit and the on-line resources.

While a final examination of the impact of the process on services for frail seniors must await further studies, as this report is being completed we have heard of many positive new developments. New frailty focused services have emerged, specific services such as falls clinics have been reported, new interorganizational collaborations and team development processes have been undertaken. The toolkit has proven valuable to several LHIN planning groups and one LHIN has adopted the GiiC toolkit for the development of its services for seniors. Finally, we have secured some new funding to continue to develop the

GiiC idea for new stakeholders across the circle of health care for seniors and to

confirm the early reports of practice change.

Appendix A

GiiC

geriatrics
interprofessional
interorganizational
collaboration

Team Profile Summary

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OVERVIEW

Your team has participated in the Geriatrics, Interprofessional Practice & Interorganizational (GiiC) funded by HealthForceOntario to enhance practice in these areas in Family Health Teams and Community Health Centers across the Province. Through the initiative one your colleagues was designated as a GiiC facilitator for your team and participated in a 16-hour training program to help them serve as a resource to your team on the GiiC knowledge base for primary care. As well, your team's facilitator has been supported by a GiiC consultant affiliated with either your area's Regional Geriatric Program, the Center for Research in Ageing and Health in Thunder Bay or the North East Specialized Geriatric Services Group in Sudbury.

An important element of the GiiC initiative evaluation was an edumetric teamwork exercise in which each team member was encouraged to complete a Dimensions of Teamwork (DTEAM) Survey and a Network Analysis. This edumetric exercise is designed to provide a source of information that could be of use in enhancing interprofessional collaboration on your team. This document is a report on the structure and function of teamwork on your team.

The DTEAM survey is a measure of team members' perceptions of teamwork in seven areas: customer and inter-team issues, team-member strengths and skills, communication and conflict management, roles and interdependence, clarity of team goals, decision-making and leadership, and organizational support. The survey is one of few such tools to be standardized specifically for health care settings.

The social network analysis provides a "snapshot" of the pattern of relationships amongst team members with respect to referral patterns and exchange of information. This sociometric method has developed in the field of sociology over the last 50 years but has seldom been used to inform teamwork in health care. Social network analysis involves the mapping and measuring of relationships (ties) between individuals, organizations or teams (nodes). For this study we examined two types of ties [1] referring clients to and 2) exchanging information with] between individuals within a Family Health Team or CHC.

In what follows you will find a graph representing your teams mean scores in each subscale of the DTEAM survey together with a comparator group representing the responses of all the health care teams who have used the survey in the past. The GiiC project director has also prepared a brief written summary of the survey results, along with the highest and lowest rated item on each scale. As well, you will find two social network analytic diagrams with comments on four important social network constructs:

1) network density; 2) network centralization; 3) strength of ties and 4) reciprocity of ties.

Together we hope that these will provide the basis for reflection and discussion during a team meeting that might help you to enhance the quality of interprofessional collaboration on your team. As you plan the reflective discussion please keep in mind that your GiiC consultant and the GiiC project director can be of help to you.

We would like to thank everyone on your team for participating in this exercise and we hope that we can continue to help you develop your team's good works in the areas of Geriatrics, Interprofessional Practice and Interorganizational Collaboration

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RESULTS of DIMENSIONS of TEAMWORK SURVEY

OVERVIEW OF THE DIMENSIONS OF TEAMWORK SURVEY (DTEAM)

THE DTEAM COMPRISES 56 ITEMS ALONG SEVEN DIMENSIONS OF TEAMWORK

1. **Customer and inter-team issues** - Items sample the extent to which team-members incorporate customer and inter-team issues into their work.
     i. We regularly examine our client's satisfaction with our work.
     ii. We can develop our services without any advice from people outside of the team.
     iii. Our team always works hard to maintain constructive relationships with other teams involved with our clients.
     iv. We seldom allow our clients or their families to decide what assessments and interventions are needed.
     v. The family members of our clients are often just like team members.
     vi. Too often, we seem to have to compete rather than co-operate with other health care teams and organizations.
     vii. We always try to remember that our customers include both our clients and the people who assist them in the community.
     viii. We seldom get to know the people working on other teams even those within our own community.

2. **Team-member strengths and skills** - Items sample team member's perceptions that the team has the basic skills and knowledge necessary for its work.
     i. People know how to get things done on this team.
     ii. We lack some important skills and knowledge on this team.
     iii. Everyone on this team knows what's needed to make the team work well.
     iv. On this team, few people know how to run a meeting effectively.
     v. People on this team have lots of experience in our type of work.
     vi. Most team members have been trained only in their technical discipline.
     vii. Everyone on this team is highly skilled, and confident in their abilities.
     viii. People just don't seem able to adjust to change on this team.

3. **Communication and conflict management skills** - Items sample member's perceptions of the team's ability to communicate and resolve conflict effectively.
     i. People really listen to one another on this team.
     ii. On this team, speaking your mind creates problems more often than not.
     iii. When problems arise we are always able to talk things through.
     iv. People don't really know each other very well on this team.
     v. When conflicts arise team members negotiate solutions easily.
     vi. Conflict on this team is never just left to "smoulder" and get worse.

vii. People on this team are always frank and open with each other.
viii. There are always cliques and political maneuverings on this team.

4. **Team roles and interdependence** - Items sample member's perceptions that roles are understood and that the team is capable of interdisciplinary functioning.
    i. People on this team share their knowledge and skills easily.
    ii. On this team, people develop their own care-plans independent of everyone else.
    iii. On this team we understand each other's roles and are able to be flexible and creative with them.
    iv. On this team, roles are "carved in stone" and you had better not try to change them.
    v. Members of this team co-ordinate their efforts well.
    vi. Although no one says it, sometimes it's hard to get help with things because people feel that "it's not my job".
    vii. People collaborate rather than compete with each other on this team.
    viii. We have no way of knowing whether we have achieved our goals or not.

5. **Clarity of team goals** - Items sample members perceptions that team goals are clear, stable, and understood by all.
    i. This team's overall goals and objectives are clear.
    ii. This team does little planning and has no "game plan" for the future.
    iii. Everyone knows the goals we have for each client.
    iv. We are always changing our priorities on this team.
    v. The goal of continuous quality improvement is understood by everyone.
    vi. We seldom examine what this team does, how it works, and how to improve it.
    vii. When we have team meetings we always have a clear agenda.
    viii. We have no way of knowing whether we have achieved our goals or not.

6. **Decision-making and leadership** - Items sample member's perceptions of the team's decision-making skills and facility for developing leadership skills.
    i. This team can make good decisions in difficult situations.
    ii. I often don't understand how the team makes the decisions it does.
    iii. I've always felt that I am able to influence the way this team makes decisions.
    iv. I have too little authority to carry out the responsibilities that are assigned to me.
    v. Ability not politics determines whether someone is leader on this team.
    vi. It's often unclear who has authority on this team.
    vii. All team members are accountable for the care our patients receive.
    viii. On this team, we rely on the physician's authority; after all, they are the ones who are accountable in the end.
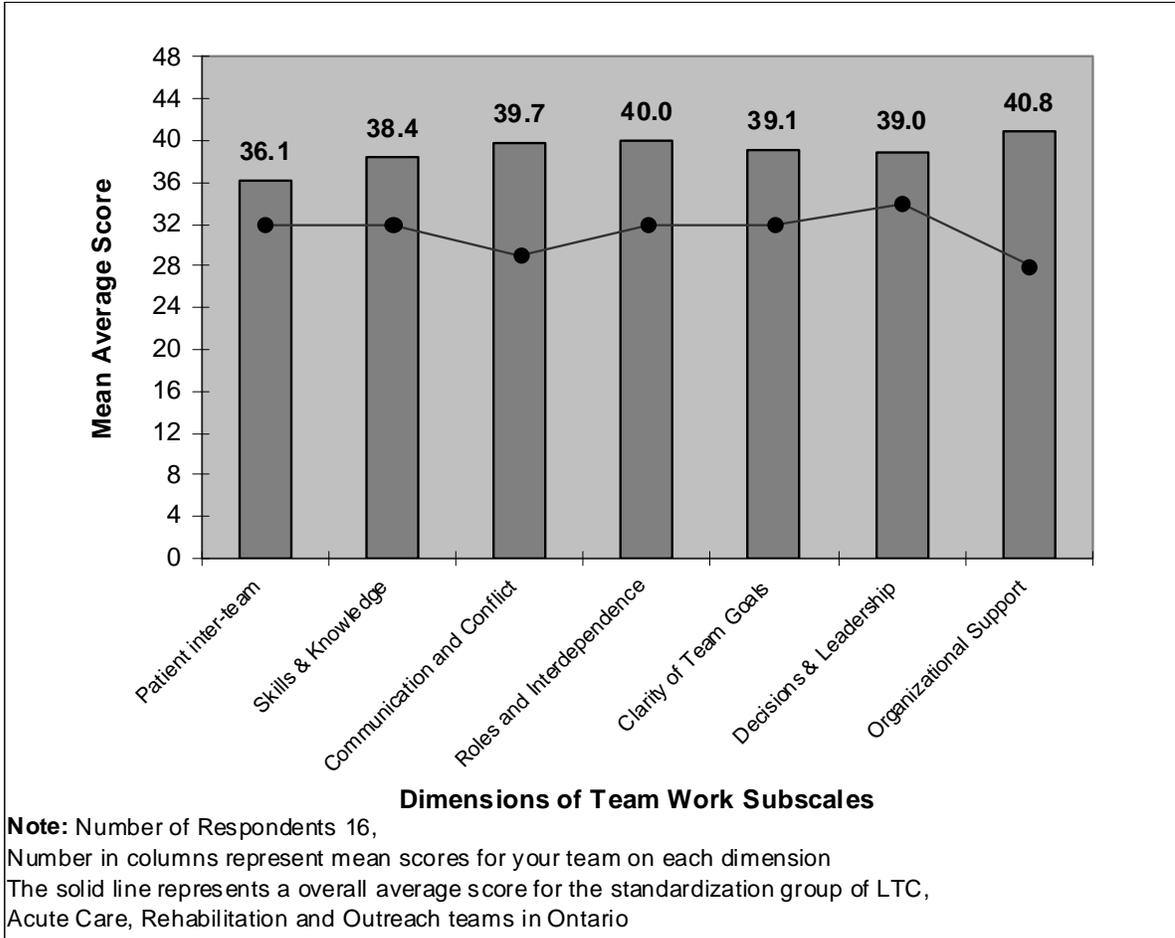
7. **Organizational support** - Items sample members' perceptions of support for their team from the organization as a whole.
- i. I can always get the resources I need to carry out my job.
- ii. My workload is so heavy that it's impossible to complete during an ordinary work day.
- iii. The community seems to really understand the kind of work we have to do on this team.
- iv. I'm concerned because too often, the amount of work I have to do interferes with the quality of care I can provide.
- v. The organization shows its appreciation for work well done.
- vi. It's often unclear who has authority on this team.
- vii. I think this team has a lot of influence in the community.
- viii. If the team were disbanded, the community would not feel the loss.

Psychometric Properties of the DTeam Survey

Dimension of Teamwork	Internal Consistency (n=116)	Inter-rater Reliability (n=28)	Test/Retest Reliability (n=16)	Convergent Validity (n=104)
Customer and Inter-team	0.39	0.58*	0.84*	0.46*
Team member strengths and skills	0.81	0.69*	0.93*	0.72*
Communication and Conflict	0.77	0.45*	0.96*	0.84*
Roles and Interdependence	0.77	0.58*	0.96*	0.74*
Clarity of Team Goals	0.81	0.60*	0.95*	0.71*
Decision-making and Leadership	0.69	0.46*	0.96*	0.79*
Organizational Support	0.67	0.28	0.97*	0.63*

* **p<.05**

RESULTS AND ANALYSIS FOR YOUR TEAM

Note: Number of Respondents 16,
Number in columns represent mean scores for your team on each dimension
The solid line represents a overall average score for the standardization group of LTC,
Acute Care, Rehabilitation and Outreach teams in Ontario

Summary/Interpretation:
Team members' responses to the Dimensions of Teamwork Survey suggest that this team has achieved substantially above average levels of performance in all the domains of teamwork.

The team has developed an inter-professional style of practice with high levels of collaboration, role flexibility and sharing. Its patient focus is high and it appears sensitive to the inter-organizational context in which it works. Communication amongst team members is effective and the team is able to readily negotiate solutions to differing perspectives and opinions. Team member strengths and skills allow them to "get things done", to adapt to change and pull together to achieve shared goals.

Team members appear comfortable with and feel that they are able to influence team decision-making.

They feel that ability determines the capacity to exercise leadership on the team and each team member assumes accountability for her/his work. And, with the exception of periodically feeling overwhelmed with the volume of work team members feel supported and well recognized by the organization as a whole.

Despite this high level of achievement, several opportunities for improvement are also evident. The team might consider whether it is appropriate for team members to "develop their care plans independent of others" and whether the teams reliance on the 'final accountability" of team physicians might be burdensome.

RESULTS of SOCIAL NETWORK ANALYSIS

OVERVIEW OF SOCIAL NETWORK ANALYSIS

Social network analysis involves the mapping and measuring of relationships (ties) between individuals, organizations or teams (nodes). For this study we examined two types of ties (referring clients to: and exchange information with) between individuals within a Family Health Team or CHC.

The following constructs are considered:

Network Density: how many connections there are between network members compared to the maximum possible number of connections that could exist. The higher the proportion, the more dense the network (e.g. the more interconnected the members of the network). One might expect that a highly functioning inter-professional team would have a high network density with team members highly interconnected with each other.

Centralization of a Network: extent to which the network is centralized around one or a few actors. Are there members of the network who are more highly interconnected or less interconnected than others?

Strength of Ties: ranges from weak (interactions that are infrequent, once per week or less) to strong (frequent interactions, at least several times per week).

Reciprocity: refers to the extent to which relationships are two-way. Symmetric means that the ties are reciprocated, e.g. participants refer clients to each other. Asymmetric means that ties are not reciprocated e.g. the referrals are in one direction only from one person to another. One might expect that in a well-functioning interprofessional team ties would be symmetrical (participants refer to each other) whereas asymmetrical ties would suggest hierarchy (referrals are just in one direction).
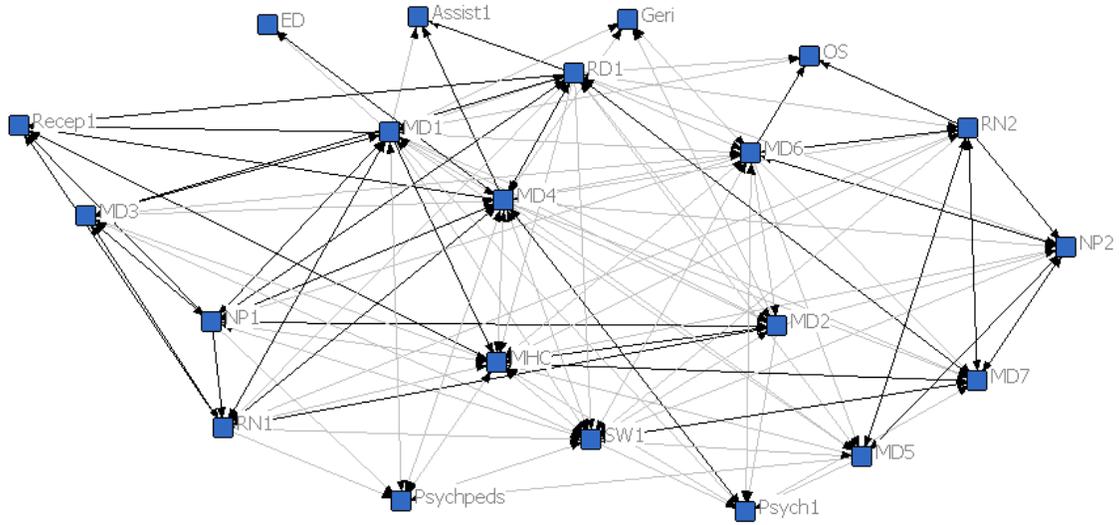
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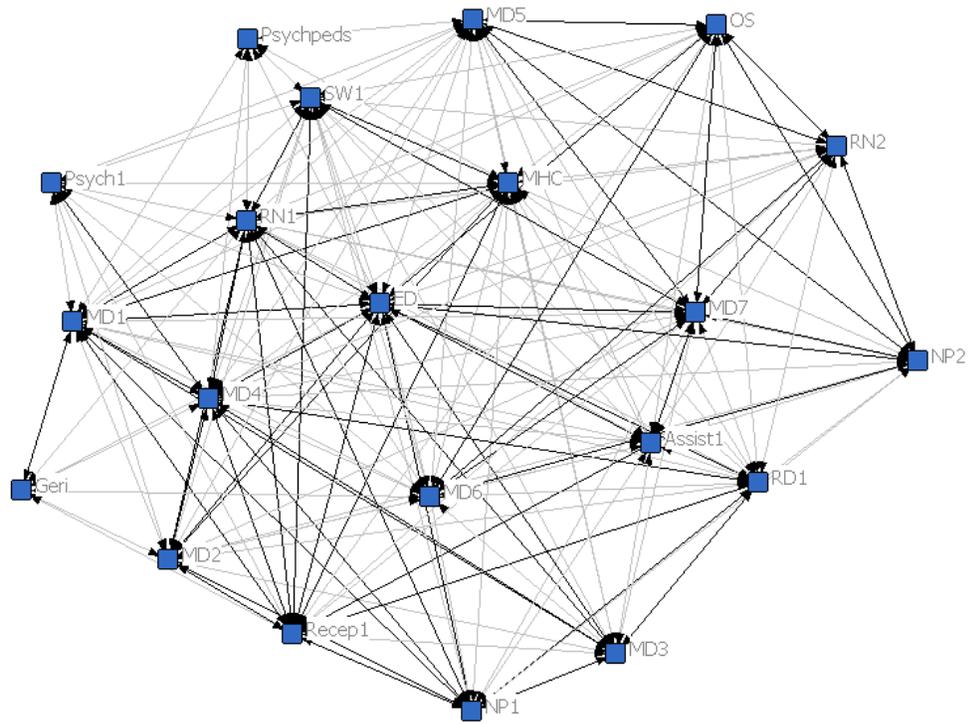
EXCHANGE INFORMATION

KEY TO SOCIOGRAMS

ED	Executive Director
MD1	Physician 1
MD 2	Physician 2
MD3	Physician 3
MD4	Physician 4
NP1	Nurse Practitioner 1
MHC	Mental Health Coordinator
SW1	Social Worker 1
RN1	Registered Nurse 1
RD1	Registered Dietician 1
Recep1	Receptionist 1
Assist1	Family Health Team Assistant
Psych1	Psychiatrist 1
Psychpeds	Psychiatrist- pediatrics
Geri	Geriatrician
MD5	Physician 5
MD6	Physician 6
MD7	Physician 7
NP2	Nurse Practitioner 2
RN2	Registered Nurse 2
OS	Office Supervisor

Response Rate: 17/21   81%

SUMMARY OF SOCIAL NETWORK ANALYSIS FOR YOUR TEAM

Network Density: how many connections there are between network members compared to the maximum possible number of connections that could exist.

Refer clients to: Network Density is low to moderate– 37.9%. There are moderate cross referrals within the team.

Exchange information: Network Density is moderate to high (69.1%), as most team members exchange information with each other.

Centralization of a Network: extent to which the network is centralized around one or a few actors.

Refer to: Referral patterns are most centralized around MD1, MD4, MD6 and RD1.

Exchange Info: Team seems to be centralized around the ED, MHC, RN1 and MD4 for exchange of information. However, there are frequent interactions amongst most team members.

Strength of Ties: ranges from weak (interactions that are infrequent, once per week or less) to strong (frequent interactions, at least several times per week).

Refer to: The majority of ties are weak (infrequent). The stronger referrals are made to MD1, MD4, MD6 and RD1.

Exchange Info: The majority of ties are weak (infrequent). There are frequent exchanges of information among RN1 and MHC, RN1 and MD4, RN1 and ED, as well as ED and MHC.

Reciprocity: refers to the extent to which relationships are two-way.

Refer to: The majority of ties are not reciprocal.

Exchange Info: The majority of ties are reciprocal.

REFLECTION QUESTIONS

Does this Team Profile Summary seem to be an accurate reflection of your team?

What are the accountabilities of all professionals on an interprofessional team?

Are all team members' roles and skill sets understood and utilized appropriately by other team members?

What strategies does the team have in place to ensure they are able to maintain this high level of performance should the composition of the team change?